CLUSTAL 2.1 multiple sequence alignment

Rattus --GTCGGGATACTCGGTCCGCCCACCTAGTCTTCTCGTCCT------CGTTCGCGAGATC 52

Danio ------------------------------------------------------------

Mus CTGTCGGGATACTCGGTCCGCCCACCTAGTCCTCTCGTCCAGTGCTGCGTTCGCGAGATC 60

Gallus ---------CGCTCGCCTCTCCCTTCCCCTCCCGCCA-----------GGCCGCGGGCCC 40

Anopheles ------------------------------------------------------------

Homo -----------------------AGCCAGTCCTCCCGTCTTGCGCCGCGGCCGCGAGATC 37

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CGTGTTTCTCCCAAGATGGTGGCGCTCCTCTTTGGGTGACTACAGGAGACGACAGGGCCT 112

Danio ------------------------------------------------------------

Mus CGTATTTCTCCCAAGATGGTGGCGCTCCTCTTTGGGTGACTCCAGGAGACGACAGGGCCT 120

Gallus CTCTTCTCCGCCCCGACGG--------CTCCTCCGGCAGC-------GGCGGCGGCACCT 85

Anopheles ------------------------------------------------------------

Homo CGTGTGTCTCCCAAGATGGTGGCGCTGGGCTCGGGGTGACTACAGGAGACGACGGGGCCT 97

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TTCGTCTTCGCAAGTACCTCGCCGCCCCTCCTGCGTTCGCTC--------GCGCACCGGG 164

Danio ------------------------------------------------------------

Mus TTCGTCTTTGCCAGCACCTCGTCGCCCCTCCTGCGCTCGCTCTCTCGCTCGCGCACCGGG 180

Gallus C------------------CTCCTCCTCGCCTGCG-------------------GCCCGG 108

Anopheles ------------------------------------------------------------

Homo TTTCCCTTCGCCAGGACCCGACACACCAGGCTTCGCTCGCTCGCGCACCCCTCCGCCGCG 157

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CCACGCAGCTGTTCACCGCCTCATCACGACTCTCCTCGTTCGACCAGTCGCGGACGGTGG 224

Danio ------------------------------------------------------------

Mus CCACGCAGCTGTTCACCGCCTCGTTACGCTTCTCTTCCGTCGACCTGTCGCTGACGGTGG 240

Gallus CCCCG-AGCGCGGCGCGGCCCCCGCATGA------------GCCCGGGCGGCGGCGGCGG 155

Anopheles ------------------------------------------------------------

Homo TAGCCATCCGCCAGCGCGGGCGCCCGCCATCCGCCGCCTACTTACGCTTCACCTCTGCCG 217

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CGCCTCCTTCTGCTTCTCTTCGGAGTTGCTCGCCACCCTCGCCCCCCACCGTGGACAGAT 284

Danio ------------------------------------------------------------

Mus CGCCTCCTTCTGCTTCTCTTCGGAGTTGCTCGCCGCCCTCGCCCCCCACTGTGGACAGAT 300

Gallus CAGCGGCAGCGGCAGCGAGCGGGAGCAGCAGGCCGCG-------------GCGCGCAGGT 202

Anopheles ------------------------------------------------------------

Homo ACCCGGCGCGCTCGGCTGCGGGCGGCGGCGCCTCCTTCGGCTCCTCCTCGGAATAGCTCG 277

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CGCGGCAGCAGCCGTTCAGCGCCGACTTCAAGGTTGCCCAGGCGCCCGGCC--------- 335

Danio ------------------------------------------------------------

Mus CGCGACAGCAGCGCTTCAGCGCCGACTTCAAGGTTGCCCAGGCGCCTGGCC--------- 351

Gallus CG--GTAGGCGCTGCGCCGCGC------------TGCGCGGGGGCCGGGAGGNNNNNNNN 248

Anopheles ------------------------------------------------------------

Homo CGGCCTGTAGCCCCTGGCAGGAGGGCCCCTCAGCCCCCCGGTGTGGACAGGCAGCGGCGG 337

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 308

Anopheles ------------------------------------------------------------

Homo CTGGCGACGAACGCCGGGATTTCGGCGGCCCCGGCGCTCCCTTT---------------- 381

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 368

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 428

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 488

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 548

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -----------TCCCGGCCTCAGTTTCCTGAGGAGAAGCGCGGGTCCCGCATGAGACCCG 384

Danio ------------------------------------------------------------

Mus -----------TCTCGGCCTCGGTTTCCTGAGGAGAAGCGCGGGTCCCGCATGAGACCCG 400

Gallus NNNNNNNNNNNTTTGTAGATCGGGTGTCCGAGGTGA--TGTGGGCCATGCTTTGTTCCC- 605

Anopheles ------------------------------------------------------------

Homo -----------CCCGGCCTCGTTTTCCGGATAAGGAAGCGCGGGTCCCGCATGAGCCCCG 430

Pan -----------------CTCGTTTTCCGGATAAGGAAGCGCGGGTCCCGCATGAGCCCCG 43

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GCGGTGGCGCCAGCGAAAGGGAACGAGGCGGTGGCGGGCGGCGGCGGTGGACGAGGGCGA 444

Danio ------------------------------------------------------------

Mus GCGGTGGCGCCAGCGAAAGGGAACGAGGCGGTGGCGGGCGGCGGCGGTGGACGAGGGCGA 460

Gallus ----TAGCAGTAAC-----------------TCGTGAACGACCGTGTC--CCTTAAGTGA 642

Anopheles ------------------------------------------------------------

Homo GCGGTGGCGGCAGCGAAAGAGAACGAGGCGGTGGCGGGCGGAGGCGGCGGGCGAGGGCGA 490

Pan GCGGTGGCGGCAGCGAAAGAGAACGAGGCGGTGGCGGGCGGAGGCGGCGGGCGAGGGCGA 103

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CAAGGACCAGTGAGGCGGCCGCAGCTGCGAGGGCCGCAGCCCACGCGCGGGGGCGAGGAC 504

Danio ------------------------------------------------------------

Mus CAAGGACCAGTGAGGCGGCCGCAGCTGCGAGGGCCGCAGCCCACGCGCGGGGGCGAGGAC 520

Gallus CATGAACCTGTAACCTATAGACTCCTCCTGCTTCCCCCCCCCTCCCACTCACAC----AC 698

Anopheles ------------------------------------------------------------

Homo CTACGACCAGTGAGGCGGCCGC------------CGCAGCCCAGGCGCGGGGGCGACGAC 538

Pan CTACGACCAGTGAGGCGGCCGC------------CGCAGCCCAGGCGCGGGGGCGACGAC 151

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AGGTCAGTGCTGCTGCGGCCGCGGCCTGCCCGGCGCGCTCCCTCTGGTCTGTACCGCCGG 564

Danio ------------------------------------------------------------

Mus AGGTCAGTGCTGCTGCGGCTGCGGCCTGCCCGGCGCGCTCCCTCTGGTCTGTACCGCCGG 580

Gallus ACTCTCCAGTTAATGAAAATACTTTCTGTGTTGGAATCGGGCTTTTGGGTCAAAGCTTGT 758

Anopheles ------------------------------------------------------------

Homo AGGTCAGTGTTGCCGCGGCCTGCGCCAGGCGGCGCTGGCTCCCCTCCGTCACTCGGCCGG 598

Pan AGGTCAGTGTTGCCGCGGCCTGCGCCAGGCGGCGCTGGCTCCCCTCCGTCACTCGGCCGG 211

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TCCCCTCGTCACCCTCCAGGCCGCGCTGACAGGGTAGGCGCCTGGGCCCTCACCCGCCTC 624

Danio ------------------------------------------------------------

Mus TCCCCTCGTCACCCTCCGGCCCGCGCTGACAGGGTAGGCGCC-GGGCCCTCACCCGCCTC 639

Gallus CTCACACATCACTTCTGAGATGGTCCCTCT---------GTATGGAAACTTCACTATCTC 809

Anopheles ------------------------------------------------------------

Homo CCTTCGGGGCCCGCTGTGGCGAGGTC------GACACCCCCCTTCCCCGCCCCCCGCCGC 652

Pan CCTTCGGGGCCCGCTGTGGCGAGGTC------GACACCCCCCTTCCCCGCCCCCCGCCGC 265

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CGTGAGCGAGTGCTTGGG-CGCGTGGTCTGGAGGGGCCGGTGCCAGGACTAGGCCC-TGG 682

Danio ------------------------------------------------------------

Mus CGTGAGCGAGTGCTTGGGGCGCGTGGTCTGGAGGGGCCGGTGCCAGGACTAGGCCC-TGG 698

Gallus AGCAGGATGCTGCATTAACCTGATGTTCTGCGTGAGCCCGCTCGGCAGATTTGTTT-TAC 868

Anopheles ------------------------------------------------------------

Homo CGAGGCGAGTGTTTGGGGGCGCGTGGTCCGAAGGGGCTGGTGCCAGAAGTAGGCCCCTGG 712

Pan CGAGGCGAGTGTTTGGGGGCGCGTGGTCCGAAGGGGCTGGTGCCAGAAGTAGGCCCCTGG 325

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TGGCTGCGGCTGCTGCAGCCTTAACTGTCAGTGCTGGCTGAGCGCAAGAGGGAGGGTTTT 742

Danio ------------------------------------------------------------

Mus TGGCTGCGGCTGCTGCAGCCTTAACTGTCAGTGCTGGCTGGACGCAGGAGGGAGGGTTTT 758

Gallus TG--TGCCTCTACTGTGTGTCTGTCAGAAAGTTCT---------CCAGTGTGAAACTGT- 916

Anopheles ------------------------------------------------------------

Homo TGGCCGCGGCTGCTGCAGCCGTAACTGTCAGTCCTGGCTGAGCGACGGCGGGAGGGTTTT 772

Pan TGGCCGCGGCTGCTGCAGCCGTAACTGTCAGTCCTGGCTGAGCGACGGCGGGAGGGTTTT 385

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GTCACCCGCGGGTACCCGAGTGGGCCCGGGGTGGGGCGGACGTGCAGGGCGTCGAGATTG 802

Danio ------------------------------------------------------------

Mus GTCACCCACGGGTACCCGAGTGGGCCCGGGGTGGGGCGGACGTGCAGGGCGTCGAGATCG 818

Gallus ---ACCCGAGCATAGCTCTGATTGCCCAAGGAAGAAAAAGCTGTCTGATTGTATTGTCAG 973

Anopheles ------------------------------------------------------------

Homo GTCGCCCGAGGGGACGCGAGCGGGCCCGGGGCGGGGCGGGACGTGCGAGGCGTCGAGATT 832

Pan GTCGCCCGAGGGGACGCGAGCGGGCCCGGGGCGGGGCGGGACGTGCGAGGCGTCGAGATT 445

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GGG-CCTCATCTAAGCAGGGATCGGAGAGCCAGCCGTGGCTTCAGGCTGCAAAAGGAAGT 861

Danio ------------------------------------------------------------

Mus GGGGCCTCATCTAAGCAGAGATCGGAGAGCCAGCCGTGGCTTCAGGCTGCGAAAGGCAGG 878

Gallus TATATCTAATACGGCTTTGTTTCCGTGATTTGAAAGGGA----GAGGTCTAAAAGTTAAA 1029

Anopheles ------------------------------------------------------------

Homo TGGGCCTCCTAGGAGCCAGGCTCTTCGAGCCAGCCGGGGCCCCAGACAGGGAAGGGCAGG 892

Pan TGGGCCTCCTAGGAGCCAGGCTCTTCAAGCCAGCCGGGGCCCCAGACAGGGAAGGGCAGG 505

Drosophila ------------------------------------------------------------

Canis -----------------------------------ATGGCCACAGCTTGTAAAAGGTAAT 25

Bos ------------------------------------------------------------

Rattus CCTTTTCCTCCAAAGGGGCGCTCTGGT-----------------------------GGGG 892

Danio ------------------------------------------------------------

Mus CCTTTTCCTCCAAAGGGGCGCTCTGGT-----------------------------GGGG 909

Gallus GTTCTT--------AAAGGATTCATAC-----------------------------AGGT 1052

Anopheles ------------------------------------------------------------

Homo CCCTTTCCTTCAAAGGGGAGCCCTTTCTCGGCGTTTTCAAGGTTTTTGGCTCTCTTGGGG 952

Pan CCCTTTCCTTCAAAGGGGAGCTCTTTCTCGGCGTTTTCAAGCTTTTTGGCTCTCTTGGGG 565

Drosophila ------------------------------------------------------------

Canis TTT------------GAATGTTATTTTACAGCCTTTAAAAGGCTGTTA---TTGTAAAGT 70

Bos ------------------------------------------------------------

Rattus AAGACATATTTAGAAGTGTGCTTAGTGGGTTGGGGTATTGTAGG--GGGTGGATTGGAAG 950

Danio ------------------------------------------------------------

Mus AAGACATATTTAGATGTGTGCTTAGTGGGTTGGGGTATT---GG--GGGTGGATTGGAAG 964

Gallus AGCATCCGCTTGGAGAT-TCCTTGCTGGG--GGCGAAGCTGCAG--GGGTGAGTGTGACA 1107

Anopheles ------------------------------------------------------------

Homo AAGACATATTTAGCCGTGTGCTTGGTGGGTTGGGGTTTTGGGGGTGGATTGATGGGAAGG 1012

Pan AAGACATATTTAGCCGTGTGCTTGGTGGGTTGGGGTTTTGGGGGTGGATTGATGGGAAGG 625

Drosophila ------------------------------------------------------------

Canis AAAATACAT--------------------------------------ACTGTACAAAATG 92

Bos ------------------------------------------------------------

Rattus GAAGACGGATGAAGCGGCACATCAAGCCCA-AGGATTGCGCTGTGGTTTTATTCGTGTGC 1009

Danio ------------------------------------------------------------

Mus GAAGACGGATGAAGCGGCACCTCAAGCCCA-AGGATTGCGCTCTGGTTTTATTCGTGTGC 1023

Gallus GT------ACTGATAGGCACCTCCCGTGGGTGGGAGAGGGCTGGGGTGGTGACAGGTACC 1161

Anopheles ------------------------------------------------------------

Homo GAGGGCGGATGAAGTGGTATGTCAAGCCCA-AGGGTTGTGCGCACAGGTTACTCTGTGTT 1071

Pan GAGGGCGGATGAAGTGGTATGTCAAGCCCA-AGGGTTGTGCGCACAGGTTACTCTGTGTT 684

Drosophila ------------------------------------------------------------

Canis AAGAAAATGTATAGT----TGGCAGGAATA-AGTAGTATACCTAAGTGTTAATGTGCTTC 147

Bos ------------------------------------------------------------

Rattus TGCGTCTGGTAGGATT-CAGTAGTTGAACGTGAGTTACTGGATTCCTCAGAAACTGCTGT 1068

Danio ------------------------------------------------------------

Mus TGCTTCTGGTAGGATT-CAGTAGTTGAACGTGAGTTACTG-ATTCCTCAGAAACTGCTGT 1081

Gallus TCATGGTAAGAGAGAA-AACTCTTGGAAAGTGGGCTCACAAACTCCTTGCTTTGGGTGGT 1220

Anopheles ------------------------------------------------------------

Homo ACCGGCCACCAGGATTTCTGAAGTTGAACGTGAGTTATTGGCTTTGCCAGAGACTGCTGT 1131

Pan ACCGGCCACCAGGATTTCTGAAGTTGAACGTGAGTTACTGCCTTTGCCAGAGACTGCTGT 744

Drosophila ------------------------------------------------------------

Canis TCCATTTAATATCCTTCCTGAAAT------------------------------------ 171

Bos ------------------------------------------------------------

Rattus GTTAATTTTAAATGCAAACCTGTAAGCAGTTGGTCTCCTCCTCTTCTCCCCTCCCCCTTT 1128

Danio ------------------------------------------------------------

Mus GTTAATTTTCAATGCAAACCTGTAAGCAGTTGGCCTCCTCCTCTTCTCCCCTCCCCCTTT 1141

Gallus GTTACAGT---------ATTTGCATATTGT-----GTCTCTGAATATTCCGTGTACTTTG 1266

Anopheles ------------------------------------------------------------

Homo GTTAT------ATGCAGACCTGTATGCAAGCAG----TTGGCCTTTTTTCCCCCCCCTTT 1181

Pan GTTAT------ATGCAGACCTGTATGCAAGCAG----TTGGCCTTCCCCCCCCCCCCTTT 794

Drosophila ------------------------------------------------------------

Canis ATTTT------ATGC------------------------------TCCCCCCCCCAGATC 195

Bos ------------------------------------------------------------

Rattus TCAGTTGAGAAAATGAAAAGGACGTTTTCCCCATTTTGATGCGGAGGCTTTTTGTTGGAA 1188

Danio ------------------------------------------------------------

Mus TCAGTTGAGAAAATGAAAAGGACGTTTTCCCCATTTTGATGCGGAGGCTTTTTGTTGGAA 1201

Gallus ATCTTGGAAACAGTTAGAGGGACTTTTTTCTGTCTGAGA------------GTACTGTGA 1314

Anopheles ------------------------------------------------------------

Homo TCAGTGTAGAAAATGAAAAGGATGCTTTCCTCATCTTGGTGGTAAAGGCTTTTGTTGGTA 1241

Pan TCAGTGTAGAAAATGAAAAGGATGCTTTCCTCATCTTGGTGGTAAAGGCTTTTGTTGGTA 854

Drosophila ------------------------------------------------------------

Canis TATCTGTATAAGTAAACAGGAAAGTATTTCTCAA---GAATGTCAAGCTTTTAAGTAAAA 252

Bos ------------------------------------------------------------

Rattus GAGTCAGAGTTGAATGTGCTATAATTGCGTTAGCCTTAAAA-ATAAAAAATATAATTTTA 1247

Danio ------------------------------------------------------------

Mus GAATCAGAGTTGAATGTGCTATAATTGCGTTAGCCTTAAAA-ATAGAAAGTATAATTTTA 1260

Gallus AACTCCACGTTTAATG-------ATTGGGCTGAATTGAAAATATGAAATGTGCATTACCA 1367

Anopheles ------------------------------------------------------------

Homo AAGGTAGAATTGAATGT--ACCAAATGCCTTAGTCCGTAAA-ATTTTAGAAATAATTTTA 1298

Pan AAGGTAGACTTGAATAT--ACCAAATGCCTTAGTCCATAAA-ATTTTAGAAATAATTTTA 911

Drosophila ------------------------------------------------------------

Canis AATATCATTCTGAACAT--TATAAAAGCTATG----AAAAA-ATGCTCAATGTGCATTTA 305

Bos ------------------------------------------------------------

Rattus ATAAGACTTTTTCACATTTAGAA---TCCTCTAAAGACAATTTTACGTCAATTTTTTTTT 1304

Danio ------------------------------------------------------------

Mus ATAAGACTTTATCAGCTTTAGAAGAATCCTCTAAAGACAATTTTACGTCAATTTTTTTT- 1319

Gallus ATAA------------------------CTTTCAATAACTTTCCTCACCTACTTTT---- 1399

Anopheles ------------------------------------------------------------

Homo ATACAGACACTGGTGAAGCTTGGCA-ACCTTGAAAGAGAATTTAGCGTCTACATTTTTTA 1357

Pan ATACAGACACTGGTGAAGCTTGGCA-ACCTTGAAAGAGAATTTAGCGTCTACATTTTTTA 970

Drosophila ------------------------------------------------------------

Canis ATGTGGT----------------------------GAGAGTTTTAACTCAAATGCTGCTT 337

Bos ------------------------------------------------------------

Rattus ---ATGTCTTTTGAGGATACTGAAATAGA------CAAAATCTCTTTGGGTTTGTATTAA 1355

Danio ------------------------------------------------------------

Mus ---ATGTCTTTTGAGCATGCTAAAATAGAACAGTATAAAATCTCTTTGGGATTGCGTTAA 1376

Gallus -----GCCTTTAGAAACAGATGCGGTT--------TGCAGTGTTTATGACTGTCTCCATA 1446

Anopheles ------------------------------------------------------------

Homo AATGACTTTTTATGGATATGCTAAATTAGTAACAGTCCAAAATCTGTTTGAGATTATTAA 1417

Pan AATGACTTTTTATGGATGTGCTAAATTAGTAACAGTACAAAATCTGTTTGAGATTATTAA 1030

Drosophila ------------------------------------------------------------

Canis TAGAAATTTTTACAGGTTTAATAA----------------AGCTGATGTAATTTTCTCTC 381

Bos ------------------------------------------------------------

Rattus GTAGCTAGTGTACTGTTGCAAATGTTAACCAAATAGTATATGGGATGTGTGATCCACAAT 1415

Danio ------------------------------------------------------------

Mus ATAGCTAGTGTACTGTTGGAAATGTTAACTAAATAGTATATGGGATGTGTTATCCACCAT 1436

Gallus ATAG------TACCGTTGTCAATTCAGGCGTAATACT----GGAATAAAAAGCATACAAC 1496

Anopheles ------------------------------------------------------------

Homo GTGGCGAGGGTGCTGTTGAAAATGTAAACT-AATAGCATATGGGGTTTACAGTGCACAGT 1476

Pan GTGGCGAGGGTGCTGTTGAAAATGTAAACT-AATAGCATATGGGGTTTACAGTGCACAGT 1089

Drosophila ------------------------------------------------------------

Canis GTAGAGAGT-TACAGTTGGAGGGTAAAAGG-AGTGGCTTGCATGCTGGATAAGCTACACC 439

Bos ------------------------------------------------------------

Rattus TATCTAATGTCGCAAAGGA-TGTTCGTATAACCCAGGGTTTTGGGAGAAGCAGCAGATT- 1473

Danio ------------------------------------------------------------

Mus TATCTTACTTCGTGAAGGA-TATTCGTATAACCCATGGTTTTGGGAGAAGCAGCAGATT- 1494

Gallus TATTT-----------------------------AGGTTTATAGGATGAAAAATAACTT- 1526

Anopheles ------------------------------------------------------------

Homo TAACCTCAATCATGAAGAAATGTGGATATGACCCGTAATTTTGGATCATTTTACTGCCTG 1536

Pan TAACCTCAATCATGAAGAAATGTGGATATGACCCGTAATTTTGGATCATTTTACTGCCTG 1149

Drosophila ------------------------------------------------------------

Canis TGTTATTATT-----GGAAGTGAGCCTCCATTTGAATGTTCTGGCTCATA-------CTG 487

Bos ------------------------------------------------------------

Rattus --ATGTTAAAATGCTTTGGAGAAGGAAGTGCGTTTGAAATGAAGATGGCCTGAACTTTAA 1531

Danio ------------------------------------------------------------

Mus --ATGTTAAAATGTTTTGGATAGGGAAGTGCGTTTGAAATAAAGATGGCCTGAACTTTAA 1552

Gallus --TAATTGAAATAATT---ATAGTGCAGTCT--------TACAGATGTTCTTCTCTCTTG 1573

Anopheles ------------------------------------------------------------

Homo CAATATTGAGAGAAGCAGCAAATTATTACAGTTTTTTTTGGGAGACGACCTAAAGTTTAA 1596

Pan CAATATTGAGAGAAGCAGCAAATTATTACAGATTTTTTTGGGAGACGACCTAAAGTTTAA 1209

Drosophila ------------------------------------------------------------

Canis CAGTATTTAGAGTAGGAAGTATTTTGTGATTACTTTTCTGTAATCCAAATCAAGACCTAA 547

Bos ------------------------------------------------------------

Rattus GAAATATAGCTGTGGGGCAGGGGGTGGGGGAGAAATATAGCTGTTAAAAAGCTAAATATT 1591

Danio ------------------------------------------------------------

Mus GAAATACAGCTGT-------------------------------TAAAAAGCTAAATAT- 1580

Gallus TGAATGTCCCACTCCA----------------------------CTCTGCGTTTACTATT 1605

Anopheles ------------------------------------------------------------

Homo GAAATACAACTGTTGAA-----------AGTTACCTGTCAGAGACACAAAGGTACCCAAT 1645

Pan GAAATACAACTGTTGAA-----------AGTTACCTGTCAGAGACACAAAGGTACCCAAT 1258

Drosophila ------------------------------------------------------------

Canis AATAGAGACTCTTCTGA-----------GATTTATTTTTTATTTTTTAATGTTACTTATT 596

Bos ------------------------------------------------------------

Rattus CAAAGACCTAGTAAATCTTGTTGGACAAGTGACATGACAAGTGTTTTTTTTTTTTTTTTT 1651

Danio ------------------------------------------------------------

Mus CAAAGCCCTA----------TTGGACAAGAGACACGACGAATGTTTTT------------ 1618

Gallus TAATGTGGTA--------TCTTTCCTCCAGGAATTAACAAGTTCTTCTT----------- 1646

Anopheles ------------------------------------------------------------

Homo CAATCTTGTTG-------AATAAATTGGACAAGTGGGATAAGGTGTTTGT---------- 1688

Pan CAATCTTGTTG-------AATAAATTGGACAAGTGGGATAAGGTGTTTGT---------- 1301

Drosophila ------------------------------------------------------------

Canis GTTTGTTTTAA-------AGTTCCTTTTCTGGTTTG-------TTACTGT---------- 632

Bos ------------------------------------------------------------

Rattus GTTTTTTGTTTTTGTTTGTTTTTTGTTTTTTTTTTGTCACATCCCAGATTAGTGACTACT 1711

Danio ------------------------------------------------------------

Mus -----------------------------------GACACACCTCAGATTAGTTAATACT 1643

Gallus ------------------------------------------------CTGTTTACCAGA 1658

Anopheles ------------------------------------------------------------

Homo -----------------------------------CTCACACTTCTGATCAATAAGTACT 1713

Pan -----------------------------------CTCACACTTCTGATCAATAAGTACT 1326

Drosophila ------------------------------------------------------------

Canis -----------------------------------GACAAACTTTAGGTTAACCTAAATC 657

Bos ------------------------------------------------------------

Rattus TTTACTTAAGATTTTTTTTTTTTTTGGTAAATCATGCAGATTTAGATTTTAGGAGAGATA 1771

Danio ------------------------------------------------------------

Mus ----CTTAAGATATCTTTTT-----GGTAAATTATGTAAATTTAGAATTGAGGAGAGATA 1694

Gallus GCTGTTTGATATTTCTCCTCACTGGAGTATTCAGTGGCTCCCAAGTGTTTGGAAATAAAA 1718

Anopheles ------------------------------------------------------------

Homo CTTACTTAAGAAGTGATTTGGT-----AAATCATGTAAAATTTAGAATTTAGGAGAGATA 1768

Pan CTTACTTAAGAAGTGATTTGGT-----AAATCATGTAAAATTTAGAATTTAGGAGAGATA 1381

Drosophila ------------------------------------------------------------

Canis TGTACTTTTGA-GTTTTTTTTC-----CCCTTTGATTATATCCTGAATTTGGTAAAACTA 711

Bos ------------------------------------------------------------

Rattus AAAGGAAAATTTTGTCTTGTTATGTATGACAGAAACTGCTTTAGTATTAAATTCTC---T 1828

Danio ------------------------------------------------------------

Mus AAAGGAAAATTTTGTCTTGTTATGTATGACAGAAATTGCTTTAGTATTAAATTCTCCTCT 1754

Gallus ACA-----------TCAAGCTAGATGGCAAAAGAAATGATTTGGTTTGTCACTTGT---- 1763

Anopheles ------------------------------------------------------------

Homo AGA---AAGTTGTAACTTGGTGTGTATAGTGGAAATAGCTTTGAAATTAGATCCTGTTTT 1825

Pan AGA---AAGTTTTAACTTGGTGTGTATAGTGGAAATAGCTTTGAAATTAGATCCTGTTTT 1438

Drosophila ------------------------------------------------------------

Canis TGA---ACATGT---------------------------------ACTAGACCCT----- 730

Bos ------------------------------------------------------------

Rattus TAAGTAGAATCTGCTTACTGCACTTTTAAGGGAATGGATAT------------------- 1869

Danio ------------------------------------------------------------

Mus TAAATAGA--CTGCTTACTGCACTTTTAAGGAAGTGGATAC------------------- 1793

Gallus ---------TTTGTTTTATTTGTTTTTAGGGGTATGGTTGTG------------------ 1796

Anopheles ------------------------------------------------------------

Homo TAAATCCAAGCTACTTACCACATTTTTAGTGAAATGAATACATTATTAATGATGCTACTG 1885

Pan TAAATCCAAGCTACTTACCACATTTTTAGTGAAATGAATACATTATTAATGATGCTACTG 1498

Drosophila ------------------------------------------------------------

Canis -----------TACTTCCAAAAACTGGACAGTAACGAATA-------------------- 759

Bos ------------------------------------------------------------

Rattus -------------------------------------------TGCATCTGTATTGCTGA 1886

Danio ------------------------------------------------------------

Mus -------------------------------------------TGCATCTGTATTGCTGA 1810

Gallus -------------------------------------------TGCATCTATTTAAAAAA 1813

Anopheles ------------------------------------------------------------

Homo ATAAGCCCTAAGGATGACCAGAAGCCCTTTTAAGAAACACTAATACAGTTGACCAAAAAA 1945

Pan ATAAGCCTTAAGGATGACCAGAAGCCCTTTTAAGAAACACTAATACAGTTGACCAAAAAA 1558

Drosophila ------------------------------------------------------------

Canis -------------------------------AAGAAAC-----TGTAGTGGGGCCAAAGT 783

Bos ------------------------------------------------------------

Rattus TAAGCCTAAG---------TA----TGACTGTAAATCCATAGATACTTAGCAT------- 1926

Danio ------------------------------------------------------------

Mus TAAGCCTAAG---------TAAGGATGACTGTAAATCCATAAATACTTAGCTT------- 1854

Gallus GAAAAC------------------------ATAAAACCTCAGACAGTCAG---------- 1839

Anopheles ------------------------------------------------------------

Homo TAAAAAAGGAAATAGCTTCAAGAAATAATTTTCAATCTTTGTGTATTTATAATATACACA 2005

Pan TAAAAAAGGAAATAGCTTCAAGAAATAATTTTCAATCTTTGTGTATTTATAATATACACA 1618

Drosophila ------------------------------------------------------------

Canis AAAGCTTGGAAACTATTGCTAGATGTTAATTTAATAGTTTCGGGAATCTGAATGTTAAC- 842

Bos ------------------------------------------------------------

Rattus --------------------TACAAAAAAGCCATGTATCAAAATC-TGTAATAAAAATGA 1965

Danio ------------------------------------------------------------

Mus --------------------TACAAAAAAGCCATGTATCAGAATC-TGTAATAAAAATGA 1893

Gallus -----------------------AGGTGTGTCTTTGGTTGTTGTG-TTTTCCAAGCA-GT 1874

Anopheles ------------------------------------------------------------

Homo GGAGAAATAAAAGAACAGAATATGAAGAGGTAACTTATAATCTTTACAAAATTAGAATGT 2065

Pan GGAGAAATAAAAGAACAGAATATGAAGAGGTAACTTATAATCTTTACAAAATTAGAATGT 1678

Drosophila ------------------------------------------------------------

Canis ---------------TAAGATATGTTTAGGTAAGCTAT--TCATAATATTACAGAAATAT 885

Bos ------------------------------------------------------------

Rattus GAACTTCATCAAT-TTGCAGTCTATATTTTAAGAAAGATACAA----------------- 2007

Danio ------------------------------------------------------------

Mus GAACTTCAACAAT-TCGCAGTCTATCGTTTAAGAAAGATACAG----------------- 1935

Gallus GAGTTTCAA---------ATCCTAGGTGTTAATCCACGTCCTC----------------- 1908

Anopheles ------------------------------------------------------------

Homo AAACTATGCTAGTCTTACTGTGTCAATATTTATTAACCTGCATTAGTTTGCTAAGTAGTA 2125

Pan AAACTATGCTAGTCTTACTGTGTCAATATTTATTAACCTGCATTAGTTTGCTAAGTAGTA 1738

Drosophila ------------------------------------------------------------

Canis AAGCAG----------AATGACTAGAAATTTATTCAGCTGTGT----------------- 918

Bos ------------------------------------------------------------

Rattus ---------------------------------------------CACATAATAAAGATG 2022

Danio ------------------------------------------------------------

Mus ---------------------------------------------CACATAATAAAGATG 1950

Gallus ---------------------------------------------CTCAAAGCTGATGTG 1923

Anopheles ------------------------------------------------------------

Homo TGCTCACTATCCTCTGGACATTGCCCCTGTCCCTGAGGAGCTTAACTTTATACAGAGATA 2185

Pan TGCTCACTATCCTCTGGACATTGCCCCTGTCCCTGAAGAGCTTAACTTTATACAGAGATA 1798

Drosophila ------------------------------------------------------------

Canis --------------------------------------ATTTTAACATATTACTGTAAGA 940

Bos ------------------------------------------------------------

Rattus AGA--------------------------------------TGACTTGTAGCTT------ 2038

Danio ------------------------------------------------------------

Mus AGA--------------------------------------TGACTTGTAGTTT------ 1966

Gallus TGA--------------------------------------TTTTTTGATTGTT------ 1939

Anopheles ------------------------------------------------------------

Homo CAAAATACTGTGTTTTGATTTCCTTTCAGAGGATTTATAAGCTACTTATGTTTTATCTGT 2245

Pan CAAAATACTGTGTTTTGATTTCCTTTCAGAGGATTTATAAGCTACTTATGTTTTATCTGT 1858

Drosophila ------------------------------------------------------------

Canis AAAG-----------TGTTTCTCTT--------------AGTTATTTGTATATT------ 969

Bos ------------------------------------------------------------

Rattus ----------------TGTTTTCAGAATCAGAATGTAAGTAAGCTGTGAAGTA-TTTGTG 2081

Danio ------------------------------------------------------------

Mus ----------------TGTTTTCAAAATCAGAATGTAGGT----TGTGAAATAATTTGTG 2006

Gallus ----------------TTTCACGTAACAAACAATTCTAGTCGTCTTTTAATTACTGCTCC 1983

Anopheles ------------------------------------------------------------

Homo CCTAAATTCTGCCCTTTTTTTTC-CCATGGCTGAAAAAATAACTTCCTAAGAAAGGTACA 2304

Pan CCTAAATTCTGCCCTTTTTTTTTTCCATGGCTGAAAAAATAACTTCCTAAGAAAGGTACA 1918

Drosophila ------------------------------------------------------------

Canis -------------CACTTTTCTCTTAATT-----AAAAATAATTTCC------------- 998

Bos ------------------------------------------------------------

Rattus TCAATATTTACCTTGCATTGGTGTGTTGTGG----------------------------- 2112

Danio ------------------------------------------------------------

Mus TCAATATTTACCTTGCAT-GGTGTGTTGTGA----------------------------- 2036

Gallus TGCTTAGAGGCATGTGAGTGATGATCTGTGG----------------------------- 2014

Anopheles ------------------------------------------------------------

Homo TACTAGTCAGAGGTGTGGGGAAAACGTGTTCTCATCCCACTTGTGCAGTCCATTTAACAG 2364

Pan TACTAGTCAGAGGTGTGGGGAAAACGTGTTCTCATCCCACTTGTGCAGTCCATTTAACAG 1978

Drosophila ------------------------------------------------------------

Canis ---------ATTTTGAGTAGAAAACTTGCGCTAATA------------------------ 1025

Bos ------------------------------------------------------------

Rattus ------------------AGTGGTATACACACGTAATTCTTTGGGTATTGCTCCTCATAT 2154

Danio ------------------------------------------------------------

Mus ------------------AGTGGTATACACA--TACTTCTTTGGATGTTGCTCTTCATAT 2076

Gallus ------------------ATGGA-------AGGTAAAACTCTGTGCATTAA-----ATAT 2044

Anopheles ------------------------------------------------------------

Homo GATTTATTGGGTACCTACAGTGTCTTTGACATGTAACATTTAATCAGTTGTATTTCTTAA 2424

Pan GATTTATTGGGTACCTACAGTGTCTTTGACATGTAACATTTAATCAGTTGTATTTCTTAA 2038

Drosophila ------------------------------------------------------------

Canis ----------------ACCATGTTTAAGAGACCCAGGGATAGACCTCTT----------- 1058

Bos ------------------------------------------------------------

Rattus ACCTGAGGAGCTTAACCATGAGTTTAAAAAAAAAAAAATCCCT----------------- 2197

Danio ------------------------------------------------------------

Mus AACTGAGGAGCTTAACTTTGAGTTTAGAAAA-------TTCCT----------------- 2112

Gallus ATCTAGGGATGTTTAATGCCTGTCAGAGTCTGTTAGAGCACCT----------------- 2087

Anopheles ------------------------------------------------------------

Homo ACTTTAGATAATTTCTATTTCGATCATTTCTATTTCAATCTCCTCCCTCTCCCCTCCAAA 2484

Pan ACTTTAGATAATTTCTATTTCGATCATTTCTATTTCAATCTCCTCCCTCTCCCCTCCAAA 2098

Drosophila ------------------------------------------------------------

Canis --TTAGGGTAATATCTCTTTCAATCCTTTCATATTCTATCCTT----------------- 1099

Bos ------------------------------------------------------------

Rattus --------------------TTTGCATGCAGGTTTTGT---------------------- 2215

Danio ------------------------------------------------------------

Mus --------------------TTTGTATGCAGGTTTTGT---------------------- 2130

Gallus --------------------TCAGATTGTACCTGTTCT---------------------- 2105

Anopheles ------------------------------------------------------------

Homo AAAATTTACTGTGTAAACTGTGATAATACACTGTTTCTCTCAGTGTCAGTCAGTGGAATG 2544

Pan AAAATTTACTGTGTAAACTGTGATAATACACTGTTTCTCTCAGTGTCAGTCAGTGGAATG 2158

Drosophila ------------------------------------------------------------

Canis -----------------CTGTTAGACTGAATTGGTTT------------------AAACT 1124

Bos ------------------------------------------------------------

Rattus ----------------------------------------------AGGTGGCTTTTTTT 2229

Danio ------------------------------------------------------------

Mus ----------------------------------------------AGGTGGCTTTTTT- 2143

Gallus ----------------------------------------------AACGAACGTGGGAA 2119

Anopheles ------------------------------------------------------------

Homo ATCCAGATTTATAGGTCATAGCAAAATTTTTCATCCCAAGCTCTTGAAATGATGTTTCCA 2604

Pan ATCCAGATTTATAGGTCATAGCAAAATTTTTCATCCCAAGCTCTTGAAATGATGTTTCCA 2218

Drosophila ------------------------------------------------------------

Canis ACTTGGTTTGACATAT------------------------------AAATGGTTTTTCGA 1154

Bos ------------------------------------------------------------

Rattus AA-------TCTCTGAAATATCCACCATCACCATTTTTTCGTTCTTTTTTTTTTTTTT-- 2280

Danio ------------------------------------------------------------

Mus -A-------TCCCTGAAATAGCCACCATCACCCTTTT---------TTTTTTTTTTTT-- 2184

Gallus AA-------TAAAACAGATTCACTTCATTTGCATTGA---------TTTTTCTTCTGT-- 2161

Anopheles ------------------------------------------------------------

Homo AATGTCCATTTTCTTAAATGACTGCTAGTTATGTTCTCCAATCATGTTACACATATTTTG 2664

Pan AATGTCCGTTTTCTTAAATGACTGCTAGTTATGTTCTCCAATCATGTTACTCATATTTTG 2278

Drosophila ------------------------------------------------------------

Canis A------GCTCACTTGAATATATGTTAAT------ATTAAATGATAATCCACTTATAT-- 1200

Bos ------------------------------------------------------------

Rattus ------------------------------TGTTGAAAGGGTCTTAATGGTACTC-CACT 2309

Danio ------------------------------------------------------------

Mus ------------------------------TTGAGAAAGGGTCTTA-TGGTATAT-CGCT 2212

Gallus ------------------------------AAGAGACAACGTGCTACAGACAT------- 2184

Anopheles ------------------------------------------------------------

Homo TTTAGACTTATAATTGTGTAGGTCTAAATGTAGAAACATTACATTATGTACATATGCAGC 2724

Pan TTTAGACTTATAATTGTGTAGGTCTAAATGTAGAAACATTACATTATGTACATATGCAGC 2338

Drosophila ------------------------------------------------------------

Canis -----ATTTACAAT------------AATTTGGTGACAGTTTGATGCTAATGTTTACA-- 1241

Bos ------------------------------------------------------------

Rattus GGATGACCTGTAACTTTCCTCTTGGCTTTGTCTCCAGGGT----TCTGCAATTAAAACTG 2365

Danio ------------------------------------------------------------

Mus GGATGACGTCTAACTCTCCTCTTGGCTTTGTCTCCAGGGT----TCTGCGATTAAAAATG 2268

Gallus --ATGAAGTGACATGTACCTCTGGTGTATAAAATCATGTG----TGTTTCACTATAAATG 2238

Anopheles ------------------------------------------------------------

Homo TGCTGAAAGAAAATTAGTTTTCTAATTTTTAGATCGGGGTGAAGACAAACTTTTAGAAGT 2784

Pan TGCTGAAAGAAAATTAGTTTTCTAATTTTTAGATCGGGGTGAAGACAAACTTTTAGAAGT 2398

Drosophila ------------------------------------------------------------

Canis ----------------------TACTCTTTTGTTTAGGG----AACAGAAATTGGAAAAC 1275

Bos ------------------------------------------------------------

Rattus TATACCACCAGGACTGGCTA---------------------------------------- 2385

Danio ------------------------------------------------------------

Mus TATACCACCAGGACCGGCTA---------------------------------------- 2288

Gallus TGCTTTGT--GGATGCGTTG---------------------------------------- 2256

Anopheles ------------------------------------------------------------

Homo GATCTTTCGGTAAAATACTGGATGAAGTCTTAGGTGCTCTTTTTATGTTGGTTCAGGACA 2844

Pan GATCTTTCGGTAAAATACTGGATGAAGTCTTAGGTGCTCTTTTTATGTTGGTTCAGGACA 2458

Drosophila ------------------------------------------------------------

Canis TACCATTTGATGATGTA------------------------------------------- 1292

Bos ------------------------------------------------------------

Rattus -------CTTGCCCTTTTTATGGCTTTAAAT----------------------------- 2409

Danio ------------------------------------------------------------

Mus -------TTTACCCTTTTTATGGTTTTAAATT---------------------------- 2313

Gallus -------TTTGTTAGTTTTCACGT------------------------------------ 2273

Anopheles ------------------------------------------------------------

Homo AAAGTTTTTTGACTGCTTTTTGAGTTTTCCCCTCACTGCCAAATGTAAGGATAAAATGTA 2904

Pan AAAGTTTTTTGACTGCTTTTTGAGTTTTCCCCTCACTGCCAAATGTAAGGGAAAAATGTA 2518

Drosophila ------------------------------------------------------------

Canis -------TTTAATTTCAATCCCATTTCTC------------------------------- 1314

Bos ------------------------------------------------------------

Rattus ------AGAAAATGTAATTTTCATCTGAGAC----------------------------- 2434

Danio ------------------------------------------------------------

Mus -----AGAAAAATGTGATTTCTACCTGAGACAAAACTCATTCTATTTGATTCGTTTTTTT 2368

Gallus -------GAATTCATAGGTTCTGTTTAACTA----------------------------- 2297

Anopheles ------------------------------------------------------------

Homo GTAACAAGACATCTTGGTATGTATAGTGGTAATATCTTTGGAATTAGACCCTAATTTTAA 2964

Pan GTAA-AAGACATCTTGGTATGTATAGTGGTAATATCTTTGGAATTAGACCCTAATTTTAA 2577

Drosophila ------------------------------------------------------------

Canis -----AAAACTTTGTAGTATATATTGTGCTTTTA-----------AGACTCCAATTTGTT 1358

Bos ------------------------------------------------------------

Rattus ------------------------------------TAATTTCTCTGACATGTTAAT--- 2455

Danio ------------------------------------------------------------

Mus TTTTTTTTTTTTAACATTGCATTCATTAGGTATCTATAATGTCTCTGACATGTAAAT--- 2425

Gallus -------------------------------------AATGTATGGGGGG---------- 2310

Anopheles ------------------------------------------------------------

Homo TTCTGGCCTTATTAATCTTGGTAAGCCACAGTTTTGTCATCTGTAAAATGGGTTGGTGAA 3024

Pan TTCTGGCCTTATAAATCTTGGTAAGCCACAGTTTTGTCATCTGTAAAATGGGTTGGTGAA 2637

Drosophila ------------------------------------------------------------

Canis TTCCTTCTTGCTTATGTCT-------TACCTTTTTGC----------------------- 1388

Bos ------------------------------------------------------------

Rattus -----------------------------------------------------TTTATTC 2462

Danio ------------------------------------------------------------

Mus -----------------------------------------------------TTTATTC 2432

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ACTTCCCCAGAGTTGTGAGGCTTAAAGTATGTAAAACGCCTAACACGTAGGCACTCAATA 3084

Pan ACTTCCCCAGAGTTGTGAGGCTTAAAGTATGTAAAACGCCTAACACGTAGGCACTCAATA 2697

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AGTTGTATATCTTAAACATTTATGTCAATCTCTCTTCCCTCAAA-AATTGCT-------- 2513

Danio ------------------------------------------------------------

Mus AGTTGTATTTCTTAAACATTTGTGTC--------TTCCCTCAAATAATTGCA-------- 2476

Gallus GGTGGGAAGGGATAAATCTTTGAGTCAAGTT---TTAATAGTCATAAACGTA-------- 2359

Anopheles ------------------------------------------------------------

Homo AGTATTACCTTAGAAATCTTCCTATCCAGTTTTTCTGAATGGTCTGGAAGCACCTTGTAT 3144

Pan AGTATTACCTTAGAAATCTTCCTATCCAGTTTTTCTGAATGGTCTGGAAGCACCTTGTAT 2757

Drosophila ------------------------------------------------------------

Canis AGTAGTATTTTA---ATTTTCCTGTC---------------------------------- 1411

Bos ------------------------------------------------------------

Rattus -----GTAAT---CGTTTCTCTCAATTTTTATCAACTTTTTTTTTTCCATTGGGCATAGC 2565

Danio ------------------------------------------------------------

Mus -----GTAATAATTGTTTCTCTCAATTTTTATGAACATTTTCTTTTTAATTGGCCATAGC 2531

Gallus -----AACATGTTTAAGTGTGAACATGTTTAAGCATATAACATCTTGTATAAACAGTAAT 2414

Anopheles ------------------------------------------------------------

Homo GTAGTGGACTACAGCATGTTATCCTTTATGTTGTTTATTTCTTTTCTCATTAGCTATGAA 3204

Pan GTAGTGGACTACAGCATGTTATCCTTTATGTTGTTTATTTCTTTTCTCATTAGCTATGAA 2817

Drosophila ------------------------------------------------------------

Canis -------ATTGTGTCCTCATTTTTTTCCCTCTCTCTTTCTCTTTCCCTATTAATTTTGAA 1464

Bos ------------------------------------------------------------

Rattus TAATTTTTTT-CTGT----TCAAGGGCTTA-----------------AGATGATTTTTTC 2603

Danio ------------------------------------------------------------

Mus TATTTTTTTTTCTGT----TCAAGAGCTTA-----------------AGATGATCTTTTC 2570

Gallus TAGTGTGTTACATGA----TACGACACTTA-----------------ATGGAACAAATTA 2453

Anopheles ------------------------------------------------------------

Homo CTTTTTAAGGCCAGGAATTCCTAGTGTTTACCAGAGAATGTGTTACTAGATGTCTTAGTC 3264

Pan CTTTTTAAGGCCAGGAATTCCTAGTGTTTACCAGAGAATGTGTTACTAGATGTCTTAGTC 2877

Drosophila ------------------------------------------------------------

Canis AGTTTTGCCGCCTGC--------GTGTTTG-----------------AAAGCTTCTAATC 1499

Bos ------------------------------------------------------------

Rattus AA-----ATGTCCTTTA------------------------------------------- 2615

Danio ------------------------------------------------------------

Mus AA-----ATGTCCTTTA------------------------------------------- 2582

Gallus AGTGTTTATATTTTTCT------------------------------------------- 2470

Anopheles ------------------------------------------------------------

Homo TGTTCTGGCTGCTATTACAAAACACCACAGACAGCATGGCTTATAAACAACAGAAGTTTA 3324

Pan TGTTCTGGCTGCTATTACAAAACACCACAGACAGCATGGCTTATAAACAACAGAAGTTTA 2937

Drosophila ------------------------------------------------------------

Canis TGCCTTTCTTCCCTT--------------------------------------------- 1514

Bos ------------------------------------------------------------

Rattus ------------------------------------AAAAAATAAA-ACCTTAAATG--- 2635

Danio ------------------------------------------------------------

Mus ------------------------------------AAAAAACCAACACCTTAAATGAAT 2606

Gallus ------------------------------------GAATATTCATCGTCATAGTT---- 2490

Anopheles ------------------------------------------------------------

Homo TTTCTCACGGTTCTGGGGGCTGAGAAGTCCAAGATCAAGGTACCAACAAATTTGACATCT 3384

Pan TTTCTCACGGTTCTGGGGGCTGAGAAGTCCAAGATCAAGGTACCAACAAATTTGACATCT 2997

Drosophila ------------------------------------------------------------

Canis --------------------------------------AGTGCCAGCAGGTTTA------ 1530

Bos ------------------------------------------------------------

Rattus -GTTACTGGTATATTACCATTTATTCTACTTAGGTTTATGTTTGTTATTAATGATAAAAT 2694

Danio ------------------------------------------------------------

Mus GGTTACTGGTATATTATCATTTATTCTAATTAGGTT--TGTTTGTTATTATTGATAATAT 2664

Gallus --TTTGCTGTGCAGAAAAGTTTTTTTGGTTTTTGTTGTTGTTGGTTTTTTTGGTTTTTTT 2548

Anopheles ------------------------------------------------------------

Homo TAGTGAGGGCCCTCTTCCCTTGTTCATAGATAGCTAGCTGTCTTTTCACCATTACCTCAT 3444

Pan TAGTGAGGGCCCTCTTCCCTTGTTCATAGATAGCTAGCTGTCTTTTCACCATTACCTCAT 3057

Drosophila ------------------------------------------------------------

Canis ------------TTTTTTGTTTTGCAAGCCTGCTCTGCCTCCTTTACAGTATGACATC-- 1576

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTAGTAGAAGAGTAGACGGGGCTCTATAGGGCCTCTTTTATAGAGGCATTAATTCCATTA 3504

Pan GTAGTAGAAGAGTAGACGGGGCTCTATAGGGCCTCTTTTATAGAGGCATTAATTCCATTA 3117

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -----------------------------------------TACTGTTAATGGATTTATA 2713

Danio ------------------------------------------------------------

Mus -----------------------------------------TACTGTTAATGGATTTATA 2683

Gallus -----------------------------------------TCCCTTTGCTACTTTTGGT 2567

Anopheles ------------------------------------------------------------

Homo ATGATGGCAAAGCTTCCCAAAGGCCCCACCTCTTAATACTATCACCTTGGAGGTTAGGCT 3564

Pan ATGATGGCAAAGCTTCCCAAAGGCCCCACCTCTTAATACTATCACCTTGGAGGTTAGGCT 3177

Drosophila ------------------------------------------------------------

Canis -TGATG---------------------------------------CTGGAGGGTCGCACT 1596

Bos ------------------------------------------------------------

Rattus TTACA-----------------------------------------------TGTATATG 2726

Danio ------------------------------------------------------------

Mus TTATA-----------------------------------------------TTTATATG 2696

Gallus TTCAG-----------------------------------------------TTTACTTA 2580

Anopheles ------------------------------------------------------------

Homo TTCAACATGAATTTTGGGGG-ACACATTCAGACCACAGCACTAGAGCAGGCATGAATTGG 3623

Pan TTCAACATGAATTTTGGGGGGACACATTCAGACCACAGCACTAGAGCAGGCATGAATTAG 3237

Drosophila ------------------------------------------------------------

Canis TTCAAAA--------------------------------------------ATGAGTCAG 1612

Bos ------------------------------------------------------------

Rattus CAGCTATTAAAACATCAAGTGTTCTGATT--------TTTGCAACTGGGTTTGAATTTTA 2778

Danio ------------------------------------------------------------

Mus CAGCTATTAAAAACATCAGTGTTCTGATT--------TTTGCAACTGGAGATGAGTTTTA 2748

Gallus GGGAATGTCCAAAG---AGTATTCATATT--------TTAAAAGCAGGAAATGGCTTTTT 2629

Anopheles ------------------------------------------------------------

Homo TTATTGGTAAATCAGTAAATGATCAACTAA-CATTTATTAGGTTCCTCCTGTGGCTTCTA 3682

Pan TTATTGGTAAATCAGTAAATGATCAACTAAACATTTATTAGGTTCCTCCTGTGGCTTCTA 3297

Drosophila ------------------------------------------------------------

Canis C---TGGTACATGGGGTTATCATCAGTT---------TTTAGCTCTTCT----------- 1649

Bos ------------------------------------------------------------

Rattus ACCGATGGTCTTCTA--AGTACTTTCAAGTACAAAAAAAGTATCAGAGCAGAGGG----- 2831

Danio ------------------------------------------------------------

Mus AGAGGTGGTCTTTTA--AGTACTTTCAAATACGGAAAAA----CAATATAAAA------- 2795

Gallus CCTCTCCCCCTTCCACCAGTGTATTCATACACTGGAAGG--------------------- 2668

Anopheles ------------------------------------------------------------

Homo TGAGCTGAGCTAAGTACAGGACCCACAAAGACAAGAAAGATGTCTGTCTTTTTTGAATGC 3742

Pan TGAGCTGAGCTAAGTACAGGACCCACAAAGACAAGAAAGATGTCTGTCTTTTTTGAATGC 3357

Drosophila ------------------------------------------------------------

Canis -------------GTCTGAGACATACAAACA----------------------------- 1667

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTATAGTTGAGTGACTTTCTCACATTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTAAAAC 3802

Pan TTATAGTTGAGTGACTTTCTCACATTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTAAAAC 3417

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -------------------------------------TCATATAAAAATAGTCTTTAAAG 2854

Danio ------------------------------------------------------------

Mus ---------------------------------------ATATAAAAATAGTCCTCTAAG 2816

Gallus ---------------------------------------------TAAAAATTCTTACAG 2683

Anopheles ------------------------------------------------------------

Homo CCTATCACATAATGGAACTTCATTTTCCCATGCCCTTCCAATCTAAGAGCAGTTCTATGG 3862

Pan CCTATCACATAATGGAACTTCATTTTCCCATGCCCTTCCAATCTAAGAGCAGTTCTGTGG 3477

Drosophila ------------------------------------------------------------

Canis ---------------------------------------AGTTTGGAAGCAATCTTGGGG 1688

Bos ------------------------------------------------------------

Rattus TCTTT-GATGTTCTCTTCATATGAAGGTTTAGGATAATAGAGTTTTGGTTTT-------G 2906

Danio ------------------------------------------------------------

Mus TCTTTTGATGTTCTCTTCAGA--AAGGCTTAGGATAATAGAGTTTTGGTTTT-------G 2867

Gallus TGAAATGGAAAGACAAAGGGAAAGAATTCCTGGAGTACAGAGGTTCATTGCA-------A 2736

Anopheles ------------------------------------------------------------

Homo ACTCAATACCTCCTACCCACCAGCTGCTACTGTAAAGATTTACTTTTTTACTCCTTTTAA 3922

Pan ACTCAATACCTCCTACCCACCAGCTGCTACTGTAAAGATTTACTTTTTTACTCCTTTTAA 3537

Drosophila ------------------------------------------------------------

Canis -------------TACTTACCCACAAGGCTGGTGGAGACCAGGTGTGTCAC--------A 1727

Bos ------------------------------------------------------------

Rattus ACAGTA------------------TTTTACTTCATTACTGATAAAA----ATAAAAACAA 2944

Danio ------------------------------------------------------------

Mus ACAGTT------------------ACTT--TTTCTTACTGATAAAA----ATAAAGACAA 2903

Gallus GTACTG------------------ACTT---TCCTTTCTGGTCA---------------- 2759

Anopheles ------------------------------------------------------------

Homo AAAGTTCAACCCTCTGGCACATGCATTACTTCATTCCTTGGTCCCAGCCCACCACCCCAG 3982

Pan AAAGTTCAACCCTCTGGCACATGTATTACTTCATTCCTTGGTCCCAGCCCACCACCCCAG 3597

Drosophila ------------------------------------------------------------

Canis AAGGTG------------------ATTTGCTTGCTCCCTGG------------------- 1750

Bos ------------------------------------------------------------

Rattus TGTTATGTTAGGCATGATGTCTCACTTCTGTAAACCCAACAAT-TGAGAGATTGAAGA-- 3001

Danio ------------------------------------------------------------

Mus TGTTATGTTAGGCATGATGTCTCACATCTGTAAACC-AACAAT-TGAGAGGCT-AAGG-- 2958

Gallus TGGTAGGCCAGGT-TGTCACCCAACTTCAGTTAATGGATCAATATGGGCTTTTAAAGA-- 2816

Anopheles ------------------------------------------------------------

Homo TATCTGGCACGTAGTGTATTAGTATTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG 4042

Pan TATCTGGCATGTAGTGTATTAGTATTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTG 3657

Drosophila ------------------------------------------------------------

Canis -----GGGAGAGGGTGGAGTGAAATTTTTGCATTTGTGTCAGTGC--------------- 1790

Bos ------------------------------------------------------------

Rattus ----------------------------------------AAGGATTGTGGCCAGGTTTA 3021

Danio ------------------------------------------------------------

Mus ----------------------------------------AAGGATTGTGGCAA------ 2972

Gallus ----------------------------------------GAGGTGTGTTTTACATTT-- 2834

Anopheles ------------------------------------------------------------

Homo TGTGTGTGTGTGTGTGTATGTATATAGAATTTAAAATTTTTACTCCGGCAGTTGTCTTCA 4102

Pan TGTGTGTGTGTGT----------ATAGAATTTAAAATTTTTACTCCGGCAGTTGTCTTCA 3707

Drosophila ------------------------------------------------------------

Canis ----------------------------------------CAAGTCACCTGCCACCTCCA 1810

Bos ------------------------------------------------------------

Rattus GGTCAGCCTAGAATAAGAGTTGAGAACTTGTCTCAAAA---------------------- 3059

Danio ------------------------------------------------------------

Mus -----GCCTAGACTAAGAGGCGAGACCTTGTCTCAAAA---------------------- 3005

Gallus ---CTGGCTATTTTGGTAATATATTTTTTTTCTTTAGT---------------------- 2869

Anopheles ------------------------------------------------------------

Homo A-ATACTCTAATTTTGGGGGGCATGATTATCATTCTGTCTTCTGGCAGTACATGGATAGA 4161

Pan A-ATACTCTAATTTTGGGGGGCATGATTATCATTCTGTCTTCTGGCAGTACATGGATACA 3766

Drosophila ------------------------------------------------------------

Canis GCATGCCCCAGTTTTTAGTTCTAATATAACTATGC------------------------- 1845

Bos ------------------------------------------------------------

Rattus ----------------------------------------------------AAATGT-- 3065

Danio ------------------------------------------------------------

Mus ----------------------------------------------------AA--GT-- 3009

Gallus ----------------------------------------------------ATCCATGT 2877

Anopheles ------------------------------------------------------------

Homo TGCTACCTGAGTAGGATTGTCTATGAGGTCAGCTGCTCCAGTCATTTTATACAAGAGGAA 4221

Pan TGCTACCTGAGGAGGATTGTCTATGAGGTCAGCTGCTCCAGTCATTTTATACAAGAGGAA 3826

Drosophila ------------------------------------------------------------

Canis ---------------------------------------------------------AAA 1848

Bos ------------------------------------------------------------

Rattus -TATCAATCAGAGATGTGATA--GAATGTGTAATCAAACAAACTTTCTTTTTTTTTTTCT 3122

Danio ------------------------------------------------------------

Mus -TATCAATCAGAGATGTCATA--GAATGTGTAATTGAAAA-----------CTTTTTTCT 3055

Gallus ATTTGAACCACGAGTTTCGTAAAGAACTGGTATTTGAGTG--------------CTGGCT 2923

Anopheles ------------------------------------------------------------

Homo ATTGGAGTGCAAAGCTTTAAAATGATTTTCTTAAAGTCACCCAGGTGTCAGAACCAGAAC 4281

Pan ATTGGAGTGCAAAGCTTTAAAATGATTTTCTTAAAGTCACCCAGGTGTCAGAACCAGAAC 3886

Drosophila ------------------------------------------------------------

Canis ATTGAAAATAAATATACTGCAAAGAGGTTCTAAAA----------TATTTGAGCTG---C 1895

Bos ------------------------------------------------------------

Rattus TTTCTTTCTTTCTTCTCTTTCC--------TTCATTCCCTCCTTCCTTCCTTTTTTTCTT 3174

Danio ------------------------------------------------------------

Mus TTAATTAATTAATTAA-----------------------------------TTAATATTT 3080

Gallus GATAGTAGTTGAAT---------------------------------------------T 2938

Anopheles ------------------------------------------------------------

Homo CAGAGTCCATGTCTCTAGTTCAGGACTCTGCACACATTGGCACATGTTCTGTCCTACCTT 4341

Pan CAGAGTCCACGTCTCTAGTTCAGGACTCTGCACACATTGGCACATGTTCTGTCCTACCTT 3946

Drosophila ------------------------------------------------------------

Canis TGGAGTCTTTTTTTTT-------------------------------TTTTTTCTTCCTT 1924

Bos ------------------------------------------------------------

Rattus TTTGGAGGCAGG---------GTTTCTTTGTGTAGCTGTCGCTATCCTGTGTTGACCAGG 3225

Danio ------------------------------------------------------------

Mus TTGGGAGGCAGG---------GTTTCTTTGTGTAGCCATGGCTGTCCTG----------- 3120

Gallus CTGATTGGCACA---------TCGCATGAGAGGGGCAAGAAGTTCCCTG----------- 2978

Anopheles ------------------------------------------------------------

Homo TTGGGATGAATAGTTATACTTGCTTTGTGATTACTCACCCACCTTTTTGGAGACATATGA 4401

Pan TTGGGATGAATAGTTATACTTGCTTTGTGATTACTCACCCACCTTTTTGGAGACATATGA 4006

Drosophila ------------------------------------------------------------

Canis TT-----------------TTTTTTTTTTTTTTTGCATTCTTGGCCTTGGA--------- 1958

Bos ------------------------------------------------------------

Rattus CTGGCCTCAAA------------------------------------------------- 3236

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTGTTTTGTACACTATTAATAGAAGGCAGCCTTCACAAAATGCCATCTGCAGATCTGTTA 4461

Pan GTGTTTTGTACACTATTAATAGAAGGCAGCCTTCACAAAATGCCATCTGCAGATCTGTTA 4066

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ---CTCACAGAGATGAACCTGCTTTTGCCTCCCCAGTGCTGGGATTAGAGTTATGGCTAC 3293

Danio ------------------------------------------------------------

Mus -----------------------------------------------GAGCTA------- 3126

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTCTTCTAATAAAGGAAATGATGTAAAATTACCTTAAATAGAAATAGTGTTAATTCTTC 4521

Pan TTTCTTCTAATAAAGGAAATGATGTAAAATTACCTTAAATAGAAATAGTGTTAATTCTTC 4126

Drosophila ------------------------------------------------------------

Canis ---CTCTGAATGAATGAACTGCAGTGA--------------------------------- 1982

Bos ------------------------------------------------------------

Rattus CATCACCCAGCCTAGAAATATCTTTGTAGTAAGAGCTTGATTTCATTTTCGATGAGACAT 3353

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGGAGACATATTCCATAATCCAAACACGAAATGTTTGAAATACTTGAAGATGCCATATAA 4581

Pan TAGAGACATATTCCATAATCCAAACATGAAATGTTTGAAATACTTAAAGATGCCATATAA 4186

Drosophila ------------------------------------------------------------

Canis --GGGGTAATTTTCATAGTCTAATAA---------------------------------A 2007

Bos ------------------------------------------------------------

Rattus GGTTTTATCTATAAACAAGATGGTGAAGATATTCCAGATTTTTAAGAATTAAAGACTGTA 3413

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATAAGTCCTTTGTAAAAAGATAATATTAAAAATTTTTGTTTTATAGAGATGGGGGTCTCA 4641

Pan ATAAATCCTTTGTAAAAAGATAATATTAAAAATTTTTGTTTTATAGAGATGGGGGTCTCA 4246

Drosophila ------------------------------------------------------------

Canis TCAGATTTTTAACAGCTAAGAAATGTGGAAAACTGTTTTTGTT----------------- 2050

Bos ------------------------------------------------------------

Rattus AAGTGCTTAATAGTCTTTCAATTTTCATACCCAGTTTTTCTGAAAATCTTAAAGCACCTT 3473

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTGTGTTGCCCAGGCTGGTCTTGAACTCCTCAGCTTTTACTTTAGCTTCCCAGTGTGTTG 4701

Pan CTGTGTTGCCCAGGCTGGTCTTGAACTCCTCGGCTTTTACTTTAGCTTCCCAGTGTGTTG 4306

Drosophila ------------------------------------------------------------

Canis --------------------------------ACTTTTCTTTT----------------- 2061

Bos ------------------------------------------------------------

Rattus TTATATAGCGTTTTATAGTCCATAATCTGTTCTGTTGTTTTCTTTCTCATTATGAAGTCA 3533

Danio ------------------------------------------------------------

Mus ---------------------------------GCTGTATT------------------- 3134

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GGATTACAGGCATGAGCCACAATACCTGGCCAAGTCCTTTTTTTTAATCAAATGACTTAT 4761

Pan GGATTACAGGCATGAGCCACAATACCTGGCCAAGTCCTTTTTTTTAATCAAATGACTTAT 4366

Drosophila ------------------------------------------------------------

Canis ----------------------------------TTTTTTTTTTTGATG----------- 2076

Bos ------------------------------------------------------------

Rattus GGCCAGGGATTTATATTG-----TTTAATCAGAGACTATTTTTCCAGAAGCCT-----AA 3583

Danio ------------------------------------------------------------

Mus GACCAGG-----------------CTGGCCTCAGACTATGTTTCCAGAATCCTT----AA 3173

Gallus ------------------------------TCGGGGTCTTTACCAAAGAATTAA----AA 3004

Anopheles ------------------------------------------------------------

Homo TAATACACAGTTTCTTTGCCAGCTTTTGTTTTCATTTGCTATCAAAAATGTTGCTTAGTA 4821

Pan TAATACACAGTTTCTTTGCCAGCTTTTGTTTTCATTTGCTATCAAAAATGTTGCTTAATA 4426

Drosophila ------------------------------------------------------------

Canis -------------------TGGCTCTGATTTTAAGATTCTTCTGTTAAAATTGTTCAAGA 2117

Bos ------------------------------------------------------------

Rattus GTCTGTTCAGCCTATTTATAAAATACCAAAGGTTGGTCTTACACCTCTCTACC------- 3636

Danio ------------------------------------------------------------

Mus GTCTGTTTGGCCTATTTATAAAATACCAAAGACTGGTCA-ACACCCCCCTTCC------- 3225

Gallus ATTTATT--GTTTACTTGTATTAATCTCCTGCTTTGGCTGACCAATCCCCCTC------- 3055

Anopheles ------------------------------------------------------------

Homo GTGCTTTGATCTGAGTTATCAATAACAGGTAAATGCCATTATGGATAATAATTCAAAAAG 4881

Pan GTGCTTTGATCTGAGTTATCAATAACAGGTAAATGTCATTATGGATAATAATTCAAAAAG 4486

Drosophila ------------------------------------------------------------

Canis TTAGTCTCAAGTCAGTGATAGATTTAAAACTCAGGTTATTGTAAATGTCATTT------- 2170

Bos ------------------------------------------------------------

Rattus ---CCCC---TCTAAAAAACGTATCTCA--GTTATGGACATTGAGAAGTGTTAAGATCAA 3688

Danio ------------------------------------------------------------

Mus ---CCCCAACTCCAAAAAATGTATCTCACAGTCAAGGACACTGAGAAATCTTAAGATCAG 3282

Gallus ---CCCC-------AAGAGAGCGCTGAA-----ACTATTGCTTAAATATTTGTTTCCCAG 3100

Anopheles ------------------------------------------------------------

Homo AAGCTTATTAATTATTAGGCCTATCTGAGAGTGAAGTAAAGTTAGCATTTTCT-TTTTGT 4940

Pan AAGCTTATTAATTATTAGGCCTATCTGAGAGTGAAGTAAAGTTAGCATTTTCT-TTTTGT 4545

Drosophila ------------------------------------------------------------

Canis -AGCTTTTGATCTCTTAAAAAAATTGAGAATTTGAGT---GTTAGCAATCATTATTCTAT 2226

Bos ------------------------------------------------------------

Rattus AGCTAATTTTCAATGTAA-TTTG------------------------------------- 3710

Danio ------------------------------------------------------------

Mus AACTAATTTTCATTGTAAATTTG------------------------------------- 3305

Gallus AGACAACAGCAATGAACAAATCG------------------------------------- 3123

Anopheles ------------------------------------------------------------

Homo TTATTTTACTTATTGTTTATTTGTTTAGAGACAGGGTCTCGCTGTGTTGCCCAAGTTGGA 5000

Pan TTATTTTACTTATTGTTTATTTGTTTAGAGACAGGGTCTCGCTGTGTTGCCCAAGTTGGA 4605

Drosophila ------------------------------------------------------------

Canis TGATTTAATATACTG--------------------------------------------- 2241

Bos ------------------------------------------------------------

Rattus ----AGTAATGTTAGGAGGATTAGGGGCTGAACC-------------------------- 3740

Danio ------------------------------------------------------------

Mus ----AGTAGTGTTAGGAGGACTAAGGACTGAACC-------------------------- 3335

Gallus ----CGTGCTTGAAGTGACTTTTGTTCTTGT----------------------------- 3150

Anopheles ------------------------------------------------------------

Homo GTGCAGTGGTGCTGTCATAACTCATTGCAGTCTCAGGCTGGAGTGATCCTCCCATCTCAC 5060

Pan GTGCAGTGGTGCTGTCATAACTCATTGCAGTCTCAGGCTTGAGTGATCCTCCCATCTCAC 4665

Drosophila ------------------------------------------------------------

Canis -----ATGCTGTTTATAAAACTGAATAGGGT----------------------------- 2267

Bos ------------------------------------------------------------

Rattus ------------------------------------------------TAGTACCTCTCA 3752

Danio ------------------------------------------------------------

Mus ------------------------------------------------TAGGGCCTCTCA 3347

Gallus -----------------------------------------------------CATCTCA 3157

Anopheles ------------------------------------------------------------

Homo CCTCCTGAGTAGGTGGGATTAGCATATGCCACCATGCCTGGCTAATTTTTTTATTTTTTA 5120

Pan CCTCCTGAGTAGGTGGGATTAGCATATGCCACCATGCCTGGCTAATTTTTTTATTTTTTA 4725

Drosophila ------------------------------------------------------------

Canis -------AATAGGAG---------------------------------TTTCTTTTTTTA 2287

Bos ------------------------------------------------------------

Rattus AGTTCTAGG-------------------------AACTGCTTTTCCACTTCTTAGTCCT- 3786

Danio ------------------------------------------------------------

Mus AGTTCTAGG-------------------------AACTGCTCTACCACTTCCTAGTCCT- 3381

Gallus AATACTTTG-------------------------ACCTTAACTAACATTTA--------- 3183

Anopheles ------------------------------------------------------------

Homo ATTTTTTTGTGGAGATGGGGTCTTGCCGTGTTCAGGTTGGTTTCAAACTCCTGGTCTCAA 5180

Pan ATTTTTTTGTGGAGATGGGGTCTTGCCGTGTTCAGGTTGGTTTCAAACTCCTGGTCTCAA 4785

Drosophila ------------------------------------------------------------

Canis ACACCATAGTAGAAATAGG-------------CAAAATTGATTCATACCCCAAAATGAAA 2334

Bos ------------------------------------------------------------

Rattus -CTGTACTGACTCTAGCTCAGGCAGACCTTGAACTGGGAATCCTCCTACTTTCTTCCATA 3845

Danio ------------------------------------------------------------

Mus -CTGTACACACTCCAGCTCAG----ACCTTGAAATGGGAGTCCTGCCGC---CTTCCATA 3433

Gallus -CTGCACTGACTTCCTGTATATACAGCCAACACCTGGCAGCCT---CATACAGCAACGTA 3239

Anopheles ------------------------------------------------------------

Homo GCGGCTTGGCCTCCCAAGGTGCTAGGATTACAGGTGTGAGCTACCATGCCCAGCTGAGCA 5240

Pan GCGGCTTGGCCTCCCAAGGTGCTAGGATTACAGGTGTGAGCTACCATGCCCAGCTGAGCA 4845

Drosophila ------------------------------------------------------------

Canis ATAAC--AGACTTTTTAGTGCCTAAG-----AGTTTTGAATATTTCTATGCAAGATAGTA 2387

Bos ------------------------------------------------------------

Rattus GTAGCTGTGATTGCAGGCC--------TGTACCACTGTGTGTTGGCATGT-TGTCTCTGT 3896

Danio ------------------------------------------------------------

Mus GGAGCTGTGATTGCAGGCC--------AGTATCACTATGTCTCTGTATCTCTGTCTCTGT 3485

Gallus TGGCCTGTGAATGAAAGTT--------TGGAG-GCTGCTGGCTCATACCAATAGTAATGT 3290

Anopheles ------------------------------------------------------------

Homo TTTTTAAAAAATACTGGTCTTTGTACATGAGTCGTTACTATTTGATTCTAAGCCTTATGA 5300

Pan TTTTAAAAAAATACTGGTCTTTGTACATGAGTCGTTATTATTTGATTCTAAGCCTTATGA 4905

Drosophila ------------------------------------------------------------

Canis TATTTAAAAAATAATAG-------AAAACAACTGACAACTATTAATAACAAATCAGTTCA 2440

Bos ------------------------------------------------------------

Rattus --------GTTTCTGTCTGTAT-TAATTGTTTATTTTTTTTTTGATTTTATTGTATGAGA 3947

Danio ------------------------------------------------------------

Mus TTATTAGGGTTTTTGTTTGTTTGTTTTTGTTTGTTCTTTTTTTGATTTTATTATATGAGA 3545

Gallus -----------GCACAGTGTACCTAGTTAGTTAGCCA------AAAGTCAGCACAT-AGA 3332

Anopheles ------------------------------------------------------------

Homo CTGATATCCCTAAAAATTATTTATAAAATTTTAAGTGCATCAGAGTCATTGAAATGGAAT 5360

Pan CTGATATCCCTAAAAATTATTTATAAAATTTTAAGTGCGTCAGAGTCATTGAAATGGAAT 4965

Drosophila ------------------------------------------------------------

Canis TAATTATCCATAG----------TAAAATTTTAA-TACCCCAGCTTGGTATACTTTTGAT 2489

Bos ------------------------------------------------------------

Rattus GTGCACTTGGGTGTGGATGTCTGTGATCCGTGAA------------GGTGAGAAGAGAGT 3995

Danio ------------------------------------------------------------

Mus GTCCACATTGGTGTGGT--------GTCTGTAGG------------GGTGAGAAGAGAGT 3585

Gallus GTGTAAAGGGCTGTGT----------TTTGTAAC------------GA----AGCAACAT 3366

Anopheles ------------------------------------------------------------

Homo GAGCACTGTCTTTTGGTCTTGAGGTTGTTTTAACTAGCTTCGTAATGGTCATGAGCAGGT 5420

Pan GAGCACTGTCTTTTGGTCTTGAGGTTGTTTTAACTAGCTTCGTAATGGTCATGAGCAGGT 5025

Drosophila ------------------------------------------------------------

Canis ATGTAGTGCATCTTG--CCCCAGTATATTTTCA-------------------GGGAAAGT 2528

Bos ------------------------------------------------------------

Rattus GTTGGGACTGCTGGGACTGGGATTTTTGACTGTTGTTCAGTTGCCATGTCAGATCTAGAA 4055

Danio ------------------------------------------------------------

Mus GTTGGAACTGCTGTGACTGGGATATA-GACAGTTGTT-AATTGCCATGTGGGCTCTAGAA 3643

Gallus GTCGGTAGCTATATGGACAGGTGAGACATTCTTTGGGAAAGTAGCCTCATAGTAGAAGTA 3426

Anopheles ------------------------------------------------------------

Homo TATTTAGCTTTTGAAGCCTTCGTTCCTTCTTTTGTCAAATGAAAGTGATAGTTGCTTTGT 5480

Pan TATTTAGCTTTTGAAGCCTTCGTTCCTTCTTCTGTCAAATGAAAGTGATAGTTGCTTTGT 5085

Drosophila ------------------------------------------------------------

Canis TAATTTCATTGTTGAACCAAGATAAT-----------AATGATTAGAATGATAAATCTCA 2577

Bos ------------------------------------------------------------

Rattus TTTGAACCCAGGTCCTCTGGAAGAGCA-CAAGTGCTTTCAATTTAACTTTTGAGTCATTT 4114

Danio ------------------------------------------------------------

Mus ATTGAACCCAGGTCCTCTGGAAGAGCAACAAGTGCTTTTAATTTAACTTTTGAATCATCT 3703

Gallus TCTGAA------------GAAGAAAAGGTAACTTCAATAATGTTTAGATCCAGGATTCCT 3474

Anopheles ------------------------------------------------------------

Homo TTTAAAAGAGTATGCTTTTCAAACGTGATCATTCTTGAAAATGTAGATTAAGAGCTTTTT 5540

Pan TTTAAAAGAGTATGCTTTTCAAACGTGATCATTCTTGAAAATGTAGATTAAGAGCTTTTT 5145

Drosophila ------------------------------------------------------------

Canis CTTAAAGTA-------TCTCAAAATTCATTAAGGCTATTAGATTTAAATTTGAATTACTT 2630

Bos ------------------------------------------------------------

Rattus CT----------------------------------------CTAGCTCTCTCTCCATTT 4134

Danio ------------------------------------------------------------

Mus CT----------------------------------------CCAGCCTTCCCTATATTT 3723

Gallus GC----------------------------------------CTGGCAGTGTTAACATGT 3494

Anopheles ------------------------------------------------------------

Homo AGAGGCCAAGTGCCATGGCTCACGCCTGTCATCCCAGCACTTTGGGAAGCCGAGGCGGGC 5600

Pan AGAGGCCAAGTGCCGTGGCTCACGCCTGTCATCCCAGCACCTTGGGAAGCCGAGGTGGGC 5205

Drosophila ------------------------------------------------------------

Canis AGAGCATAAGT-------------------------------TGGCAAACTTTTTCTTAA 2659

Bos ------------------------------------------------------------

Rattus CACTCCCCTTC-------TCTTCTTTTGTCTTTTTCCCC---------TCCCC-CTTCCT 4177

Danio ------------------------------------------------------------

Mus CCCTCCCCTTCCTTTCTTTTTTCTTTTGTCTTTTTCCCC---------TCCCCGCTTCCC 3774

Gallus GAGGAAGCTGGACTTCAGATCACTGTTTTTTTTATTTCT---------CCACC------- 3538

Anopheles ------------------------------------------------------------

Homo GGATCACGAGATCAGGAGATCGAGACCATCCTGGCCAACACGGTGAAACCTCATCTCTAC 5660

Pan GGATCACGAGGTCAGGAGATCGAGACCATCCTGGCCAACACGGTGAAACCTCATCTCTAC 5265

Drosophila ------------------------------------------------------------

Canis TGGTCCAGATAATAAATACTTTAGGCTTTGTGGGGCA--------------TAGCTCTAT 2705

Bos ------------------------------------------------------------

Rattus TTTCTTGTGACAGTGTCTCTCATTAGCC------TCTGATACTAATAAATAGGCTAAATA 4231

Danio ------------------------------------------------------------

Mus TTTCTTGTGTCAGTGTCTCTCACTAGCC------TCTGAAGCTA---------------- 3812

Gallus -TCATTGTGGCAGAACTTCTTGATGAAA------TAACTTGTTG---------------- 3575

Anopheles ------------------------------------------------------------

Homo TAAAATACAAAAAAAAAATTAGCCGGACGTGGTGGCGCATGCCTGTAGTCCCAACTACTC 5720

Pan TAAAATACAAAAAAAAAATTAGCCGGACGTGGTGGCGCATGCCTGTAGTCCCAACTACTC 5325

Drosophila ------------------------------------------------------------

Canis TCTAATAATACAACAAAAATAGGTGAC-----TGACCCAGGCC-----------CTACTT 2749

Bos ------------------------------------------------------------

Rattus GCTAAATAGGGGAAACTGG---------------------------CCTCCAACTCAAAG 4264

Danio ------------------------------------------------------------

Mus GGTAAATAGTCGAAGCTGG---------------------------CCTCTAACTCAAAG 3845

Gallus -----ATTGCAGAATTACA---------------------------TTATAAATTAAGAA 3603

Anopheles ------------------------------------------------------------

Homo AGGAGGCTGAGGCAGGGGAAACGCTTGAACACGGGAGGCGGAGGTTGCAGTGAGCCAAGA 5780

Pan AGGAGGCTGAGGCAGGGGAAACGCTTGAACCGGGGAGGCGGAGGTTGCAGTGAGCCAAGA 5385

Drosophila ------------------------------------------------------------

Canis TGTTGTCCCAGGAAATAG---------------------------TTTGCTGACCCCTGA 2782

Bos ------------------------------------------------------------

Rattus --ATCGCCTCTGCTAAGAGTAGGAC-ATAGGGTCTTTTAACATAAGGACATAGCTC---- 4317

Danio ------------------------------------------------------------

Mus --ATC-CACCTGCTTCAGCTAAGACTAAATGGTCTTTTAAAATTAGGACATTGCTC---- 3898

Gallus TTATCACCTTACATAGGCTTGTTATGTATGAATGTCTTAAAGGAAGCATTAACTAC---- 3659

Anopheles ------------------------------------------------------------

Homo TCATGCTACTGCCTGGCGACAGAGTGAGACTGCCTCTCAAAGAAAAAAAAAAAAA----- 5835

Pan TCATGCTACTGCCTGGCGACAGGGTGAGACTGCCTCTCAAAAAAAAAAAAAAAAAAAAAA 5445

Drosophila ------------------------------------------------------------

Canis TCTAAATACAGTTTGG-----GACTGTGAATACCAGTAAATGAATACTTGGAATA----- 2832

Bos ------------------------------------------------------------

Rattus TCATTCATCAATGTAGATCCTCCTAAAAGTCACACTTGTAATTTCATCACCTCAGATTTT 4377

Danio ------------------------------------------------------------

Mus TCATTCATCAATGTAGGTCCTCCTAAAAATTACACTTGTAATTTCATCACCTCCGATTTT 3958

Gallus TCTTTACTTTTAATAGGTT------GAGCCTGCTTCCCTATATTAGTAACTGCCGAAT-- 3711

Anopheles ------------------------------------------------------------

Homo CTTTTTAGAAACGTTGTTTTGGGGAATTTTTAG---TGTGTGAAT-TCATTTTAAATATG 5891

Pan CTTTTTAGAAACGTTGTTTTGGGGAATTTTTAG---TGTGTGAAT-TCATTTTAAATATG 5501

Drosophila ------------------------------------------------------------

Canis TTTTGGATAACCAGTATTTGTAGAAAGTTTCATAGTTGTATGTTT-TTATTATAAATATT 2891

Bos ------------------------------------------------------------

Rattus AGGCTTTTAGAGAAGTTTT-----AGTAGGGTGCAAACATTCACATATCATATAGGGGA- 4431

Danio ------------------------------------------------------------

Mus AGGCTTTTAGTGAAGTTTTTTTTTGGGGGGGTGCAAAGATTCAGAT--CACATAGAAGA- 4015

Gallus ------------------------GGAAGGGGGTGGAAATCAGTCTTTACCA----GGA- 3742

Anopheles ------------------------------------------------------------

Homo TGAACTCCATTTGACATGGACAATGGATCTTAATAGTTTGTGATACATTATTCAGTGTAT 5951

Pan TGAACTCCATTTGACATGGACAATGGATCTTAATAGTTTGTGATACATTATTCAGTGTAT 5561

Drosophila ------------------------------------------------------------

Canis TGACTTT---------------GTGAATAACTGTGATTTATTATACATTATACTGC---- 2932

Bos ------------------------------------------------------------

Rattus ----------------CTATGTCTGAAATAGTTATC--TATCAGCTAACGTTTCTGAAGC 4473

Danio ------------------------------------------------------------

Mus ----------------ATATGTCTGAAATAGTTATCAGTATCAGGTAGTGTTTCTGAGGC 4059

Gallus ----------------CTCGTTCTGTAATCACC-------TCACATGGTGGTTTTTACCC 3779

Anopheles ------------------------------------------------------------

Homo TAATCAAAAGTCAAATCTCTTTTGTAATTTGCTGTA-----CCAGACCTGTTGTGTTAAT 6006

Pan TAATCAAAAGTCAAATCTCTTTTGTAATTTGCTGTA-----CCAGACCTGTTGTGTTAAT 5616

Drosophila ------------------------------------------------------------

Canis --------------------TTTGTATATTGGTATC-----TAAATACAGTGTTTACAGT 2967

Bos ------------------------------------------------------------

Rattus TTCTTTGAAATCTGTGAGCTGGCCTGAGTTATAAGGGTTAAAAAAAACCCCAAGGAAATT 4533

Danio ------------------------------------------------------------

Mus TCCTTTGAATTGTGTGAGCTGACATGGGTTATAAGGGTTAAAAAAAAAG--AAAATATCT 4117

Gallus ATGTTCTA---------------CTGGGTGGTGAAGAATTAGGAGAAGTTGCAGTTGTTC 3824

Anopheles ------------------------------------------------------------

Homo CTGATCAATGGCAAGTGAATCATAAGATTGACCTGAAAGGAAAAGATATTTTTAGGGGAC 6066

Pan CTGATCAATGGCAAGTGAATCATAAGATTGACCTGAAAGGAAAAGATATTTTTAGGGGAC 5676

Drosophila ------------------------------------------------------------

Canis TTCCTTAA---------------------------------AAAAATG-----------C 2983

Bos ------------------------------------------------------------

Rattus ATCATTTGAAAACTGAT-GATTGGTTATTT-----------------------------A 4563

Danio ------------------------------------------------------------

Mus ATCATTTGGAAACTGATAGGTTGGTTATTT-----------------------------A 4148

Gallus AGCTGAGTGGATCTAAATGGGTGGCTTCCC-----------------------------T 3855

Anopheles ------------------------------------------------------------

Homo ATAGAATCATATTGGATAAGATTATTCCTATAGTTCATTTTCAGGAAATCTGAACAGGAA 6126

Pan ATAGAATCATATTGGATAAGATTATTCCTATAGTTCATTTTCAGGAAATCTGAACAGGAA 5736

Drosophila ------------------------------------------------------------

Canis ACTGACTTTTTTTTATTAGTCCAGCTTTTATAATAAACGTGT--------TGAATGGCAA 3035

Bos ------------------------------------------------------------

Rattus TTGCACATA-ACACCAATTTATTTTTTTAATGTGATA-TCCTATTA----------TGTT 4611

Danio ------------------------------------------------------------

Mus TTGCACATA-ACACCATTTTATTTTTT-AATGTGATAATTCTGTTA----------AGTT 4196

Gallus TTGGACCCCCAAGCCTCTGTCTTCAGTAAGTGGGGTGGCCTGCTTC----------TTTT 3905

Anopheles ------------------------------------------------------------

Homo TCTCGTGTAAGGAATCACATGTGAATTATAGAAGAGAGTCTGATGTAAGACTTTATTTAT 6186

Pan TCTCGTGTAAGGAATCACATGTGAATTATAGAAGAGAGTCTGATGTAAGACT--ATTTAT 5794

Drosophila ------------------------------------------------------------

Canis TCTGATTTGATAACTTTTCCTTCTGTTAAAATCTTTAGTCACTTTTAAAA------TTGT 3089

Bos ------------------------------------------------------------

Rattus ATAGAACTTAATTGTCTATGCCCCTCCAGGTTTAGGGCAGTTTTGTAGACTTA------- 4664

Danio ------------------------------------------------------------

Mus ATGGAATTTAATTGTCTGTGCCCCTCCAGTTTTAGGGCAGTTCTGTAGACTTAATAT--- 4253

Gallus GGAGCGACTTACATTTC-------------CTTAGGACAGGGATGTATGTCAAAGA---- 3948

Anopheles ------------------------------------------------------------

Homo TAAGGTCTGCATCTGTGTTTCAAGTAAGAGCATAGAGGTAGTATATGAGCCCTGAACACT 6246

Pan TAAGGTCTGCATCTGTGTTTCAAGTAAGAGCATAGAGGTAGTATATGAGCCCTGAACACT 5854

Drosophila ------------------------------------------------------------

Canis TAACAGTTAAATCTTGTTTTCAAATTTGTCTTCTAATATAATATGTCTGCCCC------- 3142

Bos ------------------------------------------------------------

Rattus -----------------------CCTTTAACCCCTCAGCTACAATTGCAAAGGGT---AC 4698

Danio ------------------------------------------------------------

Mus -----------------------CCCTTAACCCCTTAGCTACAATTGTAAAGGAT---AC 4287

Gallus ---------------------------GAAACTCTGAGCAGGTGTCACAGAGGCTTGAAC 3981

Anopheles ------------------------------------------------------------

Homo CATACAAGTAGGATAAAATTTTTCTTAAAACTGTTGGCTGGACAGTGTAGAGTCTAATGC 6306

Pan CATACAAGTAGGATAAAATTTTTCTTAAAACTGTTGGCTGGACAGTATAGAGTCTAATGC 5914

Drosophila ------------------------------------------------------------

Canis ---------------------TTTTTGGAA---------------TATGGAATATTTTGC 3166

Bos ------------------------------------------------------------

Rattus TATTGTATCTCCTTTAGGGGGTGATGGCAACAATCCAAGTTCATGTCTTAGTTGCAGCCC 4758

Danio ------------------------------------------------------------

Mus TGTT-TGTATCCTTTTTTGTATCCTTGGTATA---TGTGTTCATGTCTTACTTGCAGCCC 4343

Gallus CTCTCTGTGGTCTG-GTGGTTCGAAAAGGATATTCACGTTACGTGGCTTTCTAAGACTTC 4040

Anopheles ------------------------------------------------------------

Homo TGTGACTCTTAACAGTTTTGTGTGTTCCAGAAGTTCATCTCCTCAGGATCAATTGAGGTT 6366

Pan TGTGACTCTTAACAGTTTTGTGTGTTCCAAAAGTTCATCTCCTCAGGATCAATTGAGGTT 5974

Drosophila ------------------------------------------------------------

Canis T-TAATTTTCCTCAATTACATTT----------TACAGATCGCCAGGAGAACCTCAGTCT 3215

Bos ------------------------------------------------------------

Rattus AACAA----TATACTATTTATAGTGCACATGCACTCCTG------------------GTA 4796

Danio ------------------------------------------------------------

Mus ATCAA----TATCCT-TTTACAGTACACATGCACATGTG------------------GTA 4380

Gallus ATCAGAAAGTGTCCCTGCTCACATCCATCCAAACGGCTGT---------------GCGTT 4085

Anopheles ------------------------------------------------------------

Homo AGTCTAGCACAGACTTTAGTTATAGAAACCAAACATGAGAAAAATTTTTTGACCCATGTC 6426

Pan AGTCTAGCACAGACTTTAGTTATAGAAACCAAACATGAGAAAAATTTTTTGACCCATGTC 6034

Drosophila ------------------------------------------------------------

Canis GACGACATCGAAGCT-----------AGCCGAATGTAAG---------------TGTATC 3249

Bos ------------------------------------------------------------

Rattus TATATAAAGTGAAATAGGTTTAGTTTGGTATGCCATTCAGCCTCTTAGGACTCATTTTTT 4856

Danio ------------------------------------------------------------

Mus TATATAAAATGAAATAGATTTAGTCTAGTATGCTACTCAGCCTGTTAGGACTCATTTATT 4440

Gallus CAAGTACTTTTGAGTCACATTTACCTTGTGTATTATGCCAACAGTAAG-----ACTGGAC 4140

Anopheles ------------------------------------------------------------

Homo TTCGTAGCATGCAGGCTTGGTAGCTCTTTCCTAGTTCTGGATGTGTGCCCGTTGTATATA 6486

Pan TTCGTAGCATGCAGGCTTGGTAGCTCTTTCCTAGTTCTGGATGTGTGCCCGTTGTATATA 6094

Drosophila ------------------------------------------------------------

Canis TTGGT----TGCAGCTGTGGTGTCTTTTAAGTTACCCTAGATTGCT-------------- 3291

Bos ------------------------------------------------------------

Rattus TGGAGAGTGATTACCATTCTGACTTTCAATAATAAGAGTCAGAGATTTTATAAAACTAAA 4916

Danio ------------------------------------------------------------

Mus TGGACAATGATTACCATTCTGA--TTCAATAATAAGAGTCAGAGAT-------------- 4484

Gallus CGGAGGTAAATTCCAGTTGTGACATTT--TGGTACACATTTGAGCTTGAGTT-------- 4190

Anopheles ------------------------------------------------------------

Homo CTTTCAGCAATTCAGGATGTTCCTTTTCATATTTAAGACAAGCACTCTTGCATACAAATT 6546

Pan CTTTCAGCAATTCAGGATGTTCCTTTTCATATTTAAGACAAGCACTCTTGCATACAAATT 6154

Drosophila ------------------------------------------------------------

Canis ----------TTAAAGGTGTTATATT----ATTTGAAAATAATTTCCAAATGTAAGAGTA 3337

Bos ------------------------------------------------------------

Rattus TATTCTTCTGAGATCAGCTACTGTATTAACTTTTTTTTTTTTAATACACGAGGGCATTGA 4976

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ACATAGCTGTGGGCTGAATGAAGATGCTACCATTGCTGTACTTCTACACAGGTTCTTTTC 6606

Pan ACATAGCTGTGGGCTGAATGAAGATGCTACCATTGCTGTACTTCCACACAGGTTCTTTTC 6214

Drosophila ------------------------------------------------------------

Canis ATATAA--------------------------------------------------TTTA 3347

Bos ------------------------------------------------------------

Rattus AGATTTTTAAAATAGTTTTCTTAAGTTCATCTAAAGTCAGAATTAATCTAGAGCCTCTGG 5036

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATGTAATGAAA------------------------------------------------- 6617

Pan ATGTAATGAAA------------------------------------------------- 6225

Drosophila ------------------------------------------------------------

Canis AAAAAACCAAT------------------------------------------------- 3358

Bos ------------------------------------------------------------

Rattus CTCCTAGGTAAAGGTTCTACTTTCATTGGCAGAATTTGTTCAGAAGAATAACCAC-ACTA 5095

Danio ------------------------------------------------------------

Mus ---------------------------------GTTTGTTTGGAAGAATAGCTAC-ACTT 4510

Gallus ---------------------------------GGCTGCTTGGTGTGGCAATTGCTAGTT 4217

Anopheles ------------------------------------------------------------

Homo ----TCAGAAGGGATGGCTTTTCCATTTCAAGCTTCTGTTAATAAGTAGTCTTAGAATTG 6673

Pan ----TCAGAAGGGATGGCTTTTCCATTTCAAGCTTCTGTTAATAAGTAGTCTTAGAATTG 6281

Drosophila ------------------------------------------------------------

Canis ----TGCGAGAGAGGAACTTTCTTATATTA--TTCCTACCAAAAAAATTCCTTTAAACTT 3412

Bos ------------------------------------------------------------

Rattus GTTTTGCAATTACAAATTCACTTTTATGGAGTTATGTATTTTTATACTATTAATAA---- 5151

Danio ------------------------------------------------------------

Mus ATTTTGCAATTAGCAATTCACTTTTATGGAGTTATATATTTTTATACTATTAGTAA---- 4566

Gallus TTTTTGTGTTCTTTTCATTAGTACATTGAAAGTGTATATATACTTAATATACTTA----- 4272

Anopheles ------------------------------------------------------------

Homo CCTTTGTGTACTGTAGCCAACACCCCA--ACTCATATATTTTTATAATCTTTGTGATGCA 6731

Pan CCTTTGTGTACTGTAGCCAACACCCCA--ACTCATATATTTTTATAATCTTTGTGATGCA 6339

Drosophila ------------------------------------------------------------

Canis TGGTACCATATCAT----TAGATTTCT--ACTTTTATTTATTTATTTTATTTAT------ 3460

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GAATAAATTCTGAAACTTTCCACCTCCTAATTAAATATAGAAATACTGAAAACAATAAAG 6791

Pan GAAAAAATTCTGAAACTTTCCACCTCCTAATTAAATATAAAAATACTGAAAACAATAAAG 6399

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ---AGGATAATCTTTATAAGATAGCATAGGATTTTATTCTTTTGAATAAAAGATG----- 5203

Danio ------------------------------------------------------------

Mus ---AATATAATCCTTATAAGATAGCACAGGATTTAATTCTTTTAAATAAAAGATG----- 4618

Gallus -----TGTGACCTTAATTTCACAGGATGTGGCCTAAGTAACTCAATAAAAAG-------- 4319

Anopheles ------------------------------------------------------------

Homo CACCATGTATTCACTATGGACATATGTCACATTTTGTCACTTTCTTGCACTCTTGTAATC 6851

Pan CACCATGTATTCACTATGGACATATGTCACATTTTGTCACTTTCTTGCACTCTTGTAATC 6459

Drosophila ------------------------------------------------------------

Canis --TTATTTATTTATTTTAT------------TTTTTTTATTTTTTTAGATTTCTA----- 3501

Bos ------------------------------------------------------------

Rattus ---TGAAATAAATTGTATTACGTAGAAATACTATTATTTTTC--AATTTCTT-----TTT 5253

Danio ------------------------------------------------------------

Mus ---TGAAATAAATTGTATTAAGTAGAAATATTATTATTTTTCTCAATTTCTT-----TTT 4670

Gallus --------TCAAGTGTATCAACCATAAGTTCCAGAATCTGTTTCAGATTGATGGAAGTTT 4371

Anopheles ------------------------------------------------------------

Homo CCTCTCTAAAGCTCATGTTAAACTCATGTTCTTTATTTTCTTCTCAGATGATTCCTTTGG 6911

Pan CCTCTCTAAAGCTCATGTTAAACTCATGTTCTTTATTTTCTTCTCAGATGATTCCTTTAG 6519

Drosophila ------------------------------------------------------------

Canis CTTTTAGATAGGTAGTTGTATACTCCTGGATTCTAATGTCTTTTTGG-----TTACCTAG 3556

Bos ------------------------------------------------------------

Rattus CCAAATGTGAAAG-TTTGAAATACTTGAGGATGCTTTATTCCTTTTTAATAAAGTG--GC 5310

Danio ------------------------------------------------------------

Mus CCAACCATGAAAGGCTTGAAATACATGACA----CTTATTCCTTCTTAATAAAGTG--AC 4724

Gallus TGGTCTTGGTGGGCCTTGCGATAACCATTGGGATTGCAATGCGTAATTATGGA------- 4424

Anopheles ------------------------------------------------------------

Homo CACTGCATGTAACAGTACAGGAATTTCTTCCTTTCGTACTTCCAACAAATACTTTTTTGT 6971

Pan CACTGCACGTAACAGTACAGGAATTTCTTCCTTTCGTACTTCCAACAAATACTTTTTTGT 6579

Drosophila ------------------------------------------------------------

Canis CAGT-TGTGGGAAAATAGGGGAA------------AGAATTCAGGTTAATA-------AT 3596

Bos ------------------------------------------------------------

Rattus TTATTAATAAATACACATCAAA-------------------------------------- 5332

Danio ------------------------------------------------------------

Mus TTATTAATG--TACACATCAGA-------------------------------------- 4744

Gallus --ACCAGTATTGAGGCTCGGGG-------------------------------------- 4444

Anopheles ------------------------------------------------------------

Homo CTCTTAACAGATGTGAACCATAATGCTGTTCTTTAGAAAGCAAAGGATGAAGTGCACAGC 7031

Pan CTTTTAACAGATGTGAACCATAATGCTGTTCTTTAGAAAGCAAAGGATGAAGTGCACAGC 6639

Drosophila ------------------------------------------------------------

Canis CATTTATTAAATATTTACTATA-----------TATAAGGCAGCTGGTGATGTG------ 3639

Bos ------------------------------------------------------------

Rattus ---------------------------------------TTTCTTATGTTTTCATTTAAT 5353

Danio ------------------------------------------------------------

Mus ---------------------------------------TTTCCTTTGTTTTCATTTAAT 4765

Gallus ---------------------------------------CTTGCTGTGTATCTGTGTGGC 4465

Anopheles ------------------------------------------------------------

Homo AGTGTTTTCTATATAAAGCTAATGGGTCATAAGGGGAAATATGGGTTATTTCCAGCTTGT 7091

Pan AGTGTTTTCTATATAAAGCTAATGGGTCATAAGGGGAAATATGGGTTATTTCCAGCTTGT 6699

Drosophila ------------------------------------------------------------

Canis -------------------TTGTGGATACAAAGATGCTTCATGGGGTATTCCTGGGTAGC 3680

Bos ------------------------------------------------------------

Rattus TTCAAAATACTAGTTATAATTTCTTGATTTTTAGTTGT--CTATAACAACTAAATTAACT 5411

Danio ------------------------------------------------------------

Mus TTCAAAATATTACCTATACTTTCTTGATTTC-AGTTGT--CTATAACAACTAAACTAA-T 4821

Gallus AACAATGAATCCACCTGGTTTCCTCTTCCTTCTGATGT--TTTGGG--AGCAGTGTGGCA 4521

Anopheles ------------------------------------------------------------

Homo TAATTGTCTTAATACATTTTTCCTAAGAATTCTATTGTGCCTCTGTGGTTATATGCACCA 7151

Pan TAATTGTCTTAATACATTTTTCCTAAGAATTCTATTGTGCCTCTGTGGTTATATGCACCA 6759

Drosophila ------------------------------------------------------------

Canis TCAGCAGTTTAGCGC---CTGCCTTCGGCTCAGGATGTGATCCTGGGGTC-------CTG 3730

Bos ------------------------------------------------------------

Rattus GGATTG-TAATTTGGAA--AGATTATAAGTATTGGACCTA-----------TCTATAAAT 5457

Danio ------------------------------------------------------------

Mus GAATAG-TAATTTGGAA--AGATTATAAGTATTGGGCCTA-----------TCTATACAT 4867

Gallus AGACTG-CAGCTTGAGCTTGAGTTGTAAGGGCGAGGCTGGGTCTTTGTGCCTCTGTCATT 4580

Anopheles ------------------------------------------------------------

Homo ATATTGATAATCTTACAGCGTGCCATAAATAAGGATTTTT-----------ATATTATCT 7200

Pan ATATTGATAATCTTACAGCGTGCCATAAATAAGGATTTTT-----------ATATTATCT 6808

Drosophila ------------------------------------------------------------

Canis GGACTG--AGTCCCACATCAGGCTTCATGCATGGAGCCTG-----------CTTCTCCCT 3777

Bos ------------------------------------------------------------

Rattus AAAATAGTTTTTTTTTAATACTGCTATGTGAA-------AGAGGCTTAAATATACAT--- 5507

Danio ------------------------------------------------------------

Mus GAAAAAAATTTTTT---ATACTGATTTTTGAA-------AGAGGTTTCAATATACAT--- 4914

Gallus GAGGTGACTCTCCTTC--TCCTCCCTTTGGAC-------TCCCTTCTGGGACTCCTT--- 4628

Anopheles ------------------------------------------------------------

Homo TTGCTAAATATTTTAAGTTTTTGTTTTGGGAATTGAAAAAATCTTTTGTGCATCTATGGT 7260

Pan TTGCTAAATATTTTAAGTTTTTGTTTTGGGAATTGAAAAAATCTTTTGTGCATCTATGGT 6868

Drosophila ------------------------------------------------------------

Canis CTGCCTGTGTCTCTGCCTTTCTCCCTC-----------------TCTGTGTCTCT----- 3815

Bos ------------------------------------------------------------

Rattus ------------TATTTATT---TCTAGGTTTTACCTGA--------------------- 5531

Danio ------------------------------------------------------------

Mus ------------TACTTATTACTTTTAGGTTTTACCTGAAGCCACAGAATAAGTAAATGG 4962

Gallus ------------GACATGTCCTTGATGATCATTATGCCAGGCAAATTGGTGAAGTGAGCA 4676

Anopheles ------------------------------------------------------------

Homo ATGTGATACGTATACTAATGGATAAATCCTGTTTCACACAAAGATTAATTGGGTAACATT 7320

Pan ATGTGATACGTATACTAATGGATAAATCCTATTTCACACAAAGATTAATTGGGTAACATT 6928

Drosophila ------------------------------------------------------------

Canis --------CGTGAATGAATAAATAAAATCTTTTTAAAAAAGCCAAAAAACAAACCAAAGT 3867

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus CTCAGAATTTCAGTGGTTTAGGAAACAAAACAACTTAGGATTATTGAAATGGAATAAAGA 5022

Gallus ATGGGAATG----------------------------------------------AAAAA 4690

Anopheles ------------------------------------------------------------

Homo TTTCTTTCCTAGTTTTCTGAAGTCAGTGGTCATGTTGTGTGTTGGTGATTGAAAATATGC 7380

Pan TTTCTTTCCTAGTTTTCTGAAGTCAGTGGTCATGTTGTGTGTTGGTGATTGAAAATA-GC 6987

Drosophila ------------------------------------------------------------

Canis T---------------------------------------------GCTTCATAATAAGT 3882

Bos ------------------------------------------------------------

Rattus --------TTTTTGTTGCCAGAAGTTGTTGTTCTTCTGACTTCTGTCTTGAGCCAGAATG 5583

Danio ------------------------------------------------------------

Mus ATGCAATATTCATGTTGTCAGAAGTTGCTGCTTTCCTGACATCTGTCTTGAGCCAGAGTG 5082

Gallus TAGACCTCCCCCTCTCCCTGAGAGGCACGGAGATCTGTCGCACGGTGCCAAGCTGCGCGG 4750

Anopheles ------------------------------------------------------------

Homo TGTTTAGGCTGGGCGCCTTGGCTCACTCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCA 7440

Pan TGTTTAGGCTGGGCACCTTGGCTCACTCCTGTAATCCCAGCACTTTGGGAGGCCGAGGCA 7047

Drosophila ------------------------------------------------------------

Canis T---------------CCTAGCCCACAGA-ATAGTCTAATCAGTGTGAAGGAC--AGGAA 3924

Bos ------------------------------------------------------------

Rattus AGCTAAA---------------------AAGCAGGCCATTTATCTTTCTAAGGCATTGTT 5622

Danio ------------------------------------------------------------

Mus AGCTAAATAG------------------GAGCAGGCCATTTATCTTTCTAAGGCCTTGTT 5124

Gallus CGCTGAGAGA------------------TGCCAGGCTTGTCCAGGCAGCCGGGCCCTGGC 4792

Anopheles ------------------------------------------------------------

Homo CACGGATCACCTGAGGTCAGGAGTTCGAGACCAGCCTGGCCAACATGGTGAAACCCTGTC 7500

Pan CACGGATCACCTGAGGTCAGGAGTTGGAGACCAGCCTGGCCAACATGGTGAAACCCTGTC 7107

Drosophila ------------------------------------------------------------

Canis AGCAAATCATC--------------------------AATCATCATAGTAGAAGGAT--- 3955

Bos ------------------------------------------------------------

Rattus AATCATATTAAAGTGATACTGC------CTTCTTGGTACAGAG--------------GAT 5662

Danio ------------------------------------------------------------

Mus AATCATATTAAAGTGGTACTGC------CTTCTTGTTACAGAG--------------GAT 5164

Gallus AGTGCTTGTGCTCTCCTGCTCTGGTATGCTCTGTGGGACCCGG--------------GCT 4838

Anopheles ------------------------------------------------------------

Homo TCTACTAAAAATACAAAAATTAGCTAGGCGTGGTGGCACACGTCTGTAATCCCAGTTACT 7560

Pan TCTACTAAAAATACAAAAATTAGCTAGGCGTGGTGGCACACGTCTGTAATCCCAGCTACT 7167

Drosophila ------------------------------------------------------------

Canis ---ACTTAGGATGCAACA----------------GGAACATAAAGGAGTATTGAGTTACC 3996

Bos ------------------------------------------------------------

Rattus TATGCTGCTCATATGGGATACTTCTTGAAAGTTGGTTGATATTGTA-------------- 5708

Danio ------------------------------------------------------------

Mus TATGCTGCTCATATGTGATACTTCTTGAACATTGATAGATACTGTA-------------- 5210

Gallus GGAGCAGCTGCGGCTCAGCAGACTTGGGGTGTTGGAGCGTGGTGAACTGG---------- 4888

Anopheles ------------------------------------------------------------

Homo TGGGAGGCTGAGGCACGAGAATCGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCTGAG 7620

Pan TGGGAGGCTGAGGCACGAGAATCGCTTGAACCTGGGAGGCAGAGGTTGCAGTGAGCTGAG 7227

Drosophila ------------------------------------------------------------

Canis TAGGTA-------TATAGTAGGAGCCTAATGCAGGGAAGTCAGGGT-------------- 4035

Bos ------------------------------------------------------------

Rattus ---------------------TAAAGAGAGTAAGTTGCCCAGGAAATTAGTAGGAGAAAG 5747

Danio ------------------------------------------------------------

Mus ---------------------TAAAGAAAGTAACTTGCCCAGGAAATTTGTAGGAGAAAG 5249

Gallus -----------------CTCTTAAAGGAGCTGAACTTCCAAAGTGGGCTGCAGGTCAAA- 4930

Anopheles ------------------------------------------------------------

Homo ATCACACCATTGCACTCCAGCCTGGGCAAGCAAGATTTCATCTCAAAAAAGAAAAGAAAA 7680

Pan ATCACACCATTGCACTCCAGCCTGGGCAAGCAAGATTTCATCTCAAAAAAGAAAAGAAAA 7287

Drosophila ------------------------------------------------------------

Canis ------------------GGCCAGGGACGGCCAAATTAAATCTTGAAGTATAATTGGGAG 4077

Bos ------------------------------------------------------------

Rattus GATGATGGAATACTGTCTTA------------------------------------TTGT 5771

Danio ------------------------------------------------------------

Mus GATGATGGAATACGGTTATA------------------------------------TTGT 5273

Gallus -----CAGGAAATGCTACCA------------------------------------TAGT 4949

Anopheles ------------------------------------------------------------

Homo GAAAAGAAAATATGCTGTTTAAGATCATTCAAATTCAGTTTCTAAGAAGTGTAAAGTTTT 7740

Pan GAAAAGAAAATATGCTGTTTAAGATCATCCAAATTCAGTTTCTAAGAAGTGTAAAGTTTT 7347

Drosophila ------------------------------------------------------------

Canis TTAAGTAGCAGAAAGCATTG------------------------------GCAGGGTTGT 4107

Bos ------------------------------------------------------------

Rattus TT-CTGTT---------------------------------------------------- 5778

Danio ------------------------------------------------------------

Mus TTTCTGTT---------------------------------------------------- 5281

Gallus CGTGGGTG---------------------------------------------------- 4957

Anopheles ------------------------------------------------------------

Homo CCTAATTACTTAAGCTGCTTCATTCTCATTCCCTTTTGTAACACATTTTGCCATCTCTGT 7800

Pan CCTAATTACTTAAGCTGCTTCATTCTCATTCCCTTTTGTAACACATTTTGCCATCTCTGT 7407

Drosophila ------------------------------------------------------------

Canis TCTAGGCA--------------------------------------------------GA 4117

Bos ------------------------------------------------------------

Rattus AACATGGCTAAGCCTGTTAAAGAAACATCTGGGGATATTTTATTTTTGTTTATTTATTTT 5838

Danio ------------------------------------------------------------

Mus AACATGGCTAAGCCTCCTG----------------------------------------- 5300

Gallus AAGTTTTTTGATTTTGTTTTCT-------------------------------------- 4979

Anopheles ------------------------------------------------------------

Homo AACATGTTGAACATGTTTAAAGAA------------------------------CAGAGT 7830

Pan AACATGTTGAACATGTTTAAAGAA------------------------------CAGAGT 7437

Drosophila ------------------------------------------------------------

Canis AGTATGGGTAAAGTTATAAATCGG------------------------------CACAAT 4147

Bos ------------------------------------------------------------

Rattus GAGACAAAGGTTCTTCAGCTGATGTTATCTTGGAACTGACAGGGAGAATAAACGTGAACT 5898

Danio ------------------------------------------------------------

Mus -------------------------------------------------------GTCTT 5305

Gallus ----------------------------------------------------TTTTTGCT 4987

Anopheles ------------------------------------------------------------

Homo GGGAGAATAGGAAGTTACGTGGATAAAGTTTGGTAATCAAGGTAGGAATACATCCTGCTT 7890

Pan GGGAGAATAGGAAGTTACGTGGATAAAGTTTGGTAATTAAGGTAGGAATACATCCTGCTT 7497

Drosophila ------------------------------------------------------------

Canis GAGCTTAGGGAACAGTAGGTAGTTGAGGATTTTTAA----------ATCATAAACTGATT 4197

Bos ------------------------------------------------------------

Rattus TCTGGTCTTCCTACCTCTTTTGAGTGCTGGGATTGCAGGTGTGTA-CTCCT--------- 5948

Danio ------------------------------------------------------------

Mus TCTGGTAT--GTACCTCTTTTGAGAGCTGGGATTGCAGGGGTATATCTCCT--------- 5354

Gallus TTAGGCTTAGTCATGCATTTGAGCTGATGACTTCAGTACTTAACAACATTC--------- 5038

Anopheles ------------------------------------------------------------

Homo CACAGAATGGGAATATTTCTGAAAAGTTGACTGTAGTATTGAAGAACACTTAAGTGTAGT 7950

Pan CACAGAATGGGAATATTTCTTAAAAGTTGACTGTAGTATTGAAGAACACTTAAATGTAGT 7557

Drosophila ------------------------------------------------------------

Canis GAAAGACAGGAAATA------GAAAGGAGA---TAAGACTTGATAGGGTTAAAGCCTTGC 4248

Bos ------------------------------------------------------------

Rattus -TTATAGCTGCATTTACAATATA--AATTTGTTTCAGATTTGA----------------- 5988

Danio ------------------------------------------------------------

Mus -TTACAGCCGCAATTACAATATATGAATTAGTTTCAGATTTGA----------------- 5396

Gallus -TGATTTTTGCAGT-ATGGTATTTTTTGTTTTCTTAAAAGGCA----------------- 5079

Anopheles ------------------------------------------------------------

Homo GTATTAGACGAACTGAGCTAATTTTGGTCTTTTATACACATAAATCAAGATTTCTGCATT 8010

Pan GTATTAGACGAACTGAGCTAATTTTGGTCTTTTATACACATAAATCAAGATTTCTGCATT 7617

Drosophila ------------------------------------------------------------

Canis ATGCTATGTGAAGGG------CCTAGGCCTGTTTCATAGGTA----------TTTGAGGG 4292

Bos ------------------------------------------------------------

Rattus --------------------TAACTCCATTTC---------------------------- 6000

Danio ------------------------------------------------------------

Mus --------------------TAACT--ATTTC---------------------------- 5406

Gallus --------------------TAAAAA-ACTTC---------------------------- 5090

Anopheles ------------------------------------------------------------

Homo TCAAATCATGCATATTTCTTTAAATTTATTGCTCAGTGTACTGTATTTCAAATATTGTAA 8070

Pan TCAAATCATGCATATTTCTTTAAATTTATTGCTCAGTGTACTGTATTTCAAATATTGTAA 7677

Drosophila ------------------------------------------------------------

Canis TCAAAAAA-------------GAATTTGCTA----------------------------- 4310

Bos ------------------------------------------------------------

Rattus ----AATAATCCTAGGTTGTTTTGTTTC-------------------------------- 6024

Danio ------------------------------------------------------------

Mus ----AATAAGCTTAGGTTGTTTTGTTTC-------------------------------- 5430

Gallus ----TACAAAGCTAGAAAATGCTGTCTG-------------------------------- 5114

Anopheles ------------------------------------------------------------

Homo AAATGAAAAGATCTTGTGGTCTTATTTAACTCAGTATGGGATAAGTCCTTCCCACCTTCC 8130

Pan AAATGAAAAGATCTTGTGGTCTTATTTAACTCAGTATGGGATAAGTCCTTCCCACCTTCC 7737

Drosophila ------------------------------------------------------------

Canis ----AGGAAGGTGTAGTAACCTTGTTAGACATAAAAT----------------------- 4343

Bos ------------------------------------------------------------

Rattus -----------------CTAA-ACCACTGAAATTCTGAAGCACTTATTTCTTCTATGGTT 6066

Danio ------------------------------------------------------------

Mus -----------------CTAA-ACCACTGAAGTTCTGAAGCACTTATTACTTCTGTGGCT 5472

Gallus -----------------TCACTACTTCAGAATTTCCAGTGGGATGCTTTCATCTTTATTT 5157

Anopheles ------------------------------------------------------------

Homo CATTCTTATTCCCTCTTTTAGGCTGAATGAAAGGCTGGGGGAGTGAATTTAAAAATAGAT 8190

Pan CATTCTTATTCCCTCTTTTAGGCTGAATGAAAGGCTGGGGGAGTGAATTTAAAAATAGAT 7797

Drosophila ------------------------------------------------------------

Canis -----------------TTTAATAGTATTGGCAGCAGAGAAACCTAATTGAAGAGAAGTG 4386

Bos ------------------------------------------------------------

Rattus TCAAGTAAA-CCTAGAAATAAGTAACATA------CATTTAACACAAACAATAACTCTTA 6119

Danio ------------------------------------------------------------

Mus TCAGGTAAAACCTAGAAATAAGTAATGTA------CATTTAACATGAA------------ 5514

Gallus GCA---------TAGCTATATTCAGATAA------TACTTAGTTTCTG------------ 5190

Anopheles ------------------------------------------------------------

Homo GGATCTCAGCTGGAGAATGGGTTGGTCACGTATCTCAACTGATATTAAATAATTTCTTAA 8250

Pan GGATCTCAGCTGGAGAATGG-TTGGTCACGTATCTCAACTGATATTAAATAATTTCTTAA 7856

Drosophila ------------------------------------------------------------

Canis TGTGGTCAAGAGAAGTGTGTGGTGGTAGGGTG----ATCAGGGCTTCAATAGTTC----A 4438

Bos ------------------------------------------------------------

Rattus ATTGGTAGTGATAAATTATTTGCAAAGCTGAGTCCCTTGTCATTTGCTCTGCTTGACCT- 6178

Danio ------------------------------------------------------------

Mus ATTGTTAGTGATAAGTTATTTGCAAAGCTGAATTCCTTGTCATTTGCTCTTCTTGACCTG 5574

Gallus ATTCATAGTGAAATCTAACGTCCAAAGTCTTGATGATCGGTGTTAGGGTTTAGTACCCT- 5249

Anopheles ------------------------------------------------------------

Homo ATCCTGGATTGAAGATTATAAGAAAACAGTAAATGTTTGCTCTCAGTTCATTTCTTTGTT 8310

Pan ATCCTGGATTGAAGATTATAAGAAAACAGTAAATGTTTGCTCTCAGTTCATTTCTTTGTT 7916

Drosophila ------------------------------------------------------------

Canis GTCC---ATGAAAGCCTTAAGAAGGACAGTGATAGG--------AATTCAGGATAACATT 4487

Bos ------------------------------------------------------------

Rattus ---CTTCATTAAGTGAATT-----GAAAATAAATCAGTTGTAAGAA-------------- 6216

Danio ------------------------------------------------------------

Mus ATTTTTAATTAAATGAATT-----GCAAGTGAATCAGTTATAAGAA-------------- 5615

Gallus ATTCTATGTTTAGAAAGTC-----CAAGGTACACCAGT-----GTA-------------- 5285

Anopheles ------------------------------------------------------------

Homo TTGTTTTTTCATGTACAGTTTTAGGCACTTGTAACTGCTGGATGCATGAACTACTTTCTA 8370

Pan TTGTTTTTTCATGTACAGTTTTAGGCTTTTGTAACTGCTGGATGCATGAACTACTTTCTA 7976

Drosophila ------------------------------------------------------------

Canis CCCTGGATGTAAGAAAAATATTTGGAAAGTGAAATAGTTAAGA----------------- 4530

Bos ------------------------------------------------------------

Rattus -----------------TGATGGGAAAGG--GCAGGC--------------TGTAGGGGC 6243

Danio ------------------------------------------------------------

Mus -----------------TGATGGGAAAGG--GTAGCC--------------TTTAGGGGC 5642

Gallus -----------------CGCTGGCAGCTGTAGCAGCA--------------CTTAGGTGC 5314

Anopheles ------------------------------------------------------------

Homo GTTCTTTCAGGCCTACTTTTAGATATCTGCTGTGGGGACAGTCCTCAACACTTAAAGTAA 8430

Pan GTTCTTTCAGGCCTACTTTTAGATATCTGCTGTGGGGACAGTCCTCAACACTTAAAGTAA 8036

Drosophila ------------------------------------------------------------

Canis ----------------CTTCAGTGATTGGTTGTAGGAA-------------TTTAAGAAG 4561

Bos ------------------------------------------------------------

Rattus CATAGTACCATATTTAGGCTT---------------TTATAGCAAATCTGAGTAGGAGCC 6288

Danio ------------------------------------------------------------

Mus CATAGTACCATAGTTAAGCTTATTCTTGCAGTTCAGTTGTAGCAAATCTGAGGAGAAGCC 5702

Gallus C---------TGTTCCAACTG---------------CTGTAGCAAAAGCTGTGTACTGTG 5350

Anopheles ------------------------------------------------------------

Homo TTTTAAATAGTGATAGGCAGAACTAGGGGTCAGTTTTACTGCCTATGCCTGTGCTGAATT 8490

Pan TTTTAAATAGTGATAGGCAGAACTAGGGGTCAGTTTTACTGCCTATGCCTGTGCTGAATT 8096

Drosophila ------------------------------------------------------------

Canis TTTAAGTTAATAGGAA---------------------AATGGTAATTACTGAAGCAAGGT 4600

Bos ------------------------------------------------------------

Rattus TCATTAAGAAATCA------GTTTCTGAGAGAGAATCCTATGT----------------- 6325

Danio ------------------------------------------------------------

Mus TCACGAAGAAATTGCATTAGGCTTATGAAGGAGAATCCTATGT----------------- 5745

Gallus GCTGGTGGAAATATATAACTGTCCACACAAGC--------TGT----------------- 5385

Anopheles ------------------------------------------------------------

Homo TGACATGGCATTCCTAGGAGGGGAGGTGGAACGAGGGCGGTGCACACATTGTCCATATTG 8550

Pan TGACATGGCATTCCTAGGAGGGGAGGTGGAACGAGGGCGGTGCACACATTGTCCATATTG 8156

Drosophila ------------------------------------------------------------

Canis TTTTAAGGTAGT--------AAGGGTTGGAAAGA-------------------------- 4626

Bos ------------------------------------------------------------

Rattus --------------------AAATCTTGCTG------GCATCTTTATTTGAAGTGAAATA 6359

Danio ------------------------------------------------------------

Mus --------------------AAATCTTGCTGAAGCTGGCATCCTTATTTGAGTGAAACCA 5785

Gallus --------------------AAATC----------------CTTTGAGTTCTTAGGACAT 5409

Anopheles ------------------------------------------------------------

Homo CTAGTCAGTGCCAGATTTTGAGAAACTGGGGCTAATCTCTCTCTTAAATGGTCAAGATCT 8610

Pan CTAGTCAGTGCCAGATTTTGAGAAATTGGGGCTAGTCTCTCTCTTAAATGGTCAAGATCT 8216

Drosophila ------------------------------------------------------------

Canis --------------------AGAAATAGGTATAGGGATCGCTTTTGAAT----AAGAGCG 4662

Bos ------------------------------------------------------------

Rattus AA--------------------------------------------------------AA 6363

Danio ------------------------------------------------------------

Mus GA--------------------------------------------------------GT 5789

Gallus GA--------------------------------------------------------GG 5413

Anopheles ------------------------------------------------------------

Homo AATTCCCCAAAGTGCTGTTTCAGATAACCTAGTATTTGTCCAAAATTGCCCTGCTACAAT 8670

Pan AATTCCCCAAAGTGCTGTTTCAGATAACCTAGTATTTGTCCAAAATTGCCCTGCTACAAT 8276

Drosophila ------------------------------------------------------------

Canis AAGGCCCCTA-------------------------TCTTCCAAAACTACT-------AGA 4690

Bos ------------------------------------------------------------

Rattus GGAA------------------------------AGTAGTGTGTAGGTCCTGAACATAT- 6392

Danio ------------------------------------------------------------

Mus AGTAGTAG-------------------------TAGTAGTATATAGGTACTGAACTT--- 5821

Gallus AGTTCCTG-------------------------GGGGAATGTATCACTTTATTGAGATT- 5447

Anopheles ------------------------------------------------------------

Homo AGTATTTATCTTATATATATGTATTATATATATAATATATATATAATCTTATATATATGT 8730

Pan AGTATTTATCTTATATATATGTATTATATATA--ATACATATATAATCTTATATATATA- 8333

Drosophila ------------------------------------------------------------

Canis AGGAGCTA-----------------------AAGATGGATATGTGATGTTAACTATGTTT 4727

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATTATATATATTATATATATAATCTTATATATGTATTATATATATAATATATATATAATC 8790

Pan ------------ATATATATAAT------------------------------------- 8344

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTATATATATGTATTATATATATAATATATATATAATCTTATATATATGTATTATATATA 8850

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAATATATATATAATCTTATATATATGTATTATATATATAATATATATATAATCTTATAT 8910

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATATGTATTATATATATAATATATATATAATCTTATATATATGTATTATATATATATAAT 8970

Pan -----------------------------------------------ACATGTATATAAT 8357

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ACATATAAATATATATATATATATATATATAGGTTTTTTTTTGTTTTTCCTCCTGAGATG 9030

Pan ACATATATATATATATATATGTA---------GTTTTTTTTTGTTTTTCCTCCTGAGATG 8408

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ----------------------TTTAAATGAGCAGGATAAAAC----------------- 6413

Danio ------------------------------------------------------------

Mus ----------------------TTTATATGAGCAGGATAAAAT----------------- 5842

Gallus ----------------------CTGGGTTGCAAAGGTTGAGCC----------------- 5468

Anopheles ------------------------------------------------------------

Homo TAGTCTCGCCCTGTTGCCCAGGCTGGTGTGCAATGGTGCAGTCTTAGCTCACTGCAGCCT 9090

Pan TAGTCTCGCCCTGTTGCCCAGGCTGGTGTGCAATGGTGCAGTCTTAGCTCACTGCAGCCT 8468

Drosophila ------------------------------------------------------------

Canis ---------------------GTAGGTGTG-AATGGGGAAGTC----------------- 4748

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CCGCCTCCTGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCTGAGTAGCAGAGACTACAGG 9150

Pan CCGCCTCCTGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCTGAGTAGCAGGGACTACAGG 8528

Drosophila ------------------------------------------------------------

Canis ---------------AAGTCATTCTC----------------------AAAGA------- 4764

Bos ------------------------------------------------------------

Rattus -----------------------------TTGCCTTATACATCCTGCTGTCTGTTTTTAT 6444

Danio ------------------------------------------------------------

Mus -----------------------------TTTCCTTACACATAACCTTGTGTGT------ 5867

Gallus -----------------------------CTTTCTTCTGTAAGATGGTGATTAAATAGTC 5499

Anopheles ------------------------------------------------------------

Homo TGTGCACTACCACGCCCGGCTAATTTTTGTATTTTTAGTAGATACAGGGTTTCACCATGT 9210

Pan TGTGCACCACCATGCCCGGCTAATTTTTGTATTTTTAGTAGATACAGGGTTTCATCATGT 8588

Drosophila ------------------------------------------------------------

Canis ----------------------------ATTTTCTCAGTAAATTCGT-------TTAGGT 4789

Bos ------------------------------------------------------------

Rattus GTGGTGGAATCTGTTGTTTCTCTAAGCAGC---TCACC---------------------- 6479

Danio ------------------------------------------------------------

Mus -------AATCTGTTGTTACTCTTAGCAGCAGCTCAGT---------------------- 5898

Gallus CGTTTGCATGGTTCTTTTGTCCTGGATATC------------------------------ 5529

Anopheles ------------------------------------------------------------

Homo TGGCCATGCTGGTTTCAAACTCCTAACCTCAGGTGATCTGCCTGCCTCAACCTCTGAAAG 9270

Pan TGGCCATGCTGGTTTCAAACTCCTAACCTCAGGTGATCTGCCCGCCTCAACCTCCGAAAG 8648

Drosophila ------------------------------------------------------------

Canis CTGCTGTACCACTGTTTGTCTCCT---TTGAGATGATATGACA----------------- 4829

Bos ------------------------------------------------------------

Rattus ------------------------------------------GCATCTCAGAATTTGGTC 6497

Danio ------------------------------------------------------------

Mus ------------------------------------------ACATTTCAGAATTTGGTC 5916

Gallus --------------------------------------------TTATTGAAAGGAGACT 5545

Anopheles ------------------------------------------------------------

Homo CACTGGGATTACAGGCATGAGCCACCACACCAATCCTATTACATTCTTAAAAAAATGTTT 9330

Pan CACTGGGATTACAGGCATGAGCCACCACACCAATCCTATTACATTCTTAAAAAAATGTTT 8708

Drosophila ------------------------------------------------------------

Canis ---------------------------------------CATTTCTTGAAAAGGAGGTTC 4850

Bos ------------------------------------------------------------

Rattus TTCCTTACCTCTCAGCATCATCTGAGCAGTATAGTACAGATCT----------------- 6540

Danio ------------------------------------------------------------

Mus TTTCTTACCTGTCAACATCATTTAAGCAGTATAGCACAACTCT----------------- 5959

Gallus ATTTGTGAATACTTGTTTTATTTGAACAACATGTGAAGAATGT----------------- 5588

Anopheles ------------------------------------------------------------

Homo GTTTGTTTGTTTTTGTAGAGATGAAGTTTCACTATATTACCCAGCCTGGTCTTGACTCCT 9390

Pan GTTTGTTTGTTTTTGTAGAGATGAAGTTTCACTATATTACCCAGCCTGGTCTTGACTCCT 8768

Drosophila ------------------------------------------------------------

Canis AATTGTTGAGTTTGGAAACTGCAAAGTTAAACAGGTTTCTTTA----------------- 4893

Bos ------------------------------------------------------------

Rattus ----------------------------CATTACTCTGACAGAAATCTGATATTCCCCCC 6572

Danio ------------------------------------------------------------

Mus ----------------------------CATTAATTTGACAGAAATCAGATATT------ 5985

Gallus ----------------------------CTCT--TATGGAAGAAAATGATTCTT------ 5612

Anopheles ------------------------------------------------------------

Homo GGGCTCAAGTGATCCTCCTGCCTTGGCGTCCCAAAGTGCTGGGATTATAGACATGAGCCA 9450

Pan GGGCTCAAGTGGTCCTCCTGCCTTGGCGTCCCAAAGTGCTGGGATTATAGACATGAGCCA 8828

Drosophila ------------------------------------------------------------

Canis -----------------------------CTGAAAATGGTGGAAATATACTCTAAAGTGG 4924

Bos ------------------------------------------------------------

Rattus TCAAAAAAA-----------------AAAAAAAAAAACCCTTCAATTTTAGTTTTGCATT 6615

Danio ------------------------------------------------------------

Mus -----------------------------AAAAAAAATCCTTCAATTTTAGTTTTACATA 6016

Gallus --------------------------------ATCCAACTTATATATTTCATGTTGTGTG 5640

Anopheles ------------------------------------------------------------

Homo CTGCGTCCAGCCTGTATCATATTTTTATTCTGATATCTTTTGTAATTTTGTTTTTAGTGA 9510

Pan CTGCGTCCAGCCTGTATCATATTTTTATTCTGATATCTTTTGTAATTTT-TTTTTAGTGA 8887

Drosophila ------------------------------------------------------------

Canis ------------------------------TGTTATACATTGTGAATCT--------CCA 4946

Bos ------------------------------------------------------------

Rattus ACTGGGGA----TAGAATACTGGGCCTTGCAACCTAGCAGTGAGCTACATCCCCA----- 6666

Danio ------------------------------------------------------------

Mus GCTGGGGA----TAGAATACAGGGCCTTGCTACCTAGCAGTGAGCTACATCACTA----- 6067

Gallus AGAAAACC----TATAATGCTAGGC------------------AAAATACCTCCA----- 5673

Anopheles ------------------------------------------------------------

Homo AGTAGGGAGGTTTATATTAGATAATCTTCCAAGGTAATTATCAGCTTGGACATTATATGC 9570

Pan AGTAGGGAGGTTTATATTAGATGATCTTCCAAGGTAATTATCAGCTTGGACGTTATATGC 8947

Drosophila ------------------------------------------------------------

Canis AGAAGGGA---CTGTAAGATGTATTTCTCAAATTTATGTGTCCATGTAACCTTTTTTTTT 5003

Bos ------------------------------------------------------------

Rattus ------GGTTGAAAAAAGTACTTTGAAAAAA-TATGTTATGGAGTCTTACAGATCTCCTT 6719

Danio ------------------------------------------------------------

Mus ------GGTTGAAAAAAATACTTTGAAAAAAATATGTTATGGAGCCTTAGAAATCTAGTT 6121

Gallus ------GTCTTGTGACAGCAGCTTG-------TGTGGTGTGGGGTCTTTGTGGTTTTTTT 5720

Anopheles ------------------------------------------------------------

Homo TAATATGTCTTTTGTTTGTTTTTAAAATAAG-TGTA-TATGTTTTAATTGTAAAATTTTT 9628

Pan TAATATGTCTTTTGTTTGTTTTTAAAATAAG-TGTA-TATGTTTTAATTGTAAAATTTTT 9005

Drosophila ------------------------------------------------------------

Canis TAATTTGGCAAAAAAAAATTTTTGTGGTAAAATACA-CATAATTTATCATCTTTATTATT 5062

Bos ------------------------------------------------------------

Rattus TGAATGATGATATG--ATGTGTGTGGGTGGGTG-GTAGGTGGATGGTGGCGG-------- 6768

Danio ------------------------------------------------------------

Mus TGAATGGTGATGGGGTATGTGTGTGGGTGTGTGCGTGGATGGATGGTGGTAGCTGTGGCG 6181

Gallus AAAAGGTAGAAAAGAGCTGT---CAAGCTTCTG---------ATAGGTGTGACT------ 5762

Anopheles ------------------------------------------------------------

Homo AAAACATCCAGAAAATGACATAGCAAGTGCCTATTTATC--CACCACCTGGAAATATAAA 9686

Pan AAAACATCCAGAAAATGACGTAGCAAGTGCCTATTTATC--CACCACCTAGAAATATAAA 9063

Drosophila ------------------------------------------------------------

Canis TTTAACTGTGCAGTTCAATGATGCATGCAACCATTTGCCACCATCATCT----------- 5111

Bos ------------------------------------------------------------

Rattus ------------------GCGGAGGCAGCAGCAGCAGTAGTGTTAGTTGATAAAAGTCAA 6810

Danio ------------------------------------------------------------

Mus GCAGTGGTGGTGGTGGCGGCGGAGGTGGCGGCGG-AGTAGTAGTAGTTGATAAAAATCAT 6240

Gallus -------------------------------------TCATTGTACCTTTCATCAGGCAA 5785

Anopheles ------------------------------------------------------------

Homo TTATGTCCATTTTTATCCCTTGGGGGAAAGGATGCAGTTATATAATCACTTTTAACAACC 9746

Pan TTGTGTCCATTTTTATCCCTTGGGGGAAAGGATGCAGTTATATAATCACTTTTAACAACC 9123

Drosophila ------------------------------------------------------------

Canis CTACAGCTCTCTTCATCT--------------TGCAATACTGAAACTGTATCTTTTAAAC 5157

Bos ------------------------------------------------------------

Rattus GGTATG-----------------------GCCGTTTATTTCAGGCTGCC----------- 6836

Danio ------------------------------------------------------------

Mus GGTATGTAACCTAGGATAGACTGTATCTGGACATGTAGTGCAGACTGCC----------- 6289

Gallus GGCA---------------------------CAAGGGTTGTGAAGTGCT----------- 5807

Anopheles ------------------------------------------------------------

Homo CCAACTGTTCAAGTCCTGTTACCCGTCTCTACACAAAGTAACAACTGTCTTGAGATTCTT 9806

Pan CCAACTGTTCAAGTCCTGTTACCCGTCTCTACACAAAGTAACAACTGTCTTGAGATTCTT 9183

Drosophila ------------------------------------------------------------

Canis AGTAACTCCCAATTCC-----CCCTTCTCCCCATCTGCCAGCAACCATC-----ATTCT- 5206

Bos ------------------------------------------------------------

Rattus --------CTTGAATTCTTGATCTTTGGCCCAAGT------------------------- 6863

Danio ------------------------------------------------------------

Mus --------CTTGAATTCTTGGTCTTCGGCCCAAGT------------------------- 6316

Gallus --------TTTCATGACTTACTTCTTAACTA----------------------------- 5830

Anopheles ------------------------------------------------------------

Homo AAGTAAATTTCACATCCTTGTTTTATACTTTTACTATACATGTGTACATGTATCTGTAAG 9866

Pan AAGTAAATTTCACATCCTTGTTTTATACTTTTACTATACATGTGTACATGTATCTGTAAG 9243

Drosophila ------------------------------------------------------------

Canis ------ATTTTTTGTGTCTGATTTTCACACTGATTAGAC--------------------- 5239

Bos ------------------------------------------------------------

Rattus -----------GCTGGGACACTTT--AGTTATTGGTGGTCTTACATATT----TTTT--- 6903

Danio ------------------------------------------------------------

Mus -----------GCTGAGACACTTTTTAGTTCTTGTTTGTTTTATATGTT----TTTTTAA 6361

Gallus ---------------------------------------CTTTTGCAGT----TCTTTAC 5847

Anopheles ------------------------------------------------------------

Homo TGATATGTGGTGTTGGTTTTTGTATTAAATTTTTACAGACATGTATAACGCTGTCTTTCA 9926

Pan TGATATGTGGTGTTGGTTTTTGTGTTAAATTTTTACAGATATGTATAATGCTGTCTTTCA 9303

Drosophila ------------------------------------------------------------

Canis ----------TATTAAATTCTGCCTCATACAAGGGGAATCATGTATATT--TGTCTTTTT 5287

Bos ------------------------------------------------------------

Rattus AAAACAGGGTATCATGTAGTCCATGGTGGTCTCAATTTCTTTGTAGTTGAAGAGGACCTC 6963

Danio ------------------------------------------------------------

Mus AAGACAGAATATCTTGTAGTCCACACTGGTCTCAATTTCTTAGTAGTTGAAGATAACCTC 6421

Gallus ACCACAGTTGTTTGGTTAATTCAATAGCTTACCATCTCTGTTGATATCCAGGGCAACTTG 5907

Anopheles ------------------------------------------------------------

Homo ATAGCTTGATTTTTTTAAACTCAGTATCAAGTTTTTGAGGTGTAT--ATGTTGATGCGTG 9984

Pan ATAGCTTGATTTTTTTAAACTCAGTATCAAGTTTTTGAGGTGTAT--ATGTTGATGCATG 9361

Drosophila ------------------------------------------------------------

Canis GTGA--TGGCTTTATTTCATTTAGTGTAATGTCCTCGAGGTTCATCCACACCGTGACATG 5345

Bos ------------------------------------------------------------

Rattus AC----TTATCCTTCTGACTTCACTGCTCCAATGCTGGGA---------GTGAACCATTA 7010

Danio ------------------------------------------------------------

Mus ACCTACTTATCCTTCTGATTACACTGCTCCAGTGCTGGGGACTATGGGTGTGAACCAATT 6481

Gallus A-------AGTCTTCTGATGGAAAACATATGGATCAGGGGCATA-----GAAAGGGAGCA 5955

Anopheles ------------------------------------------------------------

Homo TACATGTAGTTTATTCAGTTTCACTGCTGTATGGCACTTCATTTTATGCATAGATAAAAT 10044

Pan TACATGTAGTTTATTCAGTTTCACTGCTGTATGGCACTTCATTTTATGCATAGATAAAAT 9421

Drosophila ------------------------------------------------------------

Canis TGTCAGAATTTTCTTCCTTTTTAAGGCCAAATAATATTCGTGTGTGTGTGTGTGTATGGC 5405

Bos ------------------------------------------------------------

Rattus TTTTT-------------GTGTCCAGTGCATACATGTTCAATTCAAAATGTTTTTCAGGA 7057

Danio ------------------------------------------------------------

Mus TTTTTTGT-GTGTGTGTGGTGTCCAATGCATATATCTTCAATTCAGAATGTTCTTCTGGA 6540

Gallus CTCTTGG----------------CTCTGGTCGTGTGACGGATTGAGAATTCTTTACATGG 5999

Anopheles ------------------------------------------------------------

Homo GT-------ATGTGTCCCACTATTGATGGATATTTTGAGTTGTTTTCTTTTTGCTATTAT 10097

Pan GT-------ATGTATCCCACTATTGATGGATATTTTGAGTTGTTTTCTTTTTGTTATTAT 9474

Drosophila ------------------------------------------------------------

Canis ATTTTATTCATCCTTTCACCCATCGATGGACAGTTGGATTACTTTCATGTTT-------- 5457

Bos ------------------------------------------------------------

Rattus TGTTTAAAGCAAGCGTTTTGGCACACAAATTACATA---------TGAATGAAGATACTG 7108

Danio ------------------------------------------------------------

Mus CATTTAAAGCAAGCAGTTTGGCACACAAATTACATAGCTATGACATGAATGAAGATACTG 6600

Gallus AGAGGAAGCAATAGCATCTTTTTTTAAGCAGATGTAGCTTAATGCTAAATAATAATTATG 6059

Anopheles ------------------------------------------------------------

Homo AAATAATGCTGCAGTGTTTATTTTTACATGAGTGTATGTGCAGGTGTTTTGGGAAAAACC 10157

Pan AAATAATGCTGCAGTGTTTATTTTTACATGAGTGTATGTGCAGGTGTTTTGGGAAAAACC 9534

Drosophila ------------------------------------------------------------

Canis --------TTGTGATTTTTTTTTTTTAAAGATTTTATTTATTTATTCCTGAGAGACACAG 5509

Bos ------------------------------------------------------------

Rattus TCAGTGTTGTTCTTT--------------------------------------------- 7123

Danio ------------------------------------------------------------

Mus TCAGTGTTGTACTTTTCTGAACGGTGGTTTTTTGTTTTTTTTGTTTTTGTTTTTGTTGTT 6660

Gallus CTGGTGGTGAATGTT--------------------------------------------- 6074

Anopheles ------------------------------------------------------------

Homo GTAGAAGTGAAATTGCT------------------------------------------- 10174

Pan GTAGAAGTGAAATTGCT------------------------------------------- 9551

Drosophila ------------------------------------------------------------

Canis ATAGAGGCAGA------------------------------------------------- 5520

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus GTTGTTGTTTTTGAGACAGGGTTTCTCTGTATAGCCCTGGCTGTCCTGGAACTCACTCTG 6720

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -------------------------------GGTTACTAGATATTGGTAAATTCTTTTCC 10203

Pan -------------------------------GGTTACTAGATATTGGTAAATTCTTTTCC 9580

Drosophila ------------------------------------------------------------

Canis -------------------------------GACAAAGACAGAGGGAGAAGCAGGCTGCC 5549

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TAGACCAGGGAGACCTCAAACTCAGAAATCCGCCTGCCTCTGCTTCCCAAGTGCAGGGAT 6780

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAAATGGATATGCCCATGTATACTTTATCAGCATTATGTGGGCATTTCTAGCATCCTCAC 10263

Pan TAAATGGATATGCCCATGTATACTTTATCAGCATTATGTGGGCATTTCTAGCATCCTCAC 9640

Drosophila ------------------------------------------------------------

Canis CATAGGGA----------------------GCCCGATGTGGG----------ATCCAATC 5577

Bos ------------------------------------------------------------

Rattus --------------------------CTGGACAG-TGTTTTAATGTGATAAAACTTTTTT 7156

Danio ------------------------------------------------------------

Mus TAAAGGCGTGGGCCACCACTGCCCGACAGAACAG-TGTTTTAATGTGATAAAATTTTTCT 6839

Gallus -------------------------AAAGTACATCTGATTCTGTGCGATTGCATCCATTA 6109

Anopheles ------------------------------------------------------------

Homo CCATACTTGGGATTGTCAGATTTTAAAATAGTTACTAATTTGAGGCATGTGAAATGCTAT 10323

Pan CCATACTTGGGATTGTCAGATTTTAAAATAGTTACTAATTTGAGGCATGTGAAATGCTAT 9700

Drosophila ------------------------------------------------------------

Canis CCTGGATTGGGATCAC--------------GCCCCGAATCAAAGGCAGACAGACGCC--- 5620

Bos ------------------------------------------------------------

Rattus TT-----------------------------------------------------AATAA 7163

Danio ------------------------------------------------------------

Mus TTTTTTAAAACAAAAACCTATGTTTTTTTTATTTGTTTGTTTTTTTGCTTTTTTGAATAA 6899

Gallus CTGTT-------------------------------------------------AGACAA 6120

Anopheles ------------------------------------------------------------

Homo CTCATTTTAATTTACAGTTGC-------TTGATTATTCTGAATCGTAGGTAAAAGGATAG 10376

Pan CTCATTTTAATTTACAGTTGC-------TTGATTATTCTGAATGGTAGGTAAAAGGATAG 9753

Drosophila ------------------------------------------------------------

Canis --------------CAACTGC-------TGAGCCATCC---------------------- 5637

Bos ------------------------------------------------------------

Rattus AGGATATAGCTATTTACTTCAAATTTCTAATGGACTTTGTCTCTGATGTGAGAAAATAGT 7223

Danio ------------------------------------------------------------

Mus AAGAGATGGCTATTCACTTAAAACTTCTAATGGACTTT----CTGATATGAAAAAGTAGT 6955

Gallus GCATTGCAGATCCTGCGTTCCATTTTGTTGTTCACGTAGCTGCT--CATGAGTGGATGTT 6178

Anopheles ------------------------------------------------------------

Homo GAAATTTATTATTTTCTGTAT-GTTTTAAAT-----------ATCTCAAAAATAAATGTT 10424

Pan GAAATTTATTATTTTC-ATACAGTTTTAAAT-----------ATCTCAAAAATAAATGTT 9801

Drosophila ------------------------------------------------------------

Canis -AGGCGTCCCGTTTTTGCTATAGTT---AAT-----------CTGTCATGAACATGGGTG 5682

Bos ------------------------------------------------------------

Rattus CTTAGAAATG---------------------CCATTGTGGAATAAACCATGGTCATAATT 7262

Danio ------------------------------------------------------------

Mus CTTAGAGATA---------------------CCATTGTGGAA----CCATGGCCATAATT 6990

Gallus TTTCAGCAGA---------------------CTGCTG-------------------AATT 6198

Anopheles ------------------------------------------------------------

Homo TTTAAAGGAAAGGCACACTATCGTACAACATTTATGTTGAAAAGGACCATGAAGATCATT 10484

Pan TTTAAAGGAAAGGCACACTATCGTACAACATTTATGTTGAAAAGGACCATGAAGATCATT 9861

Drosophila ------------------------------------------------------------

Canis TCTAAA-------------------------TTGCTCTGAGAC----------------- 5700

Bos ------------------------------------------------------------

Rattus CATTTAGTTTTATAATCTGTGATGTAAAATAAATGCTGATACTCTCTAAATTT------- 7315

Danio ------------------------------------------------------------

Mus AATTTAGTTTTATAATCTGTGATATAAAATAAATGCTGATACCTCT--AGTTA------- 7041

Gallus CCTGGGGGGCTTCTGCTTGCCTCA-GCGGTAGCTGCTGGTGGG----AGGTCA------- 6246

Anopheles ------------------------------------------------------------

Homo TCATCCAACCTTCTTACTTTACAGTGCAGCCAAAGAAAGTTACCAGAATAAGAGTAAAAT 10544

Pan TCATCCAACCTTCTTACTTTACAGTGCAGCCAAAGAAAGTTACCAGAATAAGAGTAAAAT 9921

Drosophila ------------------------------------------------------------

Canis ---TCTACCTTTATTTCTTTG------------GGTAGATACCCACAAGTAGA------- 5738

Bos ------------------------------------------------------------

Rattus --------------AATATAGAAGATATGATCCACATAGAGGATAATATACCAAACTAAC 7361

Danio ------------------------------------------------------------

Mus --------------AATATAGAAGATATGAACAATATAGAAGAAATTAAAAGAAACCAAC 7087

Gallus --------------AGCACAGAGAGCTGGAGGTCCGGGTGCTCCAGTTTTGTGTTGGAAC 6292

Anopheles ------------------------------------------------------------

Homo ATAAAATCCTGCCCATTGTAGTATTCTCTGGTAGTATGAGCCTTAATTTTTGATGTAAAA 10604

Pan ATAAAATATTGCCCATTGTAGTATTCTCTGGTAGTATGAGCCTTAATTTTTGATGTAAAA 9981

Drosophila ------------------------------------------------------------

Canis --------------ATTGCTGGATCATATGGTAATTCTTTGTTTAATTTTT--TGAAGAA 5782

Bos ------------------------------------------------------------

Rattus CAGTAAATGTGTCATTTAG--------------TATGAACAAACTTTATATTTTGCTATT 7407

Danio ------------------------------------------------------------

Mus CATGTAATGTACCATTTAG--------------TTTGAACAAACTTTATATTTTGTTATT 7133

Gallus TAC------TGCTCTTCTG--------------TTGCAAGCTGCATCATCTTTAGCAACT 6332

Anopheles ------------------------------------------------------------

Homo ATCATGTCTTTTTCTTTATGATTGTGCTTTTTGTTTAAGAAATCCTCTTTTTATATTGTC 10664

Pan ATCATGTCTTTTTCTTTATGATTGTGCTTTTTGTTTAAGAAATCCTCTTTTTATATTGTC 10041

Drosophila ------------------------------------------------------------

Canis ACTTCGTACTGTTTTTCAT------------------AGGGATTGTACCATTTTACACTC 5824

Bos ------------------------------------------------------------

Rattus TCCTTGAACTTTTGTCCTTTCTGAAACTCATTCCCTGTTTTCTTTAGTTGATACCACTAT 7467

Danio ------------------------------------------------------------

Mus TCCTTGAATTCTTGTCTTTTCTGAAACTCATTCCTTGTTTTCATTAGTTGATACCACT-- 7191

Gallus CCTCTGTCTCCATCTCCTCT----ACTCTGCTGTGCTTCTGCTTTAATTTGTAACATC-- 6386

Anopheles ------------------------------------------------------------

Homo TGCTAATAGTTGAGGATTTTTTG----TTACTCTTTGTTATTTGCATTTAGGTTCATCTG 10720

Pan TGCTAATAGTTGAGGATTTTTTG----TTACTCTTTGTTATTTGCATTTAGGTTCATCTG 10097

Drosophila ------------------------------------------------------------

Canis CATCCAAGGGTTATAATTTTTC--------CACATTCTCATCAGTACTTGTAATTATCTG 5876

Bos ------------------------------------------------------------

Rattus AAGAATTTCTTCTCATT------------------------------------------- 7484

Danio ------------------------------------------------------------

Mus --------CTTCTCATTA------------------------------------------ 7201

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAAGGAGT---------------------------------------------------- 10728

Pan AAGGGAGTGAGGATTTTTTTTACTCTTTGTTATTTGCATTTAGGTTCATCTGAAGGGAGT 10157

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ---GTTTCAGCACTCTACCTAGTATCAGATGTGAATCATA-----CTGCTGTTTTTTTTG 7536

Danio ------------------------------------------------------------

Mus TAGGTTTCAGCACTTTACCTAGTATCAGATGTGAATCATA-----CTGCTATTTTTTT-G 7255

Gallus ----CTCAACTACGTGGCTTTGGTTCTGTTGCGACCCTTTGTTTTCTAGTCTTCTCGCTG 6442

Anopheles ------------------------------------------------------------

Homo TAGGATTTTTTATTTTAAATATGAAAAGCTAGTTGTTCCAGCATTAAGTATTGAATTTTT 10788

Pan TAGGATTTTTTATTTTAAATATGAAAAGCTAGTTGTTCCAGCATTAAGTATTGAATTTTT 10217

Drosophila ------------------------------------------------------------

Canis -------------------------------------------------------TTTTT 5881

Bos ------------------------------------------------------------

Rattus GAAAGGAAAAGATGAAATGCATAGTCACT---------TTTTTCTTTTCTTTTTGTTTTT 7587

Danio ------------------------------------------------------------

Mus GAAAGGAAAAGATGAAATGCATAGTCCCTCTTTCTTTTTTTTTCTTTTCTTTTTCTTTTT 7315

Gallus GGCAGCAATTGTTAGATCTCTGCTAAATGTATTTGTGATGCTTCTTCACTCCATACTTTT 6502

Anopheles ------------------------------------------------------------

Homo AAAATTTTGTATTGAGGTTAAATATACATACATAATTTACCATCTTTTTTAAGTGTACAG 10848

Pan AAAATTTTGTATTGAGGTTAAATATACATACATAATTTACCATCTTTTTTAAGTGTACAG 10277

Drosophila ------------------------------------------------------------

Canis G------------------------------ATAGTTAACCATCCTAATTAAGTG----- 5906

Bos ------------------------------------------------------------

Rattus GTTTTTGTTTTATTTTTTTGA-----ATAAATCCTAGTGTAT-------CATAAGGGGAA 7635

Danio ------------------------------------------------------------

Mus CTTTTTCTTTTTCTTTTTTAAGAAAAATAATGCCTAGTGCAT-------CCTAAGGGGAA 7368

Gallus CTTGCGCTCCACGCTCTCCGC--AAGCTGGTGCTT--TGTGG-------CTTAGAGGATG 6551

Anopheles ------------------------------------------------------------

Homo TTCATTTTTAATGATTTTTTAAGTGTACAGTTTTTTAAGTGTACAGTTCAGCAATAATAA 10908

Pan TTCATTTTTAATGATTTTTTAAGTGTACAGTTTTTTAAGTGTACAGTTCAGCAATAATAA 10337

Drosophila ------------------------------------------------------------

Canis -------------ATTTTTAAAAATCGTAACTTTCTGATCATGTAACTTTTTAAGAA-AA 5952

Bos ------------------------------------------------------------

Rattus GTAGCATATCCCCAATTTATTAGTATTTTCTCCCTTAAGATTTCT---TAAGATGCCCCT 7692

Danio ------------------------------------------------------------

Mus GTAGAGTAGCCTCAATTTATTAGTATTT-CTCCCTTAAGATTTCTATTTACTATGCCCCT 7427

Gallus GTCGGTTAATCACATATAGATAGCGTTG----------------------------CTCT 6583

Anopheles ------------------------------------------------------------

Homo ATACAGTTATGTTCTTCTGCCTTTGTCCTCTCACTCCCCACTTCGGCTGCTAGTAACCAC 10968

Pan ATACAATTATGTTCTTCTGCCTTTGTCCTCTCACTCCCCACTTCGGCTGCTAGTAACCAC 10397

Drosophila ------------------------------------------------------------

Canis ATGTTTTAATATTGTTTTG----------------------------------------- 5971

Bos ------------------------------------------------------------

Rattus CTGTGTAGATACATTTGCTAAGCATACAATATGTCAAAAATAAGGTTAATTAATATTTGC 7752

Danio ------------------------------------------------------------

Mus TTGTGTAGATATATTTGCTAAGCGTACAATATGCTAAAAATAAAGATA----ATATTTGC 7483

Gallus GCGTGTACAAGTGTGTGTACATGAAAAAATTTGCATACATTACGATAAA----------- 6632

Anopheles ------------------------------------------------------------

Homo CAGTCTATGCTTATCTTCTTGAGATATACTTTTTTAGCCCATGTATGAGTGAGAACATGT 11028

Pan CAGTCTATGCTTATCTTCTTGAGATATACTTTTTTAGCCCATGTATGAGTGAGAACATGT 10457

Drosophila ------------------------------------------------------------

Canis -------------------TGGGACACAGGGTTT-GATTAGGGAATTGAGAAGACTATGA 6011

Bos ------------------------------------------------------------

Rattus CTTTGTTAAA----TGTGTTTTTGTTTGGTAATTTAAAATGTT----TTTGAGTACCTGT 7804

Danio ------------------------------------------------------------

Mus CTTTGCTAAA----TGTGTTTTTGTTTGGTAACTTAAAATGTTGTTTTTTGAGTACCTGT 7539

Gallus ---AGCTGGA----AGTCCTGTGGTGTGAGATGTGAAAACACTGT--------------- 6670

Anopheles ------------------------------------------------------------

Homo GGTATTTGTCTTTCTGTGTTTGGCTTATTTCACTTAACATAATGGCTTCTTGTTCCATCC 11088

Pan GGTATTTGTCTTTCTGTGTTTGGCTTATTTCACTTAACATAATGGCTTCTTGTTCCATCC 10517

Drosophila ------------------------------------------------------------

Canis AAACTTTGAA----AGTGACTAGGGGGAATGAATGAAGAAATAGAC-------------- 6053

Bos ------------------------------------------------------------

Rattus TTTATATTATGTGTACTA-------------------ATATATAAATCATATTTCAGATA 7845

Danio ------------------------------------------------------------

Mus TGTATAGTATGTATAATA-------------------ATAGATAAATCTTATTTCAGATA 7580

Gallus ----TTGTATTCGTAGGA-------------------ATACTTTTAGCTGAGTTTGCTTG 6707

Anopheles ------------------------------------------------------------

Homo GTGTTCCTGCAAATTACAGGGTTTTATTCTTATTTTTATAGCTGAGTAGTATTCCACTGT 11148

Pan ATGTTCCTGCAAATTACAGGGTTTTATTCTTATTTTTATAGCTGAGTAGTATTCCACTGT 10577

Drosophila ------------------------------------------------------------

Canis ---------CAAAT--------------------------ATTGAGTCTTATGCTACTGA 6078

Bos ------------------------------------------------------------

Rattus --GATTCATTAGAG----AATGTGTTTTTGTCTTCATGTTTAAAGTGAGCTGT------- 7892

Danio ------------------------------------------------------------

Mus AAGACTCATTAGAG----AATATGTTTTTGTCCTCACTTTTGAAGTGACCTGACTC---- 7632

Gallus GTGGCTTCCCTGTG----AACAAATAGTTATTCT---TTGTGATGTCTGCTGTTG----- 6755

Anopheles ------------------------------------------------------------

Homo GTGTATAAACTACATTTTAAAGTCTATTCGTCCTAATTATTGAATTCTCCCCACCCCACC 11208

Pan GTGTATAAACTACATTTTAAAGTCTATTCATCCTAATTATTGAATTCTCCCCACCCCACC 10637

Drosophila ------------------------------------------------------------

Canis GCAGCTAGTTGAAGTTAGGAAACTTATC-------ATAGTTGGAGTTTAAAGACCC---- 6127

Bos ------------------------------------------------------------

Rattus ----------------TATCATGTGTTACTGATAGAAAAA-------------------- 7916

Danio ------------------------------------------------------------

Mus --------------TGTATCATGTGTTACTGATAGAAAA--------------------- 7657

Gallus ---------------GTAGTACCTCCTCCCATCAGGAAG--------------------- 6779

Anopheles ------------------------------------------------------------

Homo CACC------TTTTTTTTTTTTTTTTTTTTTCCAGGAGACAGGGTCTCCCTCTCTTCCCC 11262

Pan CACCCACCTTTTTTTTTTTTTTTTTTTTTGTCCAGGAGACAGGGTC-CCCTCTCTTCCCC 10696

Drosophila ------------------------------------------------------------

Canis -----------------------TTTACTAGCCAGAAAA--------------------- 6143

Bos ------------------------------------------------------------

Rattus ---------TACACTACGAAAATCC------------------AAATCCTTAGTTTCAAA 7949

Danio ------------------------------------------------------------

Mus ---------TACATTAAGAAAATCC------------------AAATCCTTAGTTTCAAA 7690

Gallus ---------------ATCGTGTTGC------------------TTTCGCTCACTCTTTGG 6806

Anopheles ------------------------------------------------------------

Homo AGGCTGGAGTGCAGTGCCATGATCATAGCTCCCTGCATCCTTGAACCCCCTGGCCTCAAG 11322

Pan AGGCTGGAGTGCAGTGCCATGATCATAGCTCCCTGCATCCTTGAACCCCCTGGCCTCAAG 10756

Drosophila ------------------------------------------------------------

Canis -------------GTGGCATGGT-----------------------------ATTTCAAG 6161

Bos ------------------------------------------------------------

Rattus GAAATGAAATTTCTCCACTT-----CTAAATCCTGTTCCATTCTCC-------------- 7990

Danio ------------------------------------------------------------

Mus GAAATGAAATTTCTCCGCTT-----GGAAATTCTGTCCCATTCTCC-------------- 7731

Gallus ATAAATTTATTCTTATGAGT-----GGTAGTAAAGTTTTAGTGACG-------------- 6847

Anopheles ------------------------------------------------------------

Homo CGATAGTCTTGCCTCAGCCTCCCAAGTAGCTGGGACTGCAGGCAGGCACCTCCAGGCCCT 11382

Pan CGATAGTCTTGCCTCAGCTTCCCAAGTAGCTGGGACTGCAGGCAGGCACCTCCAGGCCCT 10816

Drosophila ------------------------------------------------------------

Canis GTTGGGTGTTAGCAGAGC---------AGATGGGGCAGTATGCTA--------------- 6197

Bos ------------------------------------------------------------

Rattus --------------------------------------------------ATTCTCTCTG 8000

Danio ------------------------------------------------------------

Mus --------------------------------------------------ATCCTCTCTG 7741

Gallus --------------------------------------------------CAACTGTATA 6857

Anopheles ------------------------------------------------------------

Homo GCTAAGTTTTGTGGGTTTTTTTTTTTTTTTTTTTTTTTTTTTTTGTAGAGATGGGGTCTT 11442

Pan GCTAAGTTTTGTGGGGTTTTTTTTTTTTTTTTT------TTTTGGTAGAGATGGGGTCTT 10870

Drosophila ------------------------------------------------------------

Canis --------------------------------------------------ATGGCATGTG 6207

Bos ------------------------------------------------------------

Rattus TTACTGTTTTTCACTGATTATATAAAATTG------TACAGGTTTGTAGACTGGAGAT-- 8052

Danio ------------------------------------------------------------

Mus TTACTGTTTCTCACTGATTCTATAACATTG------TACAGGATTCTAGACTGGAGAT-- 7793

Gallus GGTTTGTTGTTCATCCTATTTATAAATCCACGTAATTACCATATTTTTGTGCTGAAAT-- 6915

Anopheles ------------------------------------------------------------

Homo CCTATGTTGCCCACTTTGGTTTGTTAGTTTTAGTAGTTTATAATTCCTTTGTATTATTGT 11502

Pan CCTATGTTGCCCACTTTGGTTTGTTAGTTTTAGTAGTTTATAATTCCTGTGTATTATTGT 10930

Drosophila ------------------------------------------------------------

Canis CATAGGTTGTTAACACTGA------------AGGAGTTG--AATTTATATGT-------- 6245

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GAACAAATAACAGTTATTTTGAAATAGAAGAGTGCTTTCTATTTAAAATTTTGCTTTGAT 11562

Pan GAACAAATAACAGTTATTTTGAAATAGAAGAGTGCTTTCTATTTAAAATTTTTCTTTGAT 10990

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -------------------------------------------------GGGAGTAAGAG 8063

Danio ------------------------------------------------------------

Mus -------------------------------------------------GGGAATAAGAA 7804

Gallus -------------------------------------------------AGGAATTGTGC 6926

Anopheles ------------------------------------------------------------

Homo AGGGTTCTGTCTACTTTCTGAGCCTTACCTTCCTGTGCATTCCCCTTTGGTCAGTACCAT 11622

Pan AGGGTTCTGTCTACTTTCTGAGCCTTACCTTCCTGTGCATTCCCCTTTGGTCAGTACCAT 11050

Drosophila ------------------------------------------------------------

Canis --------------------------------------------CATTGGTGAATACCAT 6261

Bos ------------------------------------------------------------

Rattus TTTAAATAAAAGTTGA-------------------------------------------- 8079

Danio ------------------------------------------------------------

Mus GTTATGTACAAGTTTA-------------------------------------------- 7820

Gallus TGCATTGAACAGGTAG-------------------------------------------- 6942

Anopheles ------------------------------------------------------------

Homo CTTACCACACAGGCTGCTTTTAGTTTCTTGAGTTATCCATCTTCCTTCTATCTTATAGGG 11682

Pan CTTACCACACAGGCTGCTTTTAGTTTCTTGAGTTATCCATCTTCCTTCTATCTTACAGGG 11110

Drosophila ------------------------------------------------------------

Canis G--ATTGGATAGGTTGT------------------------------------------- 6276

Bos ------------------------------------------------------------

Rattus ----------------------GGAACTTAAAGGAGAAATACACTTTCCTCCACAGATTG 8117

Danio ------------------------------------------------------------

Mus ----------------------GGAACTTAAAGGAGGAATATACTTTCCTCTACAGATTG 7858

Gallus ----------------------ACTGCTCTGTGTAGG--TTTTTCTTCTTCTGGAAATAA 6978

Anopheles ------------------------------------------------------------

Homo CTCAACCTAAATATTACTCAGGGAAGCCTTCCTTGAGAGTCTTTCTTTTTGCACTCATTG 11742

Pan CTCAACCTAAATATTACTCAGGGAAGCCTTCCTTGAGAGTCTTTCTTTTTGCACTCATTG 11170

Drosophila ------------------------------------------------------------

Canis ----------------------GGGGCCAGGCACAAGAGTTGGGTTGGTTACAAAAAGCC 6314

Bos ------------------------------------------------------------

Rattus GACTATATAATTTTAAAATAAAAACCCTTAAGG-ATAGTAGGAG---------------- 8160

Danio ------------------------------------------------------------

Mus GGCTATATAATTTTAAAGTAAGAGCTCTTAAAGCATAGTAGGAG---------------- 7902

Gallus AGAAAGTTATGCACAACCTGGTAGTGCTGTGGAGCTGAACTGGC---------------- 7022

Anopheles ------------------------------------------------------------

Homo GTTTGGGGCTTCTTTATATTATACTGTTAATTGAATTCTGAGTCGTGTTTATCTCAACTG 11802

Pan GTTTGGGGCTTCTTTATATTATACTGTTAATTGAATTCTGAGTCGTGTTTATCTAAACTG 11230

Drosophila ------------------------------------------------------------

Canis TGATAGGTCATAGAGATAGTTCAGTGTAAATGAAATTTTTAG------------------ 6356

Bos ------------------------------------------------------------

Rattus -----AACTGAGTTACTTTTAGTCTTTTATCTGTACTTCACATCATGTATAATTACTGGC 8215

Danio ------------------------------------------------------------

Mus -----AACTGAGCTAATTTTAGTCTTTTATCTGTACTTAACATCATGTATAATTACTGGC 7957

Gallus -----ACAGATGTTCCTATCCATCCTTTTCGTAT-CCCCAGAGCAGAATTGGGCCTTGGG 7076

Anopheles ------------------------------------------------------------

Homo AGATTAGGTAATTTATTTTGAGAACAGTAAATGTTTATCATCTGTCATTCTTTTTTTCAT 11862

Pan AGATTAGGTAATTTATTTTGAGAACAGTAAATGTTTATCATCTGTTATTCTTTTTTTCAT 11290

Drosophila ------------------------------------------------------------

Canis -------------------AAGGGTGGATGGTGATGATCATGGGTTGTGTGTTTAATAAT 6397

Bos ------------------------------------------------------------

Rattus TAGTACATTATGTTTCTTGT---TACTTTAAAAATGAAAGATTTTTTTTGGTCTGATTTA 8272

Danio ------------------------------------------------------------

Mus TGGTACATTATGTTTCATGT---CACTTTAAAAATGAAAGATTGTTTT-GGTCTGATTTA 8013

Gallus TACTGGAT-GGGTGCTCTGT---CATTT-----------GACATCATTAAGACCAAGTTG 7121

Anopheles ------------------------------------------------------------

Homo GCCCACATTCAGTTATTTGTAAGTGCTGAATGTATAAGTGTTCATCTACAGATAAGGATC 11922

Pan GCCCACATTCAGTTATTTGTAAGTGCTGAATGTATAAGTGTTCATCTACAGATAAGGATC 11350

Drosophila ------------------------------------------------------------

Canis GCCTACAGTCA--TGGTTG-----GCTGACAGAGGAGGTGAACCTTTTTGAAGAAAGTCA 6450

Bos ------------------------------------------------------------

Rattus ACTTCCTAC--------------CCCATTCTGAAAATTTCTTTTGCTCAATTTTTT---- 8314

Danio ------------------------------------------------------------

Mus ACTTTGTATGGATCATCTTTCTACTGATTCTGAAATTTTCTCTTACTCCATTTTTTTTTT 8073

Gallus AATGTGTAC-------------------TCTTTAAGGTAACCGGATCAGGGCTTCT---- 7158

Anopheles ------------------------------------------------------------

Homo AGTTCTTTTTT------------CCCCAACTAGAAATGTTACTCCAGTTGATAATAACAG 11970

Pan AGTTCTTTTTT------------CCCCAACTAGAAATGTTACTCCAGTTGATAATAACAG 11398

Drosophila ------------------------------------------------------------

Canis AGTATTTTG--------------------------------------------------- 6459

Bos ------------------------------------------------------------

Rattus ------GAGTTAAATGAAACACAGGGAAGAGGTGAACTTAAAAACAGATCTGTTTTATCA 8368

Danio ------------------------------------------------------------

Mus TTTTTTGAGTTAAATGAAACACAGGGAAGAGGTGAACGTAAAAACAGAT----------- 8122

Gallus ---------TTCATGGGAACACTGATCTAAGTTGGAAATCAGACTGAATCAGCTACACTG 7209

Anopheles ------------------------------------------------------------

Homo CTCAAACGGAAATATAAGGCAGAGGTGAGAGAGTCACTTGAGGCCACGAATTGGAGACCA 12030

Pan CTCAAACGGAAATATAAGGCAGAGGTGAGAGAGTCACTTGAGGCCACAAATTGGAGACCA 11458

Drosophila ------------------------------------------------------------

Canis -------GATAAGAGGGAGCTAAAGTGTTGGGATAGATTGTGAACACTGGC-----ATCG 6507

Bos ------------------------------------------------------------

Rattus GTAGAATGTGCACATAGTGTA--------ACCAATTGAAATTAGATGT------------ 8408

Danio ------------------------------------------------------------

Mus -----ATATGCACATAACTTA--------ACCAGTTGAAATTAGATGT------------ 8157

Gallus GATTTATTTGCTCTTAATGGAGGTTTAGAACCAAC--AAATTAAGTAT------------ 7255

Anopheles ------------------------------------------------------------

Homo GC---CTGGGCAACAAAGTGAGACCTTATCCCTATGAAAAATAAAATTAGCCCAGCTTGG 12087

Pan GC---CTGGGCAACAAAGTGAGACCTTATCCCTATGAAAAATAAAATTAGCCCAGCTTGG 11515

Drosophila ------------------------------------------------------------

Canis AA---GTTGGCATCCAGGTGA---------CTGGTGCAAAATGAA--------------- 6540

Bos ------------------------------------------------------------

Rattus ----------------------------------------------------TTATTCCT 8416

Danio ------------------------------------------------------------

Mus ----------------------------------------------------CTATTCCT 8165

Gallus ----------------------------------------------------TAATCCTT 7263

Anopheles ------------------------------------------------------------

Homo GAGGCTGAGGTGGGGGGATTGCTTGAACCCTGGAGTTCCAGGCTGCAGTGAGTTGTTATC 12147

Pan GAGGCTGAGGTGGGGGGATTGCTTGAACCCTGGAGTTCCAGGCTGCAGTGAGCTGTTATC 11575

Drosophila ------------------------------------------------------------

Canis ---------------------------------------------------GCTGTTAGT 6549

Bos ------------------------------------------------------------

Rattus ATACTG------------------------------------------------------ 8422

Danio ------------------------------------------------------------

Mus ATACTG------------------------------------------------------ 8171

Gallus GTGATAC----------------------------------------------------- 7270

Anopheles ------------------------------------------------------------

Homo ACACCACTGCACTCCAGCCGCGGTGACAGACCCTGTCCCTTAAAAAAAAAAAAA----TT 12203

Pan ACACCACTGCACTCCAGCCGCAGTGACAGACCCTGTCCCTTAAAAAAAAAAAAAAAAATT 11635

Drosophila ------------------------------------------------------------

Canis ATA--------------------------------------------------------- 6552

Bos ------------------------------------------------------------

Rattus -----------------AATAGTCTGGGAGA----------ACAGTAAATGT----GTAC 8451

Danio ------------------------------------------------------------

Mus -----------------AAGAGTCTGGGAGA----------ACAGTAAATGTTTGTGTAC 8204

Gallus -------------AGAAAACATACTTGGAAC----------CAAATAAGTGAGTTTCCAA 7307

Anopheles ------------------------------------------------------------

Homo ATAACCAGCCACATTGAAATATTTTGTAAGACATTAATAGAAGACTAAATGTTCTCATAT 12263

Pan ATAACCAGCCACATTGAAGTATTTTGTAAGACATTAATAGAAGACTAAATGTTCTCATAT 11695

Drosophila ------------------------------------------------------------

Canis ------------ATGGGTATAATTTACCAGA------AGAGAGAGGAAAGGTATTCACAT 6594

Bos ------------------------------------------------------------

Rattus ACAT-------------------TTTGTATTCTGTAACCTTTGTCTTCTTTTCCCATCTT 8492

Danio ------------------------------------------------------------

Mus ACAT-------------------TTTGTATTCTGTATCCTTTGTCTTCTCCCTTTTTCCA 8245

Gallus AAAG-------------------TAAATATTAGTTTTCTTTAATTATGTGACTATTTCTG 7348

Anopheles ------------------------------------------------------------

Homo GTTTACTGTTTGTGTTAAGTACGTATGGTTTTTAGAACAACAGTTTTCTATCAAGTGTGG 12323

Pan GTTTACTGTTTGTGTTAAGTACGTATGGTTTTTAGAACAACAGTTTTCTATCAAGTGTGG 11755

Drosophila ------------------------------------------------------------

Canis AGATA-----------------ACATGGCTTTCAAAGTACAAGTTCTGTTTGTGTTATAT 6637

Bos ------------------------------------------------------------

Rattus TCCCTCCTCTTCTCTTTTTTTT-----------------------------------TCC 8517

Danio ------------------------------------------------------------

Mus TCTTTCCTCTTCTCTTTTTTCTCT------CTTTCTAACCTCATGTCTCCCAGTTCTTTC 8299

Gallus TGTAACTTACACCCCTCACGTTGG------TTGTACTGTGCTTGTTAGTTGCTTGTCAAC 7402

Anopheles ------------------------------------------------------------

Homo TCTGGTTCACTTAGAATTAGATGGGGTAGATTTTTTGAAAAGCGTTTTGAAGTTAAATTA 12383

Pan TCTGGTTCACTTAGAATTAGATGGGGTCGATTTTTTGAAAAGCGTTTTGAAGTTAAATTA 11815

Drosophila ------------------------------------------------------------

Canis TTTGTTTTAATGGATATTG-------------CTTTAAA--------TATAAGGAATTAG 6676

Bos ------------------------------------------------------------

Rattus CCCTCTCTCCACCCTCTTGTCTTTGTTCTTTTCCTTT--------------------CTC 8557

Danio ------------------------------------------------------------

Mus CTCTCTCACTGTTCTCTCCCTTTTGTCCTTTTCCTTT--------------------CCC 8339

Gallus AATGTTCAGGGTATGTTTAGGCCTGAGCTCCTTCTTTATTATGG-------------CTT 7449

Anopheles ------------------------------------------------------------

Homo GAAGCTAATGGTTTTTTGTCACTAAATCAAATTTTGTTTTATGCGTTTAAGTGCTACATT 12443

Pan GAAGCTAATGGTTTTTTGTCACTAAATCAAATTTTGTTTTATGCGTTTAAGTGCTACATT 11875

Drosophila ------------------------------------------------------------

Canis AAGAATAATGGGTTTTAGTTGTCAGTTCACA----------------------------- 6707

Bos ------------------------------------------------------------

Rattus TTCTGCAGATACAGGCATTTGTAAATGCTGGAATGAATGAACTACTACTTTCTAGATTGT 8617

Danio ------------------------------------------------------------

Mus TTCTGCAGATGCAGGTATTTGTAAATGTTGGATTGAATGAACTACT---TTCTAGATTGT 8396

Gallus TTCTAAAAATG-AACTTTTTATAGAAAT---GCTTACCAAACTTCAGCAGTTCCGTGCAG 7505

Anopheles ------------------------------------------------------------

Homo TATTTGATAGGCAGGTGAATGTAACAGATTAAACTTGAAAATAATGTAGCTATGATTCCT 12503

Pan TATTTGATAGGCAGATGAATGTAACAGATGAAACTTGAAAATAATGTAGCTATGATTCCT 11935

Drosophila ------------------------------------------------------------

Canis --------------GAAAAGGTAAAAGATAGG--------------------CAGTGCCT 6733

Bos ------------------------------------------------------------

Rattus TCAAGT------------------------------------------------------ 8623

Danio ------------------------------------------------------------

Mus TCAGGT------------------------------------------------------ 8402

Gallus CCAGGA------------------------------------------------------ 7511

Anopheles ------------------------------------------------------------

Homo TCAAGGAAAAACCCACCTACCTTTAGTTCTTTTAGTATATTGCATTATAAGTCTTTTGTG 12563

Pan TCAAGGAAAAACCCACCTACCTTTAGTTCTTTTAGTATATTGCATTATAAGTCTTTTGTG 11995

Drosophila ------------------------------------------------------------

Canis TTTGGGGTAAGCC----------------------------------------------- 6746

Bos ------------------------------------------------------------

Rattus ----------------------------------CTGGGTTAGGATATCTGCTATAGGCT 8649

Danio ------------------------------------------------------------

Mus ----------------------------------CTGGGTTAGGATATCTGCTGTAGGCT 8428

Gallus ----------------------------------CCAAGGTGTGGTTCTGTGTGTGACTT 7537

Anopheles ------------------------------------------------------------

Homo TGTGCATATATAGCAGGCATAAATTGGCATAATTCTGGGTTTAATTTTAGGCTAGGCGCT 12623

Pan TGTGCATATATAGCAGGCATAAATTGGCACAATTCTAGGTTTAATTTTAGGCTAGGCGCT 12055

Drosophila ------------------------------------------------------------

Canis ------------------------------------AGGCTTTAGTGAAAGCTAAGAGGT 6770

Bos ------------------------------------------------------------

Rattus CTTGAAATGTGTATGT---------------------------------ACGATAATGAA 8676

Danio ------------------------------------------------------------

Mus CTTGAAATATGTATGT---------------------------------ATGGTAATACA 8455

Gallus CTGAAAGCATTTTTGTT--------------------------------ATTATAAATAC 7565

Anopheles ------------------------------------------------------------

Homo ATGGAAGTTTGAACTCTAATTACAGTGTAAAAATAACCCAGAGGAAAATTTCAGAATAAT 12683

Pan ATGGAAGTTTGAACTCTAATTACAGTGTAAAAATAACCCAGAGGAAAATTTCAGAATAAT 12115

Drosophila ------------------------------------------------------------

Canis GGAGGGACCGGGAC--------CATTATATAAA-------------------GCAGTTGC 6803

Bos ------------------------------------------------------------

Rattus TAATTCTCTAGGCTTGAGAA----------------TTTAAAGGTAAGCAGAATTAAGCA 8720

Danio ------------------------------------------------------------

Mus TAATTCTCTAGGCTTGAGAA----------------TTTAAAGGTAAACAGAATTAAGCA 8499

Gallus TGATGTCTTTGATTAAAAAAAAAAAAATACTATTTTTTTAAGAGGGAAAAAAATGGGTGG 7625

Anopheles ------------------------------------------------------------

Homo AAATCATTGGGACTATATGGTACAGATGTCCCTGTTTTCAGATTGTAGAATTGTTGACCA 12743

Pan AAATCATTGGGACTATATGGTACAGATGTCCCTGTTTTCAGATTGTAGAATTGTTGACCA 12175

Drosophila ------------------------------------------------------------

Canis AGATTAAGGACAATCTGTATTATAAATGTTTTT-TCTAGAGATTGTAGTAGAGTAGATTA 6862

Bos ------------------------------------------------------------

Rattus GTACTA-------------------------------------------------GATTG 8731

Danio ------------------------------------------------------------

Mus GTACTA-------------------------------------------------TAGTG 8510

Gallus GGGGTG-------------------------------------------------GGGTA 7636

Anopheles ------------------------------------------------------------

Homo GTAGGAATGCTTTATGATTAAAAGCCAGGAAATTAAAGTAATTCTGATGATTTGGTATTT 12803

Pan GTAGGAATGCTTTATGATTAAAAGCCAGGAAATTAAAGTAATTCTGATGATTTGGTATTT 12235

Drosophila ------------------------------------------------------------

Canis GTGGGA-----------------------------------------TGAAGTAATAATA 6881

Bos ------------------------------------------------------------

Rattus ACCTGGACAATTAACGGAGACATTC----------------TGAAGCCTCCTTCTCATTG 8775

Danio ------------------------------------------------------------

Mus GCCTGGACAATTAACAAAGACCTTC----------------TGAAGGTCT---------- 8544

Gallus GGGTGGAGCAGGAGAGAAACCTTGC----------------CAGAATCTTCTAGAAGAAG 7680

Anopheles ------------------------------------------------------------

Homo CTAAAGATTTTCATAGATGACAGTTGAGAACTACTCTCAGATGAGATTCTTCCATTGCTG 12863

Pan CTAAAGATTTTCATAGATGACAGTTGAGAACTACTCTCAGATGAGATTCTTCCATTGCTG 12295

Drosophila ------------------------------------------------------------

Canis GTAAAGA-----ATAGAAAAGGGT--------------AGGTGAAGTTTGGC-------- 6914

Bos ------------------------------------------------------------

Rattus TAAATATGCCTGTGCTGAATTTGACAAGGCAATCTTAGGAAGGGTAGAATT--------- 8826

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus GAAATGGATATTTA---------------------------------------------- 7694

Anopheles ------------------------------------------------------------

Homo GTAAGTCATGTAATAAAACACTTAAGTAAATATTTTAATGAGGAATGATAACATTTTAAT 12923

Pan GTAAGTCATGTAATAAAACACTTAAGTAAATATTTTAATGAGGAATGATAACATTTTAAT 12355

Drosophila ------------------------------------------------------------

Canis ----ACTATGTAGTAAGA-------------------ATCAAGGATGACAA--------- 6942

Bos ------------------------------------------------------------

Rattus ---------------------------------------GTGTGTGTTGTATATGTGTTT 8847

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATTGGCACATTGTGAGTCTACCTTCTGTAGTTAGTAGGTAAATAAGAAATAAACATACCT 12983

Pan ATTGGCACATTGTGAGTCTACCTTCTGTAGTTAGTAGGTAAATAAGAAATAAACATACCT 12415

Drosophila ------------------------------------------------------------

Canis ---------------------------------------GAATGCGAGGCA--------- 6954

Bos ------------------------------------------------------------

Rattus TTCATATTGATAATTCATTCCAAATATTTAGAA--------------------------A 8881

Danio ------------------------------------------------------------

Mus --------------------------TTTAAAA--------------------------A 8552

Gallus --------------TAATAAACTGGATGAAGGG--------------------------A 7714

Anopheles ------------------------------------------------------------

Homo TATTTAAAAAAAAAA-TTTCAAAGAACCCAAGGGAGGGGAGAGCCAAGGTGCACATTAGA 13042

Pan TATTTAAAAAAAAAAATTTCAAAGAACCCAAGGGAGGGGAGAGCCAAGGTGCACATTAGA 12475

Drosophila ------------------------------------------------------------

Canis ----TAATAGGATATTTGTCACAAGATTCCAG---------------------------- 6982

Bos ------------------------------------------------------------

Rattus ATGATACTGAATCCTTTTTTTAGTGGTCAGGATATAAT---------------------- 8919

Danio ------------------------------------------------------------

Mus TTGATACTAATTCGTCTTTTTAGTGGTCAAGAGATAAT---------------------- 8590

Gallus ATTATAAAACTGTATTGCATCACTAGAGAGGAAAGGAT---------------------- 7752

Anopheles ------------------------------------------------------------

Homo AGGAGATTACAGTACTCTTCCAGTGCACAGTGGATGTGTTGTGATTCCAGAGTTCTATGT 13102

Pan AGGAGATTACAGTACTCTTCCAGTGCACAGTGGATGTGTTGTGATTCCAGAGTTCTATGT 12535

Drosophila ------------------------------------------------------------

Canis ATGAAACTCTGGAGTTCTGGTTGAGTTCAGTGAAC------------------------- 7017

Bos ------------------------------------------------------------

Rattus -AGCTTAATTATTTAGGGACCTATTGTGTGCTTAAAATGA----------TCATGTTGTA 8968

Danio ------------------------------------------------------------

Mus -AGCTTAATTATTTAGACACCTATTCTGCGCTTAAAATTA----------TCATGTTATA 8639

Gallus -AGGG-AACGCTGTGTATGGACGTTCGGCTTTTGCACTTT----------CCCTGACATA 7800

Anopheles ------------------------------------------------------------

Homo ATGTATGACTGTGTAGCCCAGATTTACCAGCATGGGCTCAGTTTTAAATGTTAGGTTAGG 13162

Pan ATGTATGACTGTGTAGCCCAGATTTACCAGCATGGGCTCAGTTTTAAATGTTAGGTTAGG 12595

Drosophila ------------------------------------------------------------

Canis -TGTTAAACTGTTTAACTTGGCCATGTTAACATGGACTAG-----------CAGGAAATT 7065

Bos ------------------------------------------------------------

Rattus ATAATAATGATTTTTTTTCTTTTGGGTTGGGGGAGATCTTATCATTAAACCCAGGGCATG 9028

Danio ------------------------------------------------------------

Mus ATAATAGT--------TTTTTTTGGG----GGGGGTTCTTGGCATTAAACCCAGGGAACA 8687

Gallus ACGAAGCATTTTCTGCTGTGGCTGGTAT--TGAAAGTCCTGTGTTTCATTTCATTGTAAA 7858

Anopheles ------------------------------------------------------------

Homo CTCATAAATCATGAAAAGTTCCTAGGAATTCTAACATTTTTACATT-TCCAGAAGAGAGC 13221

Pan CTCATAAATCATGAAAAGTTCCTAGGAATTCAAACATTTTTACATT-TCCAGAAGAGAGC 12654

Drosophila ------------------------------------------------------------

Canis ATGATGTCTTGATAACGGTATGTAAGGTTCCACACATA-----ATC-GCTGGAATATAGT 7119

Bos ------------------------------------------------------------

Rattus TTTCTTCTATACCTAGTCTTTAGTCCTTTATATTTTATCTTAATCTTTTGAATTATTATT 9088

Danio ------------------------------------------------------------

Mus TTTCTTCTAGTCCT-----TTAGTCCTTTATATTTTGTCTTAATCTTTTGAATTATTATT 8742

Gallus CTTGTGACTAATCGAACGGCTGTTCTCATTTATATCA-------CTTTGAAGCAACAGTG 7911

Anopheles ------------------------------------------------------------

Homo CTCTTGTATTTTGTGGTAGTTGCCCCACCATCCCTCA----AATATTGGTG--TGTAGAA 13275

Pan CTCTTGTATTTTGTGGTAGTTGCCCCACCATCCCTCA----GATATTGGTG--TGTAGAA 12708

Drosophila ------------------------------------------------------------

Canis TCTGAGTCTT------CATTTCTGCCCCCATTTCTCA----AATTCCTATACCTGTGGAA 7169

Bos ------------------------------------------------------------

Rattus ACTATTACTAT---TATGTATTATATGATGTGTATTTGGGCATAAAAGTGCCATACTTTG 9145

Danio ------------------------------------------------------------

Mus ACTATTATTATCATTATGTGTTGTATAATGTGTATTTGGACATAAGAGTGCCATGCTGTG 8802

Gallus AGTTTTGTGAT---GGTATGGCGCATAGTGCAACAACTGACGTATAA-TGTTTTGCATT- 7966

Anopheles ------------------------------------------------------------

Homo TCTATTTTTGA------GGATGAGGAAATACAGAAAAGAAAAATAAAAAGCTATTTTTTT 13329

Pan TCTATTTTTGA------GGATGAGGAAATACAGAAAAGAAAAATAAAAAGCTATTTTTTT 12762

Drosophila ------------------------------------------------------------

Canis ACCATAATCAG------GCAGTAGTTTAGTAAGGTAAATAGGTCCAGGTTCTATAATTTT 7223

Bos ------------------------------------------------------------

Rattus ATGTGTGTGGAGGTCAGAGGATAGTTATGTAGATTAAGTTCTCTCAATTTTTAACTTTAA 9205

Danio ------------------------------------------------------------

Mus ATGCGGGTGGAGGTCAGAGGATAGTTAGGTAGATTAAGGTCTCTCAATTTTTAACTTTAA 8862

Gallus ATAGGTACAGGAACTGTAGAAGTCCATTTTAGAATTGGGAAGTACAAGTTT---CTGCAG 8023

Anopheles ------------------------------------------------------------

Homo TTAAGTATA--------AGAAGAAATGAAAGGTTTCTCTTCGCTTCATAGCCAATTCTAA 13381

Pan TTAAGTAGA--------AGAAGAAATGAAAGGTTTCTCTTTGCTTCATAGCCAATTCTAA 12814

Drosophila ------------------------------------------------------------

Canis CTGAGTCTGGAT-TTACAAAATAGATAATGAAGGATTCTTGGCTTTA------------- 7269

Bos ------------------------------------------------------------

Rattus TTCCAGAGA---------TTTTTTTTCAGGTG---------------------------- 9228

Danio ------------------------------------------------------------

Mus TCCCAGAGTGTTTTTTTTTTTTTTTTAAAGTG---------------------------- 8894

Gallus CTCTGGAAAAATATGGTATGTCCATGTTTTCA---------------------------- 8055

Anopheles ------------------------------------------------------------

Homo AACTTAACAGTTGTTAAGTGTGTTTAACTGTAGAGGGAAAAAAATGCCTGGAAGGAAATT 13441

Pan AACTTAACAGTTGTTAAGTGTGTTTAACTGTAGAGGGAAAAAAATGCCTGGAAGGAAATT 12874

Drosophila ------------------------------------------------------------

Canis --CCTAAGAATTAACTAGGGTCTTTGATTAA-----------------TGGCAGCATCTT 7310

Bos ------------------------------------------------------------

Rattus ---------------------------------------TCAGGCTTGGATGACTTTATC 9249

Danio ------------------------------------------------------------

Mus ---------------------------------------TCAGGCTTATATGGCTTTATC 8915

Gallus ---------------------------------------CTTCTATTGTATGGATGTATT 8076

Anopheles ------------------------------------------------------------

Homo ACCAATCAAATATAAAATGTAAGATAGCTGTAAAAGTACTGATATACATACAGCTTTTTT 13501

Pan ACCAATCAAATATAAAATGTAAGATAGCTGTAAAAGTACTGATATACATACAGCTTTTTT 12934

Drosophila ------------------------------------------------------------

Canis AC-----------------------------------ATTTATTGAAGTATGATTTTTT- 7334

Bos ------------------------------------------------------------

Rattus CTATTCACAGAGATAATCTCAGGAGTCATACATTTT-------TATCTTA--TTAAGATA 9300

Danio ------------------------------------------------------------

Mus CTACTCATGGAGATAATCTCAAGAGCCATACATTTT-------TATCTTA--TTAGCATA 8966

Gallus ATGACTAC--------TACTAATAATTATACTTCAC-------TGATTTAAACAAAGAAG 8121

Anopheles ------------------------------------------------------------

Homo CCTTTTGGGGAGGCAGTATTTAAAAAAAATCCTACCAAACATATTCTCTAACTTTCAAAA 13561

Pan CCTTTTGGGGAGGCAGTATTTAAAAAAAATCCTACCAAACATATTCTCTAACTTTCAAAA 12994

Drosophila ------------------------------------------------------------

Canis -----------GGGGGCACTTGGAGACACATTTGCATTTGACATCCTTTAACTAGGGAAC 7383

Bos ------------------------------------------------------------

Rattus TTTTTCATAAATT----GGGAAGATTGTGTCATGGAATTCTCCATAGTCTCAGGGTTTTG 9356

Danio ------------------------------------------------------------

Mus CTTTTAATAAATT----GGGAAGATTGTGTCATGGAAGTCTCCATAGTCTTAGGGTTTTG 9022

Gallus TTGAAAATAAATTCA--GGAAAACACACACATTCATTTTTCCCATATTTTTTGAACTTTA 8179

Anopheles ------------------------------------------------------------

Homo CTGTTAATAGCTTTATTGAGATAATTCACATACTATAAAATTCACCCTTTTAAAGTTTTT 13621

Pan CTGTTAATAGCTTTATTGAGATAATTCACATACTATAAAATTCACCCTTTTAAAGTTTTT 13054

Drosophila ------------------------------------------------------------

Canis ATGTTGGGTGCATTTT--AAATGGCAATTATATAAAAGAAGTTACCCATTTGT--TTTCA 7439

Bos ------------------------------------------------------------

Rattus CCTTTAGCTTAGACATTGTATATTCAGATTATTTCTTATTGAAACAT-GTTATAAAATAC 9415

Danio ------------------------------------------------------------

Mus TTTTTAGCTTAGAAATTGTATATTCAGATTGTTTCTTATTAAAACAT-GTTATAAAATAT 9081

Gallus ATGTCTGTTTTAGGCTTA---------GTTGCTTTGGATAGCTGAGT-TACTTGATATTC 8229

Anopheles ------------------------------------------------------------

Homo AGTATATTCACAGTTCTGCAGCCATCACCACTATTGAATTTTAGAACATTTTCATCATCC 13681

Pan AGTATATTCACAGTTCTGTAGCCATCACCACTATTGAATTTTAGAACATTTTCATCATCC 13114

Drosophila ------------------------------------------------------------

Canis GGTATTCTTAGTGTTTTCTATTC---------------------------TCCATGGTGC 7472

Bos ------------------------------------------------------------

Rattus TT------TTTAATAATACATCAAGAATCTACTTACCTACCACCCAGTAATATAAATGAT 9469

Danio ------------------------------------------------------------

Mus TTAAAGCACTTAATAGTATATCAATAATCTACTTACCTACCATCCTGGAATATAAA---T 9138

Gallus TTGGAGAAAATAAAGATGCAACGTTGATG-AATTCCCTTTTAATTTGTTATACAAAC--- 8285

Anopheles ------------------------------------------------------------

Homo CCAAAATAAATCCTAACCTGTTAGCAGCCATTCCCCATTCTTTCCTGGCCTCTGGAAACC 13741

Pan CCAAAATAAATCCTAACCTGTTAGCAGCCATTCCCCATTCTTTCCTGGCCCCTGGAAACC 13174

Drosophila ------------------------------------------------------------

Canis ATAAAAACAGTACAAATTT-CTAACATTTGCATATCATTCTGTAGTTGAGCCTAGAAATA 7531

Bos ------------------------------------------------------------

Rattus GCCAGTTTTGATTTT-GTTCTGGA-------AACTTAATCCGTTCCTCCAAGTC---CTG 9518

Danio ------------------------------------------------------------

Mus GCCAGTTTTGATTTTTGTTTTGGA-------AACTTAATCTCTTCCTCCAAGTC---CTA 9188

Gallus -TCAGCATTG--TGCTACTATGAT-------CCATCTATTTCTTCACTGGTTGG---ATA 8332

Anopheles ------------------------------------------------------------

Homo ACTAATCTGCTTTGTCTCTATGAATTTATTTATTCTGGATATTTCATATAAATGGGAATC 13801

Pan ACTAATCTGCTTTGTCTCTATGAATTTATTTATTCTGGATATTTCATATAAATGGGAATC 13234

Drosophila ------------------------------------------------------------

Canis GA-----------------ACTAACACAATAACCCAGATCTTTTTATCCAATTGTATGT- 7573

Bos ------------------------------------------------------------

Rattus TGACCATCTCTTCTTACCCATGTAAGAGGTTTCTTGAGGTTCTTGAATATCTCCTGTTTT 9578

Danio ------------------------------------------------------------

Mus ATACCCTCTCTTCTTATCCATGTAAGAGATTTCTTGAAGTTCTTGAATATCTTCTGTTTT 9248

Gallus AGACGTGGTGCTGTTGC-----TGAGGGCTTTTTCCATGCTGCTGTACACGTTTATAGTC 8387

Anopheles ------------------------------------------------------------

Homo ATACAGTATGTGTCCTTTTGTGTGTGGGTTCTTTTACTTACCATGGTATTTTCAAGGTAT 13861

Pan ATACAGTATGTGTCCTTTTGTGTGTGGGTTCTTTTACTTACCATGGTATTTTCAAGGTAT 13294

Drosophila ------------------------------------------------------------

Canis ATATTGTCTCTGTATTTT---GTGTAAGCTTATATATTATTATTATTTTTTTGTAAGCTT 7630

Bos ------------------------------------------------------------

Rattus GT--ACTTAAATATGACCTTTGCTCATAAGTGAGATATCATCCTTAACTTTCTATAGATA 9636

Danio ------------------------------------------------------------

Mus GT--ACTTAAATATGACCTTTGCCAATAAGTGAGATATCATGCTTAAGAATTTATAGATG 9306

Gallus AG--ACTTGTACAC--------TTTTTAAGTATAACTTGCAGAATAGACTACTAGAAAAG 8437

Anopheles ------------------------------------------------------------

Homo GTTCATTGACATGTATGTCTGTTTTTTTTGGGTAACACACACTCTTGATTACTGTAGCTT 13921

Pan GTTCATTGACATGTATGTCTGGTTTTTTTGG-TAACACACACTGTTGATTACTGTAGCTT 13353

Drosophila ------------------------------------------------------------

Canis ATATATT---ATTGGAGTCTTTTTGCATATACTAATTTAGACT-----TTATTTTTTTTT 7682

Bos ------------------------------------------------------------

Rattus TGTTTCGTACATACCTGCCATCAG--TTTATGTGT-----TT-----------------T 9672

Danio ------------------------------------------------------------

Mus TGTTTCATACATACTTGCCATCAG--TTTATGTGTCTTTATT-----------------T 9347

Gallus TTAACCAAACATCAGTGTAAGCAAAATTTACAAATTGGGATG-----------------T 8480

Anopheles ------------------------------------------------------------

Homo TGTAGTAAGTCTTGAAACCAGGAAATGTGAGTATTCTAACTTATTCTTTTTCAAAATTGT 13981

Pan TGTAGTAAGTCTTGAAACCAGGAAATGTGAGTATTCTAACTT------TTTCAAAATTGT 13407

Drosophila ------------------------------------------------------------

Canis TTTTTAATGATTTCATTCTAATAACTTCAATTTCTCCTCCTT--------------TGGT 7728

Bos ------------------------------------------------------------

Rattus TTTAAGTTTTGTTT-ATGTGTTTTATCTGTTATGTTTTTGAGATGTGTATGTTGGCACAT 9731

Danio ------------------------------------------------------------

Mus TATGTGTTTTATTTTATGTGTTTTATCTGTT-----TTTGAGATGTGTATGTTGACACAT 9402

Gallus TTGGAAGCTCAGAA-ATGTCACCCACCCATC--------AGCCTGTGCCACGTGGTGCAT 8531

Anopheles ------------------------------------------------------------

Homo TTTGGGTCTCTGGGTTTCTCAAATTTCCATAGAAT-TTTAGGGTTAGCTTGCAAAAAAAT 14040

Pan TTTGGGTCTCTGGGTTTCTCAAATTTCCATGGAAT-TCTAGGGTTAGCTTGCAAAAAAAT 13466

Drosophila ------------------------------------------------------------

Canis CTTTACTCTCCA----CCTCTATCTTTAATG-----CTTAGGATATGTTTTCAGGTG--T 7777

Bos ------------------------------------------------------------

Rattus TTAGATCTTTGGTAT-TACAATATAGGGATAACTATATAGTATTGTATCCCACT----GC 9786

Danio ------------------------------------------------------------

Mus ATCT-TTTATGGTAT-TATAGTATATGGATAACTAAATAGTATTGTATCCCACT----GC 9456

Gallus CTCTTTGCCTGGGCTATGAAGTGTCCAGCAAGCT---TAAAATTGTGTGC-GTT----CA 8583

Anopheles ------------------------------------------------------------

Homo GCAA-CTGGGATTTTAA-TAGGACTTGGATTTGTGTTGAATCTGTAGGTCTATTTGGGAA 14098

Pan GCAA-CTGGGATTTTAA-TAGGACTTGGATTTGTGTTGAATCTGTAGGTCTATTTGGGAA 13524

Drosophila ------------------------------------------------------------

Canis ATAA-CCAAGACAATAAGTGGAACATGGGT-------AAACGTATTAAGTGATTTATGGT 7829

Bos ------------------------------------------------------------

Rattus TTATGAATATTTTAGATTGCTTCTTATATTGCTCTTGTGAGTAATGCTGCAG-------A 9839

Danio ------------------------------------------------------------

Mus TTATGAATATTTTGAATTGCTTCCTATATTGCGC-------------------------A 9491

Gallus TTATAACAAAATCAAACTTGAACTTGTA-------------------------------- 8611

Anopheles ------------------------------------------------------------

Homo GTATTGCTACCTTAATACTGTCTTCTCATTCATGAGCATGGGATATCTTTCCATTTATTA 14158

Pan GTATTGCTACCTTAATACTGTCTTCTCATTCATGAGCATGGGATATCTTTCCATTTATTA 13584

Drosophila ------------------------------------------------------------

Canis TCAGTGC-ATATCAAGGCTATTTCCGTAA------------------------------- 7857

Bos ------------------------------------------------------------

Rattus GATCATTTTTATACTTCCTTTGTAAA-GGTTTTCTT--GGGAAATTTAAAGAAATGAA-G 9895

Danio ------------------------------------------------------------

Mus GATCATTTTTATACTTCCTTTGTAAAAGGTTTTCTTTAGGGAAAATTAAAGGGATGAA-G 9550

Gallus -GTTACTCTAGTTCCCATTTTCTAAC--CTTATGCTGTGGTAGTGCAGTGGAGATGCATG 8668

Anopheles ------------------------------------------------------------

Homo AGGTGTTCTTTAATTTCTTTCATGTTTTGTAGTTTTCAGTATACAGGTCTTGTACTTATT 14218

Pan AGGTGTTCTTTAATTTCTTTCATGTTTTGTAGTTTTCAGTATACAGGTCTTGTACTTATT 13644

Drosophila ------------------------------------------------------------

Canis ----GTACTTAGTTTTCTCTACATGTTGGTATGAGCTAGCACTCAGGTCTCAGGCCCATC 7913

Bos ------------------------------------------------------------

Rattus TTTTTAGAGAATAGG--------TTAACTTGATTAGATATGGAAA-------TTCTTATG 9940

Danio ------------------------------------------------------------

Mus TTGTTAGAAAATAGGATATATCCTTAACTTGATTAGATACGGCAA-------ATTTTATG 9603

Gallus GTGTTAGAGAAAA----------TCTGCTCCACTCAATAGTGG-----------CTCACG 8707

Anopheles ------------------------------------------------------------

Homo ACTTTAAAAATTTATTTCTAAGAATTTTATGTTTTGATGGTATTGCAAATTGAATTTTTT 14278

Pan ACTTTAAAATTTTATTTCTAAGAATTTTATGTTTTGATGGTATTGCAAATTGAATTTTTT 13704

Drosophila ------------------------------------------------------------

Canis ATTAT------------------CTCTTATCTCTAGATAGC-----------------TC 7938

Bos ------------------------------------------------------------

Rattus TAAATTAGATTTGTCAATACATACCATATCAGCAGTGAATGAACATTTTTGTTTCTAGCA 10000

Danio ------------------------------------------------------------

Mus TAAATTTGATTTGCCAACATATACTGTATCACCAGTGAATGAACATTTTTGTTTCTAGCA 9663

Gallus TTCTGTAGTGTTCTTGATGCATAGTG------------------ATTCTTTTCTTTAACA 8749

Anopheles ------------------------------------------------------------

Homo AAAATTTCATTTCAGGTTTTTAATTCCTTGTGCATAGATTTTTGTGTACTAAAACTTGTG 14338

Pan TAAATTTCATTTCAGGTTTTTAATTGCTTGTGCACAGATTTTTGTGTACTAAAACTTGTG 13764

Drosophila ------------------------------------------------------------

Canis TCATATTTGTCTCCAACTCTAACTTACCC-----------TCTGAGTTGTAGACTTCATA 7987

Bos ------------------------------------------------------------

Rattus TCTTTTATCA--GTACTTGGAATAGTTAGATTTTTAAATAGTGATA--AAATGGCATCTT 10056

Danio ------------------------------------------------------------

Mus TCTCTAACCA--GTACTTGGAATAGTTAGATTTT-AAATAATGATATCAAATGGCATCTT 9720

Gallus TTCTGAATTGCTGCATTCAGAAAACATTAATATTAGAGTTCAGATTTTTCTAGGTTATCA 8809

Anopheles ------------------------------------------------------------

Homo TTTCATATAATTTTTTTTTCCTCTTAACTGTGTTATAGGAATCTTTCAAATGGTTGGCTA 14398

Pan TTTCATATAATTTTTTTT-CCTCTTAACTGTGTTATAGGAATCTTTCAAATGGTTGGCTA 13823

Drosophila ------------------------------------------------------------

Canis TATCCAATAATTGAATGT----CTGATTGATTCTCTTAACATGTCCAAAGTAGCT--CTT 8041

Bos ------------------------------------------------------------

Rattus ATTTTGTGTTTGCTTTAATTCT----GAGTGGT----AAAATGATAGGAGTTTTATGTTG 10108

Danio ------------------------------------------------------------

Mus ---TTGTGTTTGCTTTAATTCT----GAGTGGTTGGTAAAATGATAAGAGTTTTATGAT- 9772

Gallus AATACATGATAACACAAAATCGTATGGAGTTACATCAACAACTACATCTAAGCTATGAAG 8869

Anopheles ------------------------------------------------------------

Homo CATACACATCCATCTGATTCACTTAGTAAACATTTCTTGAACACCTACTGTGTAGTGGGC 14458

Pan CATACACATCCATCTGATTCACTTAGTAAACATTTCTTGAACACCTACTGTGTAGTGGGC 13883

Drosophila ------------------------------------------------------------

Canis GATTTTCATCCTCTTAAATCTACTTGTAT---CTTTTTGCCATCTCAGTTGGTAGCAGCT 8098

Bos ------------------------------------------------------------

Rattus TTGTTTTTTTTTTTTTTTTGCATGTTTCAATTTAACAAATTTAATTAGTTT-------GT 10161

Danio ------------------------------------------------------------

Mus -----------TTTTTTCTACATGCTTCAATTTAATGATTTTAATTAATTTTTTTTAAGT 9821

Gallus ATA--------CTGTTTTTAAAACACTTAAAGTACTGGGAAGAATTTAGTA--------- 8912

Anopheles ------------------------------------------------------------

Homo CTTTTTTTCTAGGTCCTGGTAGAGACAGCAGTGTATAAAACCCACTCAGTCCTTTGCTTT 14518

Pan CTTTTTTTCTAGGTCCTGGTAGAGACAGCAGTGTATAAAACCCACTCAGTCTTTTGCTTT 13943

Drosophila ------------------------------------------------------------

Canis CTTTTTTTTTTCTTCCAGTT---TATCTAAAACTTTGGAAGCATCTTTGATTTCTGTTTC 8155

Bos ------------------------------------------------------------

Rattus ACTGGTGTTTAAAATC-------------------------------------------- 10177

Danio ------------------------------------------------------------

Mus GCTGGAGTTTGAAATC-------------------------------------------- 9837

Gallus ACTCCTGATACAAGTC-------------------------------------------- 8928

Anopheles ------------------------------------------------------------

Homo CATGGCACTTAAATCCTAAAAAGAGATCATAAAGATAGGTAAAATATATGTTACATAGTG 14578

Pan CATGGCACTTAAATCCTAAAAAGAGATCGTAAAGATAGGTAAAATATATGTTACATGGTG 14003

Drosophila ------------------------------------------------------------

Canis T----CACTTAAATT-------------------ATCAGCAAATCATGT----------- 8181

Bos ------------------------------------------------------------

Rattus ----------------------------------------------TAGGGCCTGCTATA 10191

Danio ------------------------------------------------------------

Mus ----------------------------------------------CAGGGCCTGCTGTA 9851

Gallus ----------------------------------------------TTATACCTGTATAT 8942

Anopheles ------------------------------------------------------------

Homo CTAAGGAGAAGAAACAAATAAGGGAAGTGTTTGCAGGTGAAAAGGATGATGGGAAATTTT 14638

Pan CTAAGGAGAAGAAACAAATAAGGGAAGTGTTTGCAGGTGAAAAGGATGATGGGAAATTTT 14063

Drosophila ------------------------------------------------------------

Canis ----------------------------------------------TGACTCCACCTTTA 8195

Bos ------------------------------------------------------------

Rattus TGCTAAGCAATTT----------------------------------------------- 10204

Danio ------------------------------------------------------------

Mus TGCTAAGCAATTT----------------------------------------------- 9864

Gallus TTATGTCTAGATT----------------------------------------------- 8955

Anopheles ------------------------------------------------------------

Homo AGATAGGGTAGGTAGAGAAAACTTCACTGAAATGGTAACTTGGGTGAAGAACTGAGGGAG 14698

Pan AGATAGGGTAGGTAGAGAAAACTTCACTGAAATGGTAACTTGGGTGAAGAACTGAGGGAG 14123

Drosophila ------------------------------------------------------------

Canis AAATACCGTAATT----------------------------------------------- 8208

Bos ------------------------------------------------------------

Rattus ---------TCTTTGTGTTT-ATAATTTATTGAAAAACATTTAAAAGAAA---------- 10244

Danio ------------------------------------------------------------

Mus ---------TCTGTGTGTTTTATAATTTACAGAAAAAAATTTAAAAGAAAAGAAA----- 9910

Gallus ---------CTTCTTTTGAAGATATCTAACATGAAAAAATAGTAAAAAAAAAA------- 8999

Anopheles ------------------------------------------------------------

Homo ATGAGAGAGCTAGCCATGTGGATATTTGGGGGAAGAGCATTTCAGGCAGAGTGTAGTGAA 14758

Pan ATGAGAGAGCTAGCCATGTGGATATTTGGGGGAAGAGCATTTCAGGCAGAGTGTAGTGAA 14183

Drosophila ------------------------------------------------------------

Canis ----------CAACCACTTGTCCTTTT------ACACCATTTC----------------- 8235

Bos ------------------------------------------------------------

Rattus --------------------------------CTGTACAATGTTATTGTTGACAAGGACC 10272

Danio ------------------------------------------------------------

Mus --------------------------------CTCTACAAGGTTTTTTTTTTTGTTTCTT 9938

Gallus ------------------------------------AAAAAATTGAAGTTCTAAAATCCC 9023

Anopheles ------------------------------------------------------------

Homo TAGGGAAACCCCAAAGTGAGAGTGCCTGATGTGTTTGAAGAACTCGAGGTGTGGCCAGTG 14818

Pan TAGGGAAACCCCAAAGTGAGAGTGCCTGATGTGTTTGAAGAACTCGAGGTGTGGCCAGTG 14243

Drosophila ------------------------------------------------------------

Canis -------------------------------TACCTCTATCACTCTAATTAAAGCCATCA 8264

Bos ------------------------------------------------------------

Rattus TTGAAA------------------------------------------------GCCATC 10284

Danio ------------------------------------------------------------

Mus TTTTTTTT--------------------------------------------TTGGTTTT 9954

Gallus ------------------------------------------------------AGCTTT 9029

Anopheles ------------------------------------------------------------

Homo TAGCTTTAGAAAAGTAATTGATGGGAAATAGAGAGAATGGAGGGTACAGATATTTTGATC 14878

Pan TAGCTTTAGAAAAGTAAATGATGGGAAATAGAGAGAATGGAGGGTACAGATATTTTGATC 14303

Drosophila ------------------------------------------------------------

Canis TCTTTT---------------------GCCAAGAGAATGAAA------------TTGTTC 8291

Bos ------------------------------------------------------------

Rattus TTATTCAAATTTTTATTTTTTTTTATT---AATGGCTGATTATCTGTCCAGTCATCAGTA 10341

Danio ------------------------------------------------------------

Mus TTGTTTGTTTGTTTGTTTGTTTGTTTTTTAAATAGCTGATTATCTGTCCAGTCATCAGTA 10014

Gallus GTGGAAGGACTGTTGGCTGTCTCTGTT---------------TCTGTAAAGTT-CTGTTT 9073

Anopheles ------------------------------------------------------------

Homo ATAATAAGGTGTTTGATTTTTACCTATAAGTGAGATGGGAAGCTATTGGAAGTCTTTGAG 14938

Pan ATAATAAGGTGTTTGATTTTTACCGGTAAGTGAGATGGGAAGCTATTGGAAGTCTTTGAG 14363

Drosophila ------------------------------------------------------------

Canis CTCAGTAGTTTTGCTGCTTCCATTCTTGGGC-----------CTTTCAGTATATTTTCTA 8340

Bos ------------------------------------------------------------

Rattus TATGGGATTTGATATATATTCAGTTTGGGTTGTTATAGTATTTTATGTGTGTGTGTGTGT 10401

Danio ------------------------------------------------------------

Mus TATGGGCTTCTGTATGCTTTCATTTTGGGTTGTTATGGTATTTTGTGTGTGTGTGTGTAT 10074

Gallus CGTGGGAGTTAAAAATGATTAATTCTAAACTGAAACTTTAACTATGGTGTGTGC---TAA 9130

Anopheles ------------------------------------------------------------

Homo CAGAGTAGTGAAAAAGTAT-GACTTATGTTTAGCAAGGTCACTCTGGTTGCTGTGTTAAT 14997

Pan CAGAGTAGTGAAAAAGTAT-GACTTATGTTTAGCAAGGTCACTCTGGTTGCTGTGTTAAG 14422

Drosophila ------------------------------------------------------------

Canis TGTAGCAGCCA---------GATTGATCTTTCCTAAGATT-------------TATTTAT 8378

Bos ------------------------------------------------------------

Rattus GTGTGTGTGTGTGTGTGTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 10461

Danio ------------------------------------------------------------

Mus ACACACACACATAAATAA------------------------------------------ 10092

Gallus TTAAAAAACTGTGAGTCT------------------------------------------ 9148

Anopheles ------------------------------------------------------------

Homo CATAGACTGAAAAAGGGGACAAGGGCAGAAACAGACCAATTGGTAGACCATTA------- 15050

Pan CATAGACTGAAAAAGGGGACAAGGGCAGAAACAGACCAATTGGTAGACCATTA------- 14475

Drosophila ------------------------------------------------------------

Canis TTTAGAGAAAAAGAGAG------------------------------------------- 8395

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 10521

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 10581

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 10641

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 10701

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 10761

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 10821

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 10881

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 10941

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNTTCTTTAAAGATGAGGTATTACAAAAAAGAATTT 11001

Danio ------------------------------------------------------------

Mus ------------------------------TTATATATTATATAATAGATATATAATATA 10122

Gallus --------------------------TAAAAAATATAAGTTGTGTTCCCTCAGAAACATC 9182

Anopheles ------------------------------------------------------------

Homo ---------------------------GTACAGATTAAGACGTGACTGAAATGGACAGAG 15083

Pan ---------------------------GTACAGATTAAGACGTGACTGAAATGGACAGAG 14508

Drosophila ------------------------------------------------------------

Canis ----------------------------------------CATGAGTGAGAGGGGCAGAG 8415

Bos ------------------------------------------------------------

Rattus TAAAGCTA-ATATTTCCA-GGCCTTACTTTGAGCTAGAGTGGTTTA-------------T 11046

Danio ------------------------------------------------------------

Mus TAATACAT-ACATATATATGGATTTAACTTTTGTTGTAAATATATAGCATTCTCTTGATT 10181

Gallus TGGGTTATGATAATTCTGTAGATTGGTCCTGTACTCCAGCAAG----------------C 9226

Anopheles ------------------------------------------------------------

Homo TGGTCACAGTGAGGGTGGTGAGAAGTGGTTGAATTCTTGATATATGTTGAAATAGAGTCC 15143

Pan TGGTCACAGTGAGGGTGGTGAGAAGTGGTTGAATTCTTGATATATGTTGAAATAGAGTCC 14568

Drosophila ------------------------------------------------------------

Canis TG-----AGAGAGAATCTGAAGCAG------ACTTCATGCTAAGCACAGGAAC----CTG 8460

Bos ------------------------------------------------------------

Rattus AAGAAAATGGACATGGATAGTCTT-------TTGAAACAGATTGAAGTTTGAATCTTATT 11099

Danio ------------------------------------------------------------

Mus ATATATCTAGGTGTGAGTTGTCTGGGAAATATGGCAACTATTTAAAACTAGAGGCATTTT 10241

Gallus ATTGGGCAGGTAGTGCGCATTCCCTGCACCCACAGCACCAGCAGGACCAGCCACCCGCTT 9286

Anopheles ------------------------------------------------------------

Homo ATAGGATTTGGTAGTAGACCAGATGAAAGTGGGAAATAAAGGGAGGAGTAAAACATGATG 15203

Pan ATAGGATTTGGTAGTAGACCAGATGAAAGTGGGAAATAAAGGGAGGAGTAAAACATGATG 14628

Drosophila ------------------------------------------------------------

Canis ACAGGGCTGGATCCCACAACGCTTGAGATCACAACCTGAGCCAAAACCAAGAGGCAGATG 8520

Bos ------------------------------------------------------------

Rattus ----CTTGCATTTACATAGCTACCCAAGTTTTTTCTTCTGTGAACTGTCT-----TATTC 11150

Danio ------------------------------------------------------------

Mus AAAACTTTTCTCAAAGTGGCTATATATTTATATTCCTTTGAAATACTTTTATTAGTAATA 10301

Gallus ----CTCACTCTCCAGTTTCAATACCAGTTGCGTGTATGACACCTCTTTCCGACCTAAGC 9342

Anopheles ------------------------------------------------------------

Homo CCAAAGTTTTTTGACCAGAGCAGCTGAGAGAATGGAGTTGGATAATTCTTATAAATTATT 15263

Pan CCAAAGTTTTTTGACCAGAGCAGCTGAGAGAATGGAGTTGGATAGTTCTTATAAATTATT 14688

Drosophila ------------------------------------------------------------

Canis CTTAA-----CCAACTATACCACCCAGGCAGGCGCCTTCAGAGTGATCTTTTTAA----- 8570

Bos ------------------------------------------------------------

Rattus TATAAACGTTTTTATGCATTT-AGTATAAAAATTAATGACATACT---TTCTTAA-TGTT 11205

Danio ------------------------------------------------------------

Mus TGTGAAGGTTCTGATTTTTTTCATTGTTAGTGTTATTGTCATTCTCAGTCCTTAACTGTC 10361

Gallus TATTATTTCTTCTTTGCTGTTATCTCTGCTGGCTGCTTTC-TTTTGAATGTTTAACTATT 9401

Anopheles ------------------------------------------------------------

Homo GCATTAAATCTGTGCATCATATCACATGCCCACTTAACTACAGGTAATTTTACCATATAA 15323

Pan GCATTAAATCTGTGCATCATATCACATGCCCACTTAACTACAGGTAATTTTACCATATAA 14748

Drosophila ------------------------------------------------------------

Canis -AATCAAAGTTAAACCATGTTATTTATGCTCAGAACTTTCAAGGGCATTCCATCT----- 8624

Bos ------------------------------------------------------------

Rattus TTATCTAGTTTGGA---------------AGAAAGGGTA--------------------- 11229

Danio ------------------------------------------------------------

Mus ATTGTTCATTTGGGGTGCTCTAAAGTTTTAAGAAGAATA--------------------- 10400

Gallus TGCTACTGTACGCGTTCATGTAGTCTCTGTAACGGTATG--------------------- 9440

Anopheles ------------------------------------------------------------

Homo GCTTGTGGGGGGAAAAGAGGAAAAACAGAAAAAAGGATGGAAAAGCATGTTTTAAAATAT 15383

Pan GCTTTTGGGGGGAAAAGAGGAAAAAGAGAAAAAAGGAAGGAAAAGCATGTTTTAAAATAT 14808

Drosophila ------------------------------------------------------------

Canis --------------AAGAGCAAAATCTGAGGA---------------------------- 8642

Bos ------------------------------------------------------------

Rattus ----------------------------TACTCACAGGGTTTGGTTACATAGTATTACAT 11261

Danio ------------------------------------------------------------

Mus ----------------------------GTTTTGTTTGTTTTTTAAATAGGCTTTTATAG 10432

Gallus ----------------------------CACTTTGTAAGCTGATGAACAGGAATCCCCCT 9472

Anopheles ------------------------------------------------------------

Homo AATAAATTAGGCCTTAATGAAAAATTGTCCTTGAGAAACCTGAGATGGAATACTCTAAAT 15443

Pan AATAAATTAGGCCTTAATGAAAAATTGTCCTTGAGAAACCTGAGATGGAATACTCTAAAT 14868

Drosophila ------------------------------------------------------------

Canis -----------------------------TCTGCCAGGACCTGTATGAGCTCCCTTGCAC 8673

Bos ------------------------------------------------------------

Rattus GTGATGGAG-AGATTAAGCTT-TATTCCAAAAGCAAATA---------AAGTTCACTAAG 11310

Danio ------------------------------------------------------------

Mus ATAAAGAGA-GGATGGAAATTGCAGAGCACAGGAAAACATTTCTTGTGGAATATCCTGAG 10491

Gallus CTAATCCACCACAATGTGCAAGTAATGAACAGCAGAACAGC-------AGAACCTCAGAA 9525

Anopheles ------------------------------------------------------------

Homo CTGATGTGT-TCTCTCAATCTTTAGAACTGAACTAGGAATTAACTCTGAGAGTTCATGAT 15502

Pan CTGATGTGT-TCTCTCAATCTTTAGAACTGAACTAGGAATTAACTCTGAGAGTTCATGAT 14927

Drosophila ------------------------------------------------------------

Canis TTG-TGTGG-CCTTTCCATTTCTCTTGCTTGTCTTTACACTGGCTTTATGGTCTTGCACT 8731

Bos ------------------------------------------------------------

Rattus GA-----ATTATTAGGGATAGTGTTGAATTGTGGTGAGATTCCTGAGGTAGAATTGGTAG 11365

Danio ------------------------------------------------------------

Mus AAGCAAAATTATTAGGACCAGAAATA---------GAGATTTCTGATATATGATAGAGTA 10542

Gallus AAACTGAGTGTTATGCTACAGAACTGCAT------GGTTGTTTGGTTTTAATACAACCTA 9579

Anopheles ------------------------------------------------------------

Homo --GTTATGAGACCCTTTGCCTGTTTTGGAAATTCGGTTGTTTTCAATATTTGCTTTTGCA 15560

Pan ATGTTATGAGACCCTTTGCCTGTTTTGGAAATTAGGTTGTTTTCAATATTTGCTTTTGCA 14987

Drosophila ------------------------------------------------------------

Canis TATGTTTCAATGTTCTTAACACTCGTG-----TCTACTGTTTGTGACCCTT-CTCTAATA 8785

Bos ------------------------------------------------------------

Rattus CAGTGAGTGAACAATATTATACTTGGCAGGAGAGATTGTACA---ATATTTCT------- 11415

Danio ------------------------------------------------------------

Mus CAATAACCAAGGGAGATTGATATTTCAGGATGTCATCATATATGGGTAATGTT------- 10595

Gallus CGTGTAAACAAACATGCTGGTGTCACTGAAGAATTTGGTGAACAGAAAGGTGC------- 9632

Anopheles ------------------------------------------------------------

Homo ATGATGGTACCTGTTATTTTTTCTGTAAGGTAGATTCCTACAAATAAGATGTCAGGCCAT 15620

Pan ATGATGGTACCTGTTATTTTTTCTGTAAGGTAGATTCCTACAAATAAGATGTCAGGCCAT 15047

Drosophila ------------------------------------------------------------

Canis TCCACATGGCTTCCTTTTAGTTACCTCAGTGATGCCTTATCAGAGAGGCCTTC------C 8839

Bos ------------------------------------------------------------

Rattus TGAACTTTTCTGATTTGA----GTCATTAGCACA--TGAATTCTACCAAGGACTTAGTAG 11469

Danio ------------------------------------------------------------

Mus TGGA-TTACTGGATGTGACCATATGACAAGGACA--TCAGTT--AATATGTAAAAAAAAG 10650

Gallus TTGACATGAGAGGCTCCA---TGTGATGAGTGGG--TGGGA------AAAAAAGCAAAAT 9681

Anopheles ------------------------------------------------------------

Homo TAGATCATGTCAATCTAAATATTTGATAGGTTTTGCCAATTACCTTTTAAAAAATAATTT 15680

Pan TAGATCATGTCAATCTAAATATTTGATAGGTTTTGCCAATTACCTTTTAAAAAATAATTT 15107

Drosophila ------------------------------------------------------------

Canis TTGACCAAATTTATCAAGGAATGTGTTGTGTTCT--TGATTACCTTGTTAGATTTATCAT 8897

Bos ------------------------------------------------------------

Rattus TATGTGATAAATCTTATCT-------------ATTATGGAGACTATGGTGTTTTTAACTA 11516

Danio ------------------------------------------------------------

Mus TTTGAAATTTATGTTAACAG-----------AATTGAGAAGGCATAGGGATTTTTTTTTA 10699

Gallus AACCAAGCATAAGCTAAAGA-----------GATAGGTGGAATAAAAGTTTAAATATTTA 9730

Anopheles ------------------------------------------------------------

Homo TAGCAAGTTTCATTCCTTAAAATATATTAGGGACTGCTCATTTACCTTGTTTTGATTCAT 15740

Pan TAGCAAGTTTCATTCGTTAAAATATATTAGGGACTGCTCATTTACCTTGTTTTGATTCAT 15167

Drosophila ------------------------------------------------------------

Canis CATAGGATTTAAT------------------GTCAGTTGACTTGTTTCACTTTGATTTTC 8939

Bos ------------------------------------------------------------

Rattus CCA------ATATATACTCAAAGTCTAATTGATA----------TCTGTCGAAT------ 11554

Danio ------------------------------------------------------------

Mus ATATGAGAGGGATATGACCAAATTCTAATTTCTAGGAGGATAGTTCTGTCAAATATGT-- 10757

Gallus AGCTGAGGTGAAGCTG--TAAAACTTAGCTGTTTGGAAGATA-----ACTTGATACCT-- 9781

Anopheles ------------------------------------------------------------

Homo GTATATATAAAATCTGTTTAAGTCTTTATAAATAACCTGG-GAAATTGCCTGGTTTTTTG 15799

Pan GTATATATAAAATCTGTTTAAGTCTTTATAAATAACCTGG-GAAATTGCCTGGTTTTTTG 15226

Drosophila ------------------------------------------------------------

Canis TTGT-TGTCTTGTTCATTTAATACTAGAGTGGAAACCTAATGAGAGTGCCTGGTCTAT-- 8996

Bos ------------------------------------------------------------

Rattus ---------------------------------------------GAAAAATTTGAA--- 11566

Danio ------------------------------------------------------------

Mus -----------------------------------------AAGAGAGAAATGAGGT--- 10773

Gallus -----------------------------------------ACCCAGTAAAT--GGA--- 9795

Anopheles ------------------------------------------------------------

Homo GTCCATTTCTATTGTGGTGTTTGTTTTTTAAATTTGTAAGCATTCTTTATATATCAT--- 15856

Pan GTCCATTTCTATTGTGGTGTTTGTTTTTTAAATTTGTAAGCATTCTTTATATATCAT--- 15283

Drosophila ------------------------------------------------------------

Canis ------------------------------AATAGGTAGTAAATACTTATATATGAAAGA 9026

Bos ----------------------------------GGTA-----TGTTCACATATGA---- 17

Rattus ---GAGTTGTAAATAGTGGTTA--------GGTTAAGTCAAAATAGGAGAAGAAGAGG-- 11613

Danio ------------------------------------------------------------

Mus ---AAAATGACAAGACTCTGTATCACAACAATCTTAGTAACCATGTGGGGAAAAGAAGCA 10830

Gallus ---GAGCTACCAAAACAAATTTAAATAGGTGATTGTATTTCACTTTCTGATGTAGGAG-- 9850

Anopheles ------------------------------------------------------------

Homo -TTAATTCTTTATTATAATTTGCAAATATTATCTCTACCTACCTTTAATTTTATAGTATC 15915

Pan -TTAATTCTTTATTATAATTTGCAAATATTATCTCTACCTACCTTTAATTTTATAGTATC 15342

Drosophila ------------------------------------------------------------

Canis GTGAAATTACTAAATTAATGTAAAATGTTTATTTCAACCC--TTTTAATTCCTTTGCA-- 9082

Bos -TGAATCTACAAAGTTGTTTTG----GTTTAATCCATCC----------TCTTTTG---- 58

Rattus -----------------------------ATGGCAGAAGATTTT------------TCTC 11632

Danio ------------------------------------------------------------

Mus ATGGATTCTTTCTTTAAAGATGAAATATTACAAAAAAGAATTTTAAA----GCTAATTTT 10886

Gallus ----------------------GACCTTTCCATTCAAAAGTGTC------------TAAT 9876

Anopheles ------------------------------------------------------------

Homo TAGTCATGTGAAATTTTA---AAGTTTTTATGTAGGCAAATCTGTCC-ATCTTTTATGGT 15971

Pan TAGTCATGTGAAATTTTA---AAGTTTTTATGTAGGCAAATCTCTCCCATCTTTTATGGT 15399

Drosophila ------------------------------------------------------------

Canis ---------GAAGT-----------------GTAGGAAGA------------------AT 9098

Bos --------------------------------------AA------------------AC 62

Rattus TCTGTTAGGAC----AATTTGATTG-TTGACATACAAAT-------------------AT 11668

Danio ------------------------------------------------------------

Mus TCCGGCGTGACTTTGAGTTAGACTGGTTTATAAGGAAATGGACATGGATAGTCTTTTGAA 10946

Gallus TTTGGAGGGAGCCTGAAGTAGCAGATGTAGCTGAGATAG-------------------AA 9917

Anopheles ------------------------------------------------------------

Homo TTCTGGGTTTCAGCATGCTAACAAAGTTGATATAAATATGATCTCATA---------TAT 16022

Pan TTCTGGGTTTCAGCATGCTAACAAAGATGATATAAATATGATCTCATA---------TAT 15450

Drosophila ------------------------------------------------------------

Canis TTTCGAGCATCAGTGTATGTGTAAATAAATGATAAATATG-----------------TAC 9141

Bos T---GAGGGTCAGT---------------------------------------------- 73

Rattus ATAGAATAGAATGTTTTGG---------------------------------------GT 11689

Danio ------------------------------------------------------------

Mus ACAGATTGAAGTTTCTTAGCCTT-----------------------------------GC 10971

Gallus ACAAAT---GGTTTTTCAGGGAT-----------------------------------AG 9939

Anopheles ------------------------------------------------------------

Homo ATATTACAAAAACTTTTTAGAGATAGGATCTCACTCTGTCACCCGGGCTGGAGCAACCAT 16082

Pan ATATTACAAAAACTTTTTAGAGATAGGATCTCACTCTGTCACCCGGGCTGGAGCAACCAT 15510

Drosophila ------------------------------------------------------------

Canis ACAGCCCATAGACCTTGTGTAGTTAGT--------------------------------T 9169

Bos ------------------------------------------------------------

Rattus ATTTGTATGG------GAGTGTGTGT---------------------------------- 11709

Danio ------------------------------------------------------------

Mus ATTTACATAGCTACCCAAGTTTCTTTTTTTTTTTTTTTCTGTGCTGTTTT---------- 11021

Gallus AGCTGTAGTCCAAGTAAAAAATTT------------------------------------ 9963

Anopheles ------------------------------------------------------------

Homo AGCTCCCTGCAACCTCAAACTCCTGGGCTCAAGTGATCCTCCTGCCTCAGCTTCCCAAGT 16142

Pan AGCTCCCTGCAACCTCAAACTCCTGGGCTCAAGTGATCCTCCTGCCTCAGCTTCCCAAGT 15570

Drosophila ------------------------------------------------------------

Canis AGCGCCTAACA-TCTTGAACACTT------------------------------------ 9192

Bos ------------------------------------------------------------

Rattus ------------GAAAATAGTTGAGAAT------TAGA--------------AAGACTTT 11737

Danio ------------------------------------------------------------

Mus -------ATTCTATAAACCTTTTAAAACATTTAGTATA--------------AAAATTAA 11060

Gallus ---------------AGTAGCTAAACGT--------------------------AACTGC 9982

Anopheles ------------------------------------------------------------

Homo AGCTAAGATTATAGACATGTGCCACTATAGCTAGTTGGTTTTTTTTT----GGTTGGTTG 16198

Pan AGCTAAGATTATAGACATGTGCCACTATAGCTAGTTGGTTTTTTTTTTTTTGGTTGGTTG 15630

Drosophila ------------------------------------------------------------

Canis -------ACCATAGG-ACACGCCACTATGCTCCGT--------------------ACTCT 9224

Bos ---------------------TCACT---------------------------------- 78

Rattus AAAATTACTTTAGATGCT------------------GAGATA------------------ 11761

Danio ------------------------------------------------------------

Mus GGACATACTCTCAATGTTTTGTCTAGTCTGGAAGGAAGGGTA------------------ 11102

Gallus AGATCTTTCCTCTCTTAC-----------------AAAGATG------------------ 10007

Anopheles ------------------------------------------------------------

Homo GTTTTTTTTTTTTTTTTTG-----------GTAGAGAACGTATCTCAGTGTGTTGCCCAG 16247

Pan GTTTTTTTTTTTTTTTTTTTT---------GTAGAGAATGTATCTCAGTGTGTTGCCCAG 15681

Drosophila ------------------------------------------------------------

Canis ACATGCATTCTATCATTTG-----------ATAGGAAAGGT------------------- 9254

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ACTGGTCTCAAACTTCTGGCCTCAAGCTATCCTCCCACCTCAGCCTCCCAAAGTGCTGGG 16307

Pan ACTGGTCTCGAACTTCTGGCCTCAAGCTATCCTCCCACCTCAGCCTCCCAAAGTGCTGGG 15741

Drosophila ------------------------------------------------------------

Canis ---------GAACCTTT---------------------------------------TTAA 9266

Bos ------------------------------------------------------------

Rattus --TTCAAACAGTATTTGACAATTGGGA--------------------------------- 11786

Danio ------------------------------------------------------------

Mus --TACTAGCAGGGTTTGGAAACATAGT--------------------------------- 11127

Gallus --AATAAACTATATGTACAATCTTA----------------------------------- 10030

Anopheles ------------------------------------------------------------

Homo ATTACAGGCATGAGCTACTATACCTGGCCAATCTCTTGTATTTTCTTCTGATACTTTTGT 16367

Pan ATTACAGGCATGAGCTACTATACCTGGCCAATCTCTTGTATTTTCTTCTGATACTTTTGT 15801

Drosophila ------------------------------------------------------------

Canis AAAACAAACAATAATGAAAATATTTA---------------TTTCTTTAGGTA------- 9304

Bos ------------------------------------------------------------

Rattus --------ACTGGAAGTTATAATGCCAAAGATAGG--GTCGTAAAAATAGGTGTGT---- 11832

Danio ------------------------------------------------------------

Mus --------TTTACATATTGTGATGGAGCAATTAAGCTATACCGAAAGCAAGTAAAGGCCA 11179

Gallus ---------CAAAAACCTCGAGGAAAAATGGTGGGGGATGCCGGGGGTGGAAATCT---- 10077

Anopheles ------------------------------------------------------------

Homo GATTTTACTTTATAGACTTTAATTTAGAAAGTTAGATATGAGCATTCAGCATATTTTTGG 16427

Pan GATTTTACTTTATAGACTTTAATTTACAAAGTTAGATCTGAGCATTCAGCATATTTTTGG 15861

Drosophila ------------------------------------------------------------

Canis ----------TATAAAGTTTAATTTCTCGAATTTG-------CATTTTATATATTTTTTG 9347

Bos ------------------------------------------------------------

Rattus --------TTATTAAGTACAGAGGTAAAATGGAATGTATGC-----------ATCACTTG 11873

Danio ------------------------------------------------------------

Mus CTGGAGAATTATTAGGGATAGTGTTGGATTGTGGGGAGATCCCTGAGGTGGAATTGGTAG 11239

Gallus -------ACTGTCCGGAGTCATGGAGACAGTTGTGGAAAAC--------------AGGAG 10116

Anopheles ------------------------------------------------------------

Homo ATATGGTATGATATGGTTTAGATCTGGATTGCATTTGTCAT-----------GGTTTGGG 16476

Pan ATATGGTATGATACGGTTTAGATCTGGATTGCATTTGTCAT-----------GGTTTAGG 15910

Drosophila ------------------------------------------------------------

Canis ACA-------------------TCTAGTTGGCACATAGTGT-----------TACATTAG 9377

Bos -----------------------CTGATTGGCA--TAGT----------------ACTGG 97

Rattus AAGTGTGTTCACAATACA----AATTCATGCACTCAATTG------CTCCGAATCAGAAT 11923

Danio ------------------------------------------------------------

Mus CAGTGAGTGAGCAATATATTATATTTGGCAGGATGATTTGA--ACTTTTCTGATTTGAGT 11297

Gallus AAACAAATAAAGAAAATG------------AGAAGCCTTTA--GCTTTAGAAAGAAAAAT 10162

Anopheles ------------------------------------------------------------

Homo AATTATATCTACCTTTTATTTTCTTCCACTTGGGTAGCTGATTGTCTTGTAAGGCATCCT 16536

Pan AATTATATCTACCTTTTATTTTCTTCCACTTGGGTAGCTGATTGTCTTGTAAGGCATCCT 15970

Drosophila ------------------------------------------------------------

Canis ATTCAGGTATACAGCATAGTCATTCACAACT----------TTCTACATTATGCCATGCT 9427

Bos GTT-------------TGGCTATTTACAA------------------------------- 113

Rattus TACTGCA--GATAA-CCCTGCATCTGTC--------TTTCTTTTT--------------- 11957

Danio ------------------------------------------------------------

Mus CATTGGAACGAGAA-TCCTACTGTTATGCCACAGGATTTACTAGT--------------- 11341

Gallus GGTAGCAAACACTA-GGCCACTTGCTGTTACTGTGTTATCTGTGG--------------- 10206

Anopheles ------------------------------------------------------------

Homo TTCCCCACTGATAA-TGCCACCTTTTTCTATATTAAGTTCTCACAAACTTTGAAAAAAAT 16595

Pan TTCCCCACTGATAA-TGCCACCTTTTTCTATATTAAGTTCTCACAAACTTTGAAAAAAAT 16029

Drosophila ------------------------------------------------------------

Canis CACCACAAGTGTAGCTACCATCTGTCACCATACAATGTTATTACA--------------- 9472

Bos ------------------------------------------------------------

Rattus -------------CTGTCCTT--------------------TTTTTTTTTTAAAAAGACA 11984

Danio ------------------------------------------------------------

Mus -------------ATGTGATAAA-----------------GTTTATCTTTGGGGAGACCA 11371

Gallus -------------GTATCATAG------------------------CCACAGCAAATTCA 10229

Anopheles ------------------------------------------------------------

Homo CAAGTTTATTGATGTATAATTGATACACAATGAAATGCACCCATTTTAACTATATAGTTT 16655

Pan CAAGTTTATTGATGTATAATTGATAAACAATGAAATGCACCCATTTTAACTGTATAGTTT 16089

Drosophila ------------------------------------------------------------

Canis -------------GTACCATTGA-----------------CTATATTCCCTGTGTGTACC 9502

Bos --------------------TAA-----------------CTGTAT-------------- 122

Rattus GGTTCTCATGTTGTTTAGGCTAT------------------------------------T 12008

Danio ------------------------------------------------------------

Mus TAGTGTTATATCAGTCCATCTATCAATTTATTAATCTGTCTGTCCATCCACCCACCCA-T 11430

Gallus GGTCCTCTCTCCAAATAGTTTAT------------------------------------- 10252

Anopheles ------------------------------------------------------------

Homo TATTGATTTTGATAAATATATACACTATCACTGCTACTACAATCAAGCTTTAGAACAATT 16715

Pan TATTGATTTTGATAAATATATACACTATCACTGCTACTACAATCAAGCTTTAGAACAATT 16149

Drosophila ------------------------------------------------------------

Canis TTTCATCCCTGTGACTTCTTCATTCCATAACTG-----------GAATCCTG-------- 9543

Bos -----------------------------ACTG-----------GA----TG-------- 130

Rattus CTAGAACTTAATA---------CACAGCCAAGTCTGTCTTTGAATTTCTGGTTCTCTTGC 12059

Danio ------------------------------------------------------------

Mus CCATCATTTATCA---------GCCCATCCA-TTTGCCTTTCCTTCTTTCCTTCTCACTC 11480

Gallus ----TACTTGCTA---------TCCTGCATG--CTTGTGTTTCTACTGAGGTTTTCCAAC 10297

Anopheles ------------------------------------------------------------

Homo GAATTACCTCCAAAAAGTTCCTTCCTGTCTGTAGTCATTTC-TCCCTCTTGGCCCCAGGC 16774

Pan GAATTACCTCCAAAAAGTTCCTTCCTGTCTGTAGTCATTTC-TCCCTCTTGGCCCCAGGC 16208

Drosophila ------------------------------------------------------------

Canis ----TACCTCCCA----------CTCCCCTATACTCATTTTGCCCCTCCTACTATCCTGC 9589

Bos ----TAC-----------------------------ATTTT------------------- 138

Rattus ATTTACC-----------------TCCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12102

Danio ------------------------------------------------------------

Mus ACCTACC-----------------TGCCAACCTATTTACCTATAAATAATATGCAG---- 11519

Gallus CTTTATT-----------------TTCTAGTCAT-------------------------- 10314

Anopheles ------------------------------------------------------------

Homo AACCACTGATCTGTTTATTAGTTTTCCTACTCTAGAATTGCATATCCATGGAATCA---- 16830

Pan AACCACTGATCTGTTTATTAGTTTTCCTACTCTAGAATTGCATATCCACGGAATCA---- 16264

Drosophila ------------------------------------------------------------

Canis CCCCACT--------------CCCTCCCCCTC---------------------------- 9607

Bos -CCCAT------------------------------------------------------ 143

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12162

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12222

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12282

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12342

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12402

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12462

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12522

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12582

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12642

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12702

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12762

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12822

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12882

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 12942

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 13002

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 13062

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 13122

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 13182

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 13242

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNANNN 13302

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -----------------------------------------------------AGTAACA 16837

Pan -----------------------------------------------------AGTAACA 16271

Drosophila ------------------------------------------------------------

Canis -----------------------------------------------------AGCAGCC 9614

Bos ------------------------------------------------------------

Rattus NNNATTTNTNNANNN--------------NNT---TGCTTAATCTATGGCATTAGGTTTT 13345

Danio ------------------------------------------------------------

Mus ---ATTTATTTATTT--------------TGTAGTTGCTTAATCCATAGGATTAGGTTTT 11562

Gallus ---ATTTTTTTAATG--------------TGTGTGTTTTCTTTCAGTTGAAATATCTTTT 10357

Anopheles ------------------------------------------------------------

Homo TGTACTCTTCCATGCCTGGTTTCTTTCACTTGGCATGTTTTTGAGATTCATCCAATTTGT 16897

Pan TATACTCTTCCATGTCTGGTTTCTTTCACTTGGCGTGTTTTTGAGATTCATCCAATTTGT 16331

Drosophila ------------------------------------------------------------

Canis ATCAGTTCTCTGTATTTA-----------TGAATCTGTTTCTGCTTTTTGCCTGATTTAT 9663

Bos ---GGTTGTCTACA---------------------------------------------- 154

Rattus CTC---ATG---ACANNTTAAGANTAAATGACATTAAAGGCAGAAAAATACTCA------ 13393

Danio ------------------------------------------------------------

Mus CTCCTTATG---ACAAAATAAGATTAAAAGATATTAAAGGCTGAAAAATATTCAAGACAA 11619

Gallus TTGTGTGTGTTCATTCTCTGTGATGAAAAGACTTGGTTTCTTCCAGTATTCTCATCAATT 10417

Anopheles ------------------------------------------------------------

Homo GTTTGTCACAGATTTTTGTTTGTTTCGTTTTTTTAAATACAATATGACTATACCACAGTT 16957

Pan GTTTGTCACAGATTTTTGTTTGTTTCGTTTTTTTAAATACAATATGACTATACCACAGTT 16391

Drosophila ------------------------------------------------------------

Canis GTG------------TTGTTCTTTTTTTTTTTTTTAAGATTATATATGTA------AGTT 9705

Bos -----------------------------------------------GGA------AGCT 161

Rattus GTTATAAATGATCTATGA----------------ACAGAAATTTAAAATCATAGGAGAAC 13437

Danio ------------------------------------------------------------

Mus GTTATAAATGAACTATGA----------------ACACAAATTTAAAATCATAGGAGAGC 11663

Gallus ATCTCAATCAACTTTTAA----------------CTCTTACCTCA---TCACAAG-GCAC 10457

Anopheles ------------------------------------------------------------

Homo ----CATTCATTTTCTGGTGAACATTTAAATTGTTTTCAGTTTTAGGCTGTTGCGAATAA 17013

Pan TGTTCATTCATTTTCTGGTGAACATTTAAATTGTTTTCAGTTTTAGGCTGTTGCGAATAA 16451

Drosophila ------------------------------------------------------------

Canis AAATCATATGGTCTTTG-------------TCTTCCTCTGTCTTATCTCACTTAGCATAG 9752

Bos A------ATGG------------------------------------------------- 166

Rattus TTGCTTTAAGCTTTGTAATAAGTTTGTTG----------TTATTCTTTATTTGTAAAGAA 13487

Danio ------------------------------------------------------------

Mus TTGTTTTAAGCTCTGTAATAAGTACATTG----------TTATTGTTTATTTGTAAAGAA 11713

Gallus TTTCTCTTGTTTTCATGCTTACCTCATGG----------CTCTTTTCTGCTACTTCTGGA 10507

Anopheles ------------------------------------------------------------

Homo AGGTACT--GTTTTGTGTGCATGTTTTTGTGTGAACATATGTTTTCATTTTTCTAGGGTA 17071

Pan AGGTACT--GTTTTGTGTGCATGTTTTTGTGTGAACATATGTTTTCATTTTTCTAGGGCA 16509

Drosophila ------------------------------------------------------------

Canis TGCCTTCTAGATCTATCAGCATTGTCTTAAGTGGAAAGATCTTACTGCTTT--TAAAGCT 9810

Bos --------------------------------GGAAA-----------------AAAG-- 175

Rattus TT----CACACATGGAGTGATTTAATCGAGTAATGGGGCCCTG--TCATGGGTCAGGAAA 13541

Danio ------------------------------------------------------------

Mus TTGTGATAGACATGGAGTGACTTAGTTGAGTAACAGAGCCCTG--TTATGTGTCAGGAAA 11771

Gallus ATGGTGTGGAAGAATATTGAGTAATTGGAGAATTAGGCTCTAGGTTTGTACATGTCTAAA 10567

Anopheles ------------------------------------------------------------

Homo AATACCTTAAATTGGAATTACTGGGTCACATGGTAAGTTTA---TGTTTAAATGTATAAG 17128

Pan AATACCTTAAATTGGAATTACTGGGTCACATGGTAAGTTTA---TGTTTAAATGTATAAG 16566

Drosophila ------------------------------------------------------------

Canis GGGCCTTTTAATCAGATTAGACTATAGACACA--AAGCTTGGATCATTTGAGATTGTAGA 9868

Bos ------------------------------------------------------------

Rattus GCAT----A---TTCTTTTAGTACATTATCTCTA------ATCCAACAATTTAATATACC 13588

Danio ------------------------------------------------------------

Mus GCATCTATA---TTCTTTTTATACATTTTCTCTA------ATTCAACAACTTAGCACTCT 11822

Gallus GTACTCTGT---GTAGATGAATACCTTTCCAGGA------ACTGTTCA-TGAATGGTATC 10617

Anopheles ------------------------------------------------------------

Homo GAACTGCCAAACTATTTTCCAGATGATTATACTACTTTACATTCCCATCATCAGTGTATG 17188

Pan GAACTGCCAAACTATTTTCCAGATGATTATACTACTTTACATTCCCATCATCAGTGTATG 16626

Drosophila ------------------------------------------------------------

Canis GAACTGGTACAATTTCTTACTTAAATTTTTGGCA----AAATTCCC-----CAGTGAACC 9919

Bos GAACT-------TTTCTT------------------------------------------ 186

Rattus TGA--------------------GAGACTGAAAGGTCAAAGGACTTAGCCATGGTTGCAA 13628

Danio ------------------------------------------------------------

Mus TGA--------------------GAGACTGACAGGTCAGAGGATTTAGCCATGGTTGCTA 11862

Gallus TGT--------------------TTCAGCTGTAACACAGGGAGCATATGTGTATTTACCA 10657

Anopheles ------------------------------------------------------------

Homo AGAGTTCCAGTTCTCCAAATGTCAGCATTTGATGTTCTCAGTCTTTAATTGCACACGTTC 17248

Pan AGAGTTCCAGTTCTCCAAATGTCAGCATTTGATGTTCTCAGTCTTTAATTGCACACGTTC 16686

Drosophila ------------------------------------------------------------

Canis TAA--TCTGGTTCT---------GGCACTTTCTGTTTTGGAAGGTTATTTATTCAGTTTT 9968

Bos ---------------------------------GACTTGGGAGA---------------- 197

Rattus CTCTAGGAG-------GTTTTATACAGCAGAAGTTTTGCATATAGAGATTAACTGAAAGT 13681

Danio ------------------------------------------------------------

Mus CTCTAG----------GTTTTATATAGCAGAAGTTTTTCATATAGAGATTACCTGGAAGT 11912

Gallus ATCAGT----------------TGCAACTGTTGTAGTCTCTTTGATGTTTTTCAGGATAT 10701

Anopheles ------------------------------------------------------------

Homo TGAGAGGTGTGTAGTGGTATCCCATTGCAGTGTTTTTTTTT--AAGTGGTACTAAAATAC 17306

Pan TGAGAGGTGTATAGTGGTATCCCATTGCAGTGTTTTTTTTTTAAAGTGGTACTAAAATAC 16746

Drosophila ------------------------------------------------------------

Canis C---------------ATATCAGATT---GTCTTTCTTCTTGTGAGTTTTGGCAGATTGT 10010

Bos -------------------------------CTCTCATCCTGTAAGTCTTGTCA------ 220

Rattus G-----------GAGTTACTATAATTATATGAAGGAATTTGAGGTATATGAGCAAGTTTA 13730

Danio ------------------------------------------------------------

Mus G-----------GACTTACTGTAGATATCTGAAGGGGTTTGAGGAA-------------- 11947

Gallus A-----------ACCCCATTATTTTTGTCTTCCAGCCACGTTGGTTT------------- 10737

Anopheles ------------------------------------------------------------

Homo ACAACATCAAATATACCATTTTAACTATTTTTAAGTGTACAGTTCAGTGACATAAAGTAC 17366

Pan ACAACATCAAATATACCATTTTAACTATTTTTAAGTGTACAGTTCAGTGACATAAAGTAC 16806

Drosophila ------------------------------------------------------------

Canis GT--CTTTCAAGGAATTAGTTCA-TTGCATCTAAGTATCAAACTTGTGGGCATAGAGT-T 10066

Bos ------------------------------------------------------------

Rattus ATATATTTTCAGCT-----------CATTTGTAAGGAGTTAAGGGATTGAGGAGTGTTAA 13779

Danio ------------------------------------------------------------

Mus -----------------------------------------AGGGATTGTGGAGCATTAC 11966

Gallus -----------------------------------------GTTTTTTGTTTGTTTTTGG 10756

Anopheles ------------------------------------------------------------

Homo ATTCACATTATTCTGCAGCCATCACCACTATCCATCTCTGAAACTTTTTCATCTTCTCAG 17426

Pan ATTCACATTATTCTGCAGCCATCACCGCTATCCATCTCTGAAACTTTTTCATCTTCTCAG 16866

Drosophila ------------------------------------------------------------

Canis ATTCATAGTAT------------------------------ATCTTTTTTACCCTTTTAA 10096

Bos --------------------------------------------TTTTTTATTCTTTTA- 235

Rattus TCTT--------TGTACACGA-------------------------------AGATGAGA 13800

Danio ------------------------------------------------------------

Mus TTTT--------TGTACATGA-------------------------------AGATGGGA 11987

Gallus CTTC--------TCCACTAGA-------------------------------TTTTATGT 10777

Anopheles ------------------------------------------------------------

Homo TCTGAAACCCTATCCATTAAACAGTAACTCTTCATTGCCTACTCTCCCTATCTGCTGGTA 17486

Pan TCTGAAACCCTATCCATTAAACAGTAACTCTTCATTGCCTACTCTCCCTATCTGCTGGTA 16926

Drosophila ------------------------------------------------------------

Canis T----------GTTCATGGGA-----------------------------TCTGTTGTGA 10117

Bos ------------------------------------------------------------

Rattus AACATGGCTTTCCT------------------------------------------AGTT 13818

Danio ------------------------------------------------------------

Mus AACATGGCTTTCCT------------------------------------------AGTC 12005

Gallus AATTAGATTTTATT------------------------------------------AGT- 10794

Anopheles ------------------------------------------------------------

Homo ATCACTGTTCTACTTCATATGTGAATTTGACTCTTCCAGGTACTTCATATAAGTGGAATC 17546

Pan ATCACTATTCTACTTTATATGTGAATTTGACTCTTCCAGGTACTTCATATAAGTGGAATC 16986

Drosophila ------------------------------------------------------------

Canis --TGTCCCTTTACTTCATTTGCGA-------------------------TAGGAGCAATT 10150

Bos ------------------------------------------------------------

Rattus GGAAAAATATTCAGACCACAGTCT-----------------ACATAGGGACCTTACTAC- 13860

Danio ------------------------------------------------------------

Mus GGAAAA-TATTCAGCTCACAGCCT-----------------ACAGAGCTACCCTGCTAC- 12046

Gallus --ATATTTGATTTTACTTTAAGGT-----------------AGTTGATAATTCGACCTC- 10834

Anopheles ------------------------------------------------------------

Homo ATACGATTTTTGTCCTTTTGTGTCTGGCACATTTCATTTAATAATAATAATGTCCTTGCG 17606

Pan ATACGATTTTTGTCCTTTTGTGTCTGGCACATTTCATTTAATAATAATAATGTCCTTGCG 17046

Drosophila ------------------------------------------------------------

Canis -TAGGTCTTTTTTTTCCCTTAGCCTGGC--------TAGAGGAGTACTGATTTTATTA-- 10199

Bos ------------------------------------------------GATTTTATT--- 244

Rattus ----------------TTATCTTGGCAATAAGAGTAGGG--------------------- 13883

Danio ------------------------------------------------------------

Mus ----------------TTTTCTTGGCAATAGGAGTGGGG--------------------- 12069

Gallus ----------------CAGATTCGTGAATGAAAGTTCAG--------------------- 10857

Anopheles ------------------------------------------------------------

Homo TTAGGCCATTCTTGCGTTGCCTTAAATGAATATCTGAGACTGGGTAATTTAAAAAGAAAA 17666

Pan TTAGGCCATTCTTGCGTTGCCTTAAATGAATATCTGAGACTGGGTAATTTAAAAAGAAAA 17106

Drosophila ------------------------------------------------------------

Canis ---------------ATCTTTTCAAAGAACCAGCTTTG---------------------- 10222

Bos ----------------------TAAAAA-------------------------------- 250

Rattus TAATTT---ATGTTTCAATATATTTTTGGATCTTTATAAGTATTGAAGATAAATTT-AAA 13939

Danio ------------------------------------------------------------

Mus TAATTT---GTCTTTCAATATATTTTTGGATCTTTATAAGTATTATTGAAGAG----AAA 12122

Gallus GAATCTTACATCTTTCCATGCTTTCTGTGCTGGTAAAAACAAGCAAGCAACAAATG-GAA 10916

Anopheles ------------------------------------------------------------

Homo GAAGTTTATTTGGCCCCTGGTGCTGCAGGCTGTACAAGCATG-GCGCCACCATCTGCTCA 17725

Pan GAAGTTTATTTGGCCCCTGGTGCTGCAGGCTGTACAAGCATG-GCGCCACCATCTGCTCA 17165

Drosophila ------------------------------------------------------------

Canis GACGTTGATTTT-TCTCTGTTGGTTTCTGTTTTTCAATTTCATGGACTTCTCTTAGCATA 10281

Bos ----------------------------------CAAATACA------------------ 258

Rattus TTTGCTTTT---ATTTTATAATGGATTTCAGT--------------------------AA 13970

Danio ------------------------------------------------------------

Mus TTGGCTTTT---ATTTTATAATGAATTTGAGT--------------------------AA 12153

Gallus TCAATGTTTCCAACCTTACTGTTATTTTTCTG--------------------------CA 10950

Anopheles ------------------------------------------------------------

Homo GCTTCTGGGGAGCCCTCATGGTGAGTTTACTCATGGTGGAAGGCAAAGGGGGAGCAGGCG 17785

Pan GCTTCTGGGGAGCCCTCATGGTGAGTTTACTCATGGTGGAAGGCAAAGGGGGAGCAGGCG 17225

Drosophila ------------------------------------------------------------

Canis TTTCTTTTCTTTTCCTTACTTTGGATTTAATT--------------------------TA 10315

Bos ----------------------GAATTTAATT--------------------------TA 270

Rattus TTCTTTTT-----------GAAAGACTATCCAGTTGTTTATGTTAAAAGAATTGAGTGA- 14018

Danio ------------------------------------------------------------

Mus TTTTTTTTCT---------GAAAGACTATCCAGTT---TATGTTAAAAGAATTGAGTGA- 12200

Gallus AGTTACAGTT---------AAGATTGAACTTAGAG----ATATGGAGGATATTCTGCAA- 10996

Anopheles ------------------------------------------------------------

Homo TGTCATATGGCGAGAGCAGGAGCAAGAGAGAGGGTGGGGAAGTGGCACACCCTTTTTAAA 17845

Pan TGTCATATGGCGAGAGCAGGAGCAAGAGAGAGGGTGGGGAAGTGGCACACCCTTTTTAAA 17285

Drosophila ------------------------------------------------------------

Canis TTCCTTTT--------TTGGATTAATAAAGTGGGAATGTAGATGATTAATTTTTT----- 10362

Bos T-----------------------ATAAA-------------------ATTTTT------ 282

Rattus -------------------GGTGTTTTATATTTTAGGTTAAA-AA---TCTGTAAGAGCC 14055

Danio ------------------------------------------------------------

Mus -------------------GGTGTTTTATATTTTAGGTTAAA-AAATCTCTCTAAGAGCC 12240

Gallus -------------------TTTCTTTCAGGACCCTTGGTGAA-TCAGTCTTAAGACAGAA 11036

Anopheles ------------------------------------------------------------

Homo CGACCACATCT---GCGAACTCACTCTGTATCCCAAGGAGAGCACCAAGCTATGAGGGAT 17902

Pan CGACCACATCTCCTGCGAACTCACTCTGTATCCCAAGGAGAGCACCAAGCTATGAGGGAT 17345

Drosophila ------------------------------------------------------------

Canis -------ATCT--------TTGTTTATGCATTCAAAGTATAA-ATTTTCCTCTGAG---- 10402

Bos ---------------------------------AAAG------------CTTTGA----- 292

Rattus T-----GATTTTAGAGTTCACCAGCTCCTCA----------------------------G 14082

Danio ------------------------------------------------------------

Mus T-----GATTTTAGAGTTCACCAGCTCCTCA----------------------------G 12267

Gallus TCACAGAACTGTAGGGGTTAGAAGGGACCTC----------------------------G 11068

Anopheles ------------------------------------------------------------

Homo T-----GCTCCCATGACCCAGTTACCTCCCACCAGGCCCCACCCCCAACATTGGGGATTA 17957

Pan T-----GCTCCCATGACCCAGTTACCTCCCACCAGGCCCCACCCTCAACATTGGGGATTA 17400

Drosophila ------------------------------------------------------------

Canis ----------CACTGTTTTTGCTGCATCCTGC---------------------------A 10425

Bos -----------------TTTG--------------------------------------A 297

Rattus AAGTTTGGCGAAATATGGT----------ATGTTTCTGT---TTAATTTTTTGAAATT-- 14127

Danio ------------------------------------------------------------

Mus AAGTTTGGCGAAATATGGT----------ATGTTTCTGT---TTTATTTTTTGAAATT-- 12312

Gallus GGGGATCATGAGAAATGGC----------CAGCTTTCCT---ATTAGTTGC--AGTTT-- 11111

Anopheles ------------------------------------------------------------

Homo TATTTTAACATGAGATTTGGGCAGGACAAATATTCAAACCGTATCAGTCATCAAAGTTCA 18017

Pan TATTTTAACATGAGATTTGGGCAGGACAAATATTCAAACCGTATCAGTCCTCAAAGTTCA 17460

Drosophila ------------------------------------------------------------

Canis AATTTTGATAAATTGTTT-----------TCATTTTTAT----TTAGTTCAAAAGGTT-- 10468

Bos AATCTT-------TGTTA-----------ATATTTATAC----CTAGT----AAGAT--- 328

Rattus ------------CATATTGCATGAATTATTTTAATA-----------------TTACGGC 14158

Danio ------------------------------------------------------------

Mus ------------CATATTGCATGAATTATTTTAATA-----------------TTACGGC 12343

Gallus ------------CCTTTTTGGCAGAGTATTAAGCTA-----------------GCAATGG 11142

Anopheles ------------------------------------------------------------

Homo TTCATGTTGTAGCATGTATCCAAATTTGATTCTTTAAGGTTGAGTAATATTTCATTGTGT 18077

Pan TTCATGTTGTAGCATGTATCCAAATTTGATTCTTTAAGGTTGAGTAATATTTCATTGTGT 17520

Drosophila ------------------------------------------------------------

Canis -------TTTAGTTTCTCTTGTGATTTTTTTTTTTA---TTGACTTGCTTTGTTTAATCT 10518

Bos -------------------------------------------------------AA--- 330

Rattus TAGCATAATGACAAATGCGTTCAATAAATTTG-GGCGCCTGTCATTT-------TTAAAG 14210

Danio ------------------------------------------------------------

Mus TAGTATAATGACAAATGCGTTCAATAAATTTG-GGCGCCTGTCAATT-------TTAAAG 12395

Gallus TAGTACAAGGGCACCT---TTCACTGTGTGGATGATGACTGTCCACT-------TCATCA 11192

Anopheles ------------------------------------------------------------

Homo GCATATATCACTTTTTGTTTTATTTATTTATTTGTCAGTGGACATTTGGACTCTTTGTAA 18137

Pan GCATATATCACTTTTTGTTTTATTTATTTATTTGTCAGTGGACATTTGGACTCTTTGTAA 17580

Drosophila ------------------------------------------------------------

Canis CCATGTATTTTGAGATTTTCCAGTTATCTTTCTGTTACTG---ATTT----TTTTTGTAA 10571

Bos --ACGTATTTTA-----------TTATCTATCTG-------------------------A 352

Rattus GATCCTACTAGGTGCC-----------AAGTATGCTACCAAATAGACTGTGAG--ATATA 14257

Danio ------------------------------------------------------------

Mus ACTCTTACTAGGTGCT-----------GAGTATACAACCAGGTAGACTGTGAGGGATATA 12444

Gallus TACTACTCAAAGTC--------------ACTCTGGAAATGTATCAGTTTGGAG--AAGGG 11236

Anopheles ------------------------------------------------------------

Homo CTTTTAACTATGTGAATGATGCT-----GCTATGAACATTGGTATATAAGTATCTGTTTG 18192

Pan CTTTTAACTATGTGAATGATGCT-----GCTATGAACATTGGTATATAAGTATCTGTTTG 17635

Drosophila ------------------------------------------------------------

Canis GATTTTATTTATTTATTCATGATCGACAGAGAAAGAGGCAGAGACATAGGCAGAGGGAGA 10631

Bos AAT---------------------------------------GCCATAAACA-------- 365

Rattus AGTGGGATGCTGGAAGAATTTGTTAGAGTTTACTGTATTATGAGACAT----AAAGTGAT 14313

Danio ------------------------------------------------------------

Mus AGTGGGGTGTTGGAAGAATTTGT--GAGTTTACTGTATTATGAGAC------AAAGTAAT 12496

Gallus CATTCCTTCTTGGGGGAATCAGAGGGATTCTTCAGTATACATATA-------AAAGTGAT 11289

Anopheles ------------------------------------------------------------

Homo AGTCCCTTCTTT-TAATTCTTTTGGTTATGTACTTAGGAGTGGAATTGCTGGGTCATGTG 18251

Pan AGTCCCTTCTTT-TAATTCTTTTGGTTATGTACTTAGGAGTGGAATTGCTGGGTCATATG 17694

Drosophila ------------------------------------------------------------

Canis AGTAGCCTCTCTATGGGACACCTGATGTGGGACTTGATCCTAGGATCCCAGAATCATGAC 10691

Bos --------------------------------CTTGA--------------AA-----AC 374

Rattus ATGGACAAGAAGATCAAGAAAATAGACTTGGCTGTCAGGCTGTAGGTA-TAAAAAATTTC 14372

Danio ------------------------------------------------------------

Mus ATGAACAAGAAGGTCAAGGAAATAGACTTGGCTGTTAGGCTGTGGGTA-TGAAAAATCTC 12555

Gallus CTTGAGGTGTAGTTTCCTGAGAGAGA--TGATTGTTTTAAATTAGAGC-AAGTAAAATTC 11346

Anopheles ------------------------------------------------------------

Homo GTAATTGTATGTTTAATTTTTTTAGAGACTGCCATACTGTTTTCCACAGTGACTGCACCA 18311

Pan GTAATTGTATGTTTAATTTTTTTAGAGACTGCCATACTGTTTTCCACAGTGACTGCACCA 17754

Drosophila ------------------------------------------------------------

Canis CTGAGCCAAAGTGAGACACTCATCTACTGAGCCACCCAGGTGTCC----CGGTTCTG--G 10745

Bos CTGA-------------------------------------------------------- 378

Rattus TTTCTTTT----GCACGCATATTGTATACATGGCACTCT---------TATGATAACCCT 14419

Danio ------------------------------------------------------------

Mus TTTCATTTATTTGCAAACATATTTTATATAAGGCACTCT---------TATGATAACCCA 12606

Gallus CTGCACT-----GGAAGCTAAGGAACGTCGTGGCACTTT---------TCTGTACTGGTA 11392

Anopheles ------------------------------------------------------------

Homo TTTTACATTCCCACCAGCAGTGAATAAGGGTTCCAATTTCTCTGCATCTTTTCTAACACT 18371

Pan TTTTACATTCCCACCAGCAGTGAATAAGGGTTCCAATTTCTCTGCATCTTTTCTAACACT 17814

Drosophila ------------------------------------------------------------

Canis TTTAATTCTGTTGTAATCTGAGAGTAGACATTGTATGATTTCTA----TTCTTTTATATT 10801

Bos ----------------------AGGAGA-----------------------------ACT 387

Rattus AACTAGAGTTTTAGTTCT---TTAGAGTAACTGAGGTTTAGAGAGGTTATGTAACTTGTC 14476

Danio ------------------------------------------------------------

Mus GACTAGGGTTTTAATTCTGCTTTAAGATAATTGAGGTTTAGAGAGGTTATGTAACTTGTC 12666

Gallus GATCACCCTCTTTTTC----------ATTAATGTCTTTCAAAAAGATGGTCTTAAAGGTT 11442

Anopheles ------------------------------------------------------------

Homo TGGTAATTTCTGTTTTTTA-TTTAAAATAATTGCCATTCTAATGGGTGTAAAAAGTCATT 18430

Pan TGGTAATTTCTGTTTTTTA-TTTAAAATAATTGCCGTTCTAATGGGTGTAAAAAGTCATT 17873

Drosophila ------------------------------------------------------------

Canis TGTTACGGTGTATTTTATGGCCCAGAATGTGATATATCTTGATGCATGTTCCATGTTAAC 10861

Bos TGTTACA----------------AG--------------------------CAAGTCAGC 405

Rattus CAAGATTTCTCCGGTAGTAAGTGATCAAGCAGAGAGTAGAATCTTAG------------- 14523

Danio ------------------------------------------------------------

Mus CAAGATTTC-CCTATAGTAAGTGATCATG--GAGAGTGGAATCTTAG------------- 12710

Gallus GAATTTTAAGCTTACT----------------AGGGGGGAAACTGAA------------- 11473

Anopheles ------------------------------------------------------------

Homo ATGGTCTTAATTTACATTTTCTTCATGACTGCTGTTGAGAAGTTTTCTT---TTGTGTGT 18487

Pan ATGGTCTTAATTTACGTTTTCTTCATGACTGCTGTTGAGAAGTTTTCTTCTTTTGTGTGT 17933

Drosophila ------------------------------------------------------------

Canis TTGAGTAGAATGTGTAATCTGTTGTTGGATG-----AAGTAGTCTATTGATGTTG----- 10911

Bos TT----------TGCAAG---------------------------------GTTG----- 417

Rattus ------------------AATGTCTTTGGAAACAGT-----TCAGCTGAGCACTGAACCT 14560

Danio ------------------------------------------------------------

Mus ------------------AATGTCTTTGGAAACTGT-----TCAACTGAACATTGAACCT 12747

Gallus ------------------ACTGTTTTCTAAAGAA---------AACAAATTCTTAAAAAT 11506

Anopheles ------------------------------------------------------------

Homo CTGTTCAAATATTTTCACATTCTTTTCAGAACATATGTTCTTTGTCAGATAGATAAATGT 18547

Pan CCGTTCAAATATTTTCACATTCTTTTCAGAACATATGTTCTTTGTCAGATAGATAAATGT 17993

Drosophila ------------------------------------------------------------

Canis ------------------ATTCTATCTAG------------TTGATTGATGATGCTGTTG 10941

Bos ------------------ATTCTGT----------------------------------- 424

Rattus AACAAAAAAGAAGAG--ACTAGGGGAGAGTACTTT------ACTTTGTAATCCTAAGAGT 14612

Danio ------------------------------------------------------------

Mus AATAAA---GAGGAG--ACTAGTGGAGAGTACTTG------ATTTAGTAATCCTAAGAGT 12796

Gallus GCCACTTCTGAGGGC--ATCGG-------TCCTTT------TAGCTGTCAGTCACAGGTG 11551

Anopheles ------------------------------------------------------------

Homo ATTTCTTCTGTATCCTTACTGATTTTCTGTCCACT-----TACTAATTACCGAGAGAGGA 18602

Pan ATTTCTTCTGTATCCTTACTGGTTTTCTGTCCACT-----TACTAATTACCGAGAGAGGA 18048

Drosophila ------------------------------------------------------------

Canis AGTTCAACTGTGTCTTTACTGATTTTTTGCCTGTTGGATCTGCCCAGTTCTGATAGAGGG 11001

Bos ------------------------------------------------------AGAAAA 430

Rattus TTGTGTAGTTCTTTAATGAATTAGTTGATTTTATTTAAACTTTGTTATTTATGTGTTTGT 14672

Danio ------------------------------------------------------------

Mus ATATATAGTTCTTTAATGAATTAGTTGATTTTATTTAAGCTGTGTTATCTTTGTGTTTGT 12856

Gallus TTCCCCAGTTC--AAAGGCTTTCCTAGACCTCAGATACTGAGCGTCATCCAC-------C 11602

Anopheles ------------------------------------------------------------

Homo ATGTTGAAATCTTCAACTATAATTTTGAGTTTATCTTCCTTCTGCTCTGTTCATTTTTTC 18662

Pan ATGTTGAAATCTTCAACTATAATTTTGAGTTTATCTTCCTTCTGCTCTGTTCATTTTTTC 18108

Drosophila ------------------------------------------------------------

Canis GTATTGAAGTCTCCAATTATGTTAGTGATTTTTTTTTTTTTTTTTTTTTTTTTTTTGTAG 11061

Bos GTATT------TCTAATT--------------------TTTTTTTTT------------- 451

Rattus --------------------AAGTTAGAAGTTAGATTCATTTCAGTATTAACATAATTCC 14712

Danio ------------------------------------------------------------

Mus --------------------AAGTTAGAAGTTAGATTCATTTCAGTATTCACATAATTCC 12896

Gallus --------------------AGATGTGCAAATGGACACCTATAAG---ACAAATAATATA 11639

Anopheles ------------------------------------------------------------

Homo TTCATATGCTTTGAAGCAAAGTCTTTAAAGTTGTGTCCTTAGGTGTGTTCACAT----TT 18718

Pan TTCATATGCTTTGAAGCAAAATCTTTAAAGTTGTGTCCTTAGGTGTGTTCACAT----TT 18164

Drosophila ------------------------------------------------------------

Canis TTCTCTCAGTTTTTGCC-----TCGTCGAGTTTGATACTCTGTTATGTT----T----TG 11108

Bos ------------------------------------------------------------

Rattus AGATAAGCTATTAGTTTCATGAGAAACTAAGGGAACTTTCTTATAGACCACATTATTT-- 14770

Danio ------------------------------------------------------------

Mus ACATAAGCT----GTTTGATGAGAAACTAAGGGAACTATGCCATGGACCACATTTAT--- 12949

Gallus GGAAAAATAATAGATTTAGAAAATCTGTACAGGCAAAAACTTTTAATTTACACTGATGTG 11699

Anopheles ------------------------------------------------------------

Homo AGGACTGTTAGATCTCCTTGATTAATTGATGTCTTTATCATTATGAAATGTCTCTGTTTA 18778

Pan AGGACTGTTAGATCTCCTTGATTAATTGATGTCTTTATCATTATGAAATGTCTCTGTTTA 18224

Drosophila ------------------------------------------------------------

Canis AGGATTGTTATGTC---TTGGAGAATTGATGTATTGATCATTAC--ATTGTGCCACTCTA 11163

Bos -----------------------AATGGA-------ATCAT------------------- 462

Rattus -ATTCAAGAATGTTTCTTTTCTTCCTTGCTATTTCAGAGATGCCTAGGTTCTTAGTA--G 14827

Danio ------------------------------------------------------------

Mus --TTCAAGGATGTTATTTCTCTCCCTTGCTAGTTCAGTGATGCCTCTGTTCTTAGTA--G 13005

Gallus TAGCTGAAAGTTGTTTTGGACTTACTTGCTGATGAATATGTACTTGTGTTCTCCATG--G 11757

Anopheles ------------------------------------------------------------

Homo TCGCTGGTAATGTTCCTTA--TCTAAAGTCTACT--TTGATATTAGTGTATCCATTC--- 18831

Pan TCGCTGGTAATGTTCCTTA--TCTAAAGTCTACT--TTGATATTAGTGTATCCATTC--- 18277

Drosophila ------------------------------------------------------------

Canis ACTCTCATGATTTTACCTTGCTTTGAAGTTGGCTGTCTGAAATTAGTATAGCTACTCTAG 11223

Bos --------------------------------------GAGATT---------------- 468

Rattus GAGATATATAG-TTATGATAGGAAAATTTGGGAATTT------GAGTTAT----TTCTTA 14876

Danio ------------------------------------------------------------

Mus AAGATAAATAG-TTATGATAGGGAAATTTGGGAAATT------GGGTTAT----TTCTTA 13054

Gallus TGTAGCTTTGGATCCTGTTTGTTGAAGCTGGGAGCCTCACCATGGCTCAT----AGAATT 11813

Anopheles ------------------------------------------------------------

Homo CTTTCTTATGATTAATTTTTGCACATTATATCATTTTGCTGTGTTTTTATTTTCAGCTTA 18891

Pan CTTTCTTATGATTAATTTTTGCACATTATATCATTTTGCTGTGTTTTTATTTTCAACTTA 18337

Drosophila ------------------------------------------------------------

Canis CTTGCTTTTGATTATTGTTAGCATGATACAT--TTTTCCTCTTTATTTTTCATCTGTATC 11281

Bos ----------------------------------------------------TCTG---- 472

Rattus ATAGGGATTATAAAT-------------CCTATTTATTGGGATTCCCTAAATTTGTTGAT 14923

Danio ------------------------------------------------------------

Mus ACAGGGGTTATAAAT-------------CCTATTTATTGGGACCCCCTGATTTTGTTTAT 13101

Gallus ACAAGGTTGAAAAGGA------------CCTACAGGATCGTATAGTCCAACCGTA---AT 11858

Anopheles ------------------------------------------------------------

Homo TTGGTCATTTAATGTCTTTCTTTTAGATAGCATATAGTTGCATCTTGCTTTCAGATTGAC 18951

Pan TTGGTCATTTAATGTCTTTCTTTTAGATAGCATATAGTTGCATCTTGCTTTCAGATTGAC 18397

Drosophila ------------------------------------------------------------

Canis TTTATATTTAAATGT---------AAATAATATGTGGTTGGATCTTATTTTTTGACCCAC 11332

Bos -----------------------------------GGTTGAGTC---------------- 481

Rattus GTATATA-------------------------------------------------CTGG 14934

Danio ------------------------------------------------------------

Mus ATATATATATATATATATATATATATATATATATATATATATATATATAATATAAACTTG 13161

Gallus GCATGTGATTCCATAATT--------------------------------------TAAG 11880

Anopheles ------------------------------------------------------------

Homo TTTTTACGATCGTTGCTTTTT---------------------------------GATTAA 18978

Pan TTTTTACGATCGTTGCTTTTTAATTT----------------------------GATTAA 18429

Drosophila ------------------------------------------------------------

Canis TCTG-GTAATCTGTGCTTTT----------------------------------AATTTA 11357

Bos -----------------------------------------------------------A 482

Rattus GGCCAACTCTAGCAATAATATGGACTCAAACATTGATGCTTCAGTAT------------- 14981

Danio ------------------------------------------------------------

Mus AGCCAACTCTAACAATAATATGGGTTCAAATATTGATGCTTTAATAA------------- 13208

Gallus GTTCAAGGAAATACTTGATGAGATCTCATCAGGCTGTGCAACCAAGT------------- 11927

Anopheles ------------------------------------------------------------

Homo GTCCATT--TACATTTATTGCAGTTGGCAATATAATTGTGTTTAAGACACTATTTGTTTT 19036

Pan GTCCATT--TACATTTATTGCAGTTGGCAATATAGTTGTGTTTAAGACACTATTTGTTTT 18487

Drosophila ------------------------------------------------------------

Canis GACCACTAATGTGTTTAAAGTGATTATTGATATAGTTAGATTAA---------------- 11401

Bos GAGC-------TGCTTA-----------------GTTAG--------------------- 497

Rattus ---TTCCTT-GAGATTCTCATGTACCTTTGTATTTT-----------AAATTGGGTTCTG 15026

Danio ------------------------------------------------------------

Mus ---TTCCTTTGGGATTCTCACTA--CTTCCTGTTTT-----------AAGTTGGGTTCTG 13252

Gallus ---TGCTTTTTAGCCACTTCTGAA-----GCATCTG-----------AAAGTGTTTTCTG 11968

Anopheles ------------------------------------------------------------

Homo CTATTTGTCTAATCTTTTCTTCCTTTTCTGCCTTCTTTTCGGTTAATGGAGCATTTTTGG 19096

Pan CTATTTGTCTAATCTTTTCTTCCTTTTCTGCCTTCTTTTCGGTTAATGGAGCATTTTTGG 18547

Drosophila ------------------------------------------------------------

Canis -----TATCTAACAGTTTT----GTTACTATTTTCT----------------ATTTGTTG 11436

Bos ------------------------------------------------------------

Rattus AT-CCATGCTTTCAGTCATC-----TTGTTTTTCTGTGTTGTCAGTTTGACGGTGTTAAT 15080

Danio ------------------------------------------------------------

Mus ATTCCGTGCTTTCAGCCATC-----TGGCTTGTCTGTGCTGTCAATTTGAGGGTGTTAAT 13307

Gallus CCTGCTTGCTTCCACTGGTT-----TATTATTTATTTCCT-TTAATTTGATAGTGTTATT 12022

Anopheles ------------------------------------------------------------

Homo AATTTTGTATTGTCTCCATTATTAGCTTGTCCCTCTGTTTTTTTTCCCCCCAGTGATACT 19156

Pan AATTTTGTATTGTCTCCATTATTAGCTTGTCCCTCTGTTTTTTTTCCCCCCAGTGATACT 18607

Drosophila ------------------------------------------------------------

Canis CCCTTGTTCTTTTCCCTGTT-----TCTGTCTTCTGTTCTTTCTTCCTTTGAGTGCTGAG 11491

Bos ------------------------------------------------------------

Rattus TGTGAAGGGGCTT----------------------TCCTTTTCCTCTTTTTAATCTTACA 15118

Danio ------------------------------------------------------------

Mus TGTGAAGGGGCTTCCTCTTCCTAATCTTACA---CTCCCTTTTCTTCTTTCTTTCTTTCT 13364

Gallus TTCAGAGAGGCTGC---------------------ACCTTTTTCACCTTTTAGAAATGGA 12061

Anopheles ------------------------------------------------------------

Homo TCTA---GGATTTACAATATGCACCTTTAA--CTTACCTCAATCTACCTTCAAAAATATT 19211

Pan TCTA---GGATTTACAATATGCACCTTTAA--CTTACCTCAATCTACCTTCAAAAATATT 18662

Drosophila ------------------------------------------------------------

Canis CCTGACTGGGCTCGATCTCCCCACCCTTAGAGCTTGGCTTGAGCCAAAATCAAGAGT--- 11548

Bos -------GGGCTC---------------------TGG----------------------- 506

Rattus CTTCTTTTTG-------------------------------------------------- 15128

Danio ------------------------------------------------------------

Mus TTCTTTCTTTCTTTCTTTCTTTCTT---------------------TCTTGTTTTGTTTT 13403

Gallus TGTTGTCTCTAA-------GTACTG---------------------TGTAAGCATTATTT 12093

Anopheles ------------------------------------------------------------

Homo ATTCCTCTTAATGTATAATGTAAGAATTTTGGAATAGTATACATCCATTTACTCTCCCTC 19271

Pan ATTCCTCTTAATGTATAATGTAAGAATTTTGGAATAGTATACATCCATTTACTCTCCCTC 18722

Drosophila ------------------------------------------------------------

Canis -------TGGCTGCTTAACTGACTG-----------------AGCTACCCAGCTGCCCTT 11584

Bos -------TGGCTGC----------------------------AGCCAGCC--CCGCCTT- 528

Rattus --TTTGTTT--TAAGCTCATTCAAATTTGTTTT-TATGAAT-----------------AG 15166

Danio ------------------------------------------------------------

Mus GTTTTGTTT--TAAGCTCATTCAAATTTGTTCTATGTTTAT-----------------AG 13444

Gallus ATCCTGTTT--TCTCTTGATGATGGCTACTCTATGCCATAT-----------------AC 12134

Anopheles ------------------------------------------------------------

Homo ATTCTTTTTGGTATTATGATCTTAACATTTTACTTCTATATGTGTTATAGATTCCACAGC 19331

Pan ATTCTTTTTGGTATTATGATCTTAACATTTTACTTCTATATGTGTTACAGATTCCACAGC 18782

Drosophila ------------------------------------------------------------

Canis AGAGTTTTTA-TATCTTAACCTTG----TCTACTTTTAAAT----------------AAC 11623

Bos -------------------------------ACCCTTGAG-------------------- 537

Rattus AGCAGTTGAAG------------------AGGATTGTGGGGGAAAAACTGGATAA--AAT 15206

Danio ------------------------------------------------------------

Mus ATCAGTGAAAG------------------AGGATTTTGGGGGAAAA-CTGGATAA--AAC 13483

Gallus ATGGTTTGAGGGT----------------ATGGTTCTTGTCCATTGTATTGGTAA--TTA 12176

Anopheles ------------------------------------------------------------

Homo AGCGTTTGAAACTATTTCTTTCAAAGGCCAGTTGTCTTACGAAGAAACTTAAAAACTAAG 19391

Pan AGCGTTTGAAACTATTTCTTTCAAAGGCCAGTTGTCTTACGAAGAAACTTAAAAACTAAG 18842

Drosophila ------------------------------------------------------------

Canis ATTGT-------------------------ATCATATCACAGGGAGTATGAGTACTTTAT 11658

Bos ---------------------------------ATGCCTCTGAGGGTCT----------- 553

Rattus CATAATTTA-----------------GTATTGGCATTTTGTTGGGATTATGATATGATAA 15249

Danio ------------------------------------------------------------

Mus CATAAC--A-----------------GTATTGGCATTTTGTCAGGAGTATAGTATGATAA 13524

Gallus TACTGTGGG-----------------TTGTTGCAGTCCTGGTTCAATCCACCTCTTGTAA 12219

Anopheles ------------------------------------------------------------

Homo AATAACATTCCTTTATATTTACCTTCATATTTACCATTTTTATTTATTTTTCTTTGTGGA 19451

Pan AATAACATTCCTTTATATTTACCTTCATATTTACCATTTTTATTTATTTTCCTTTGTGGA 18902

Drosophila ------------------------------------------------------------

Canis AACAACAAA-----------------ATAATCGTGATTTCTTGCTTCTGTCCTTG----- 11696

Bos --CAATAGA-----------------GCA------------------------------- 563

Rattus GAAGG--------------------GCTGTGAAACTTGAATCAGATTTGTTT---AAAAT 15286

Danio ------------------------------------------------------------

Mus GGAGG--------------------GCTGTGAAAC--GAATCAGATTTGTTT---AAAAT 13559

Gallus ATAA----------------------TTGCTAGACA-GATATAGATGTGTCT---GTATT 12253

Anopheles ------------------------------------------------------------

Homo GATTCCTTTTTGTAGATCCAAGTTTGTTGCTGGTGTTATTTTCCTTTTACTTGAAAAAAT 19511

Pan GATTCCTTTTTGTAGATCCAAGTTTGTTGCTGGTGTTATTTTCCTTTTACTTGAAAAAAT 18962

Drosophila ------------------------------------------------------------

Canis ------------------------TATCACTGCTGTTGTTTCACGTATGTAT-ATATAAG 11731

Bos ---------------------------CA---------------GTGTG----------- 570

Rattus CACATATGGA-AGTTAAAATATGTGAATAATAGAA----------------TATACGTTC 15329

Danio ------------------------------------------------------------

Mus CACATATGAT-AGTTCAGATATGTGAATAATAGGA----------------TATTCATTC 13602

Gallus GGAGCATGCTCAGTCCCAAAGAGCCTCTAGCAGC-------------------CATCTTA 12294

Anopheles ------------------------------------------------------------

Homo TTCTTAAACATTTCTAAAGTATAGGTCTACTGGCTACAAAATCTTTCAGCTTTTGTTTGT 19571

Pan TTCTTAAACATTTCTAAAGTATAGGTCTACTGGCTACAAAATCTTTCAGCTTTTGTTTGT 19022

Drosophila ------------------------------------------------------------

Canis TGCATATACATATTTAAAAT---------------------------------------T 11752

Bos ---------------AAGAC---------------------------------------C 576

Rattus ATATTTTG---TATATT----CATAGAATTGAGTCTTA-TGGGCTTGAGAATGAATACTT 15381

Danio ------------------------------------------------------------

Mus ATATTTTGCTTTATATTACTTCCTAGAATTGAGTCTTAGTGGGATTGAAAACGAATGCTT 13662

Gallus AGTTTCTGGGATGTGTTG---CGCAGACATGAACTTT-----GCTTGTTACCTTCAGCTG 12346

Anopheles ------------------------------------------------------------

Homo ATGGAAATGTCTTTATTT-CACTCTTCATTTTATCGTACAATTTTTCAAACCACACAGAC 19630

Pan ATGGAAATGTCTTTATTT-CACTCTTCATTTTATCGTACAATTTTTCAAACCACACAGAC 19081

Drosophila ------------------------------------------------------------

Canis ATATACACATAAGTATTA-CATAACTAAATACATTGTGTTATTATTTTGAACAAACTTAT 11811

Bos -------------------CATAGCTAAGTAGCTGGTGT--------------------- 596

Rattus TCTTATAGATCCAAGTGTCTAAAAGTTAATGTTAGATTATACTACTTA------------ 15429

Danio ------------------------------------------------------------

Mus TCTTATAGATCCAAAGGTCTAAAAGTTAATGATAGATTATACTACTTA------------ 13710

Gallus CCCTATATATTTGTG-----AAAACTAAACTGTAAGCAATGTTAATCA------------ 12389

Anopheles ------------------------------------------------------------

Homo TT-TAAAATAATTGTAGAATATAATTTCACAACATTTTGTTCTATTTGTTATTGTCTTCT 19689

Pan TT-TAAAATAATTGTAGAATATAATTTCACAACATTTTGTTCTATTT----TTGTCTTCT 19136

Drosophila ------------------------------------------------------------

Canis CTGTTAGATCAGTGATGATTAAGA----AAAATAAGCTATTTTATTT------------- 11854

Bos ----------AGGG---------------------------------------------- 600

Rattus ------------AATACACACTTTCTCTCTCTCTCTCTCTCTCTCTC------------- 15464

Danio ------------------------------------------------------------

Mus ------------AATAATTTCTGTCTCTCTGTCTCTGTCTCTCTCTC------------- 13745

Gallus ------------TGACAGTAAAGTCTAGAGAAATCATTTTTGAGTAA------------- 12424

Anopheles ------------------------------------------------------------

Homo ATCTTGTCCATCTATCCATCCTGTCTTCTTCTAGTGTCTTTTTTTATGCTTTTCAAAGTA 19749

Pan ATCTTGTCCATCTATCCATCCTGTCTTCTTCTAGTGTCTTTTTTTATGCTTTTCAAAGTA 19196

Drosophila ------------------------------------------------------------

Canis -----------TTACTCATTC---CTTCCTCAGTAGTTTGTCATTATA----------TA 11890

Bos -------------------------TTTCTCAGCAG------------------------ 611

Rattus --TCTCTCT-------------------GTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 15503

Danio ------------------------------------------------------------

Mus --TCTCTCTCTCTTTCATGTGTGGGTGCGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 13803

Gallus --TTCTGCTT---------------------------TAAGAATAAATATTTGC-TGTG- 12453

Anopheles ------------------------------------------------------------

Homo AGTTGCAGTTGTTAGTATACCACACCCTTAACTTGAGCATGTATGTTAACTAAAACTTAG 19809

Pan AGTTGCAGTTGTTAGTATACCACACCCTTAACTTCAGCATGTATGTTAACTAAAACTTAG 19256

Drosophila ------------------------------------------------------------

Canis GGTTTGAGTTTCTGATCTATATAATTTTCTTTCTAAAGAAGTTCTTTTAATATTTCTTGC 11950

Bos ----------------------------------AGAGAGGC------------------ 619

Rattus G-------AAGTTTCATCAATATTTTGCTTG------TTTGGTAGCTGATTTCTCCTATC 15550

Danio ------------------------------------------------------------

Mus GTGTGTAAAACTTTAATCAAGATTTTGCCTG------TTTGGTAGCTGATTTCTCCCATC 13857

Gallus --------GAGCTGTTTTAGAATGGTACCTT------CTGGAAGGTAAGTTACATCCAGA 12499

Anopheles ------------------------------------------------------------

Homo TAGTTTAGTATTTTTAACTAGAATTTACTATGCTGTTCCAGTTATTTATTGCTGTGTAAT 19869

Pan TAGTTTAGTATTTTTAACTAGAATTTACTATGCTGTTCCAGTTATTTATTGCTGTGTAAT 19316

Drosophila ------------------------------------------------------------

Canis AAGTTAAGT-TCACTGACAACAGATCGCCCT-------CAATTTTTTATT--TGTCTAA- 11999

Bos --GTTA----CCACTGAC----------------------------------TGACCA-- 637

Rattus AGTT------AAAGCCTCTTGATACTAAATCAGTCTCATTTTAATTATTTCCACAATCTA 15604

Danio ------------------------------------------------------------

Mus AGTT------AAAGACTCTTGATACTAAATCAGTTTCATTCTAATTACTGCCACAATACA 13911

Gallus AGTTTTTGTAAAGGACTACCTATGACAGATGAATAACTGCTGTAGCTCAGTTTCCTTTTT 12559

Anopheles ------------------------------------------------------------

Homo ACATTGCCCCAAACTTAGTGCCTTAAATATCAGCAACTATTTATTTTGCTCATGAATCTC 19929

Pan ACATTGCCCCAAACTTAGTGCCTTAAATATCAGCAACTATTTATTTTGCTCATGAATCTC 19376

Drosophila ------------------------------------------------------------

Canis ----------GAGTCTTTTCTCTTAAAGA------ATAATTTCACAAGGTACAGAATTTT 12043

Bos ------------------------------------------------------------

Rattus TAGTCTA-----------------AATTTTTGCTTAT------------------TTGTA 15629

Danio ------------------------------------------------------------

Mus TAGTCTA-----------------AATTTTTGCTT-T------------------TTGTA 13935

Gallus CACAGTG-----------------CATTTTTTCCATT------------------ATATT 12584

Anopheles ------------------------------------------------------------

Homo TCATTTGGTCAGGGATTGGCAAGGAGAGCTTGTCTTTGACAATACATTGTAACAACTGTT 19989

Pan TCATTTGGTCAGGGATTGGCAAGGAGAGCTTGTCTTTGACAATACATTGTAACAACTGTT 19436

Drosophila ------------------------------------------------------------

Canis TAGTTTGGT--------------GAGTTTTTTTTTTT------------------TTCTT 12071

Bos ----------------------------------TCT------------------TTCTT 645

Rattus TGTAT---------------TTAAATCTCAGAACACTGTTAAGCAAAGCTAAACCATAGC 15674

Danio ------------------------------------------------------------

Mus TGTAT---------------TTAAATTACAAAACACTGTAAAGCAAAACTAAACCATAGC 13980

Gallus AGTCT---------------CCACTTTCCTGATCAAGTTGAGTCC--TTTGACTCTTACC 12627

Anopheles ------------------------------------------------------------

Homo TACATAGCATTACATTGTATTTGGTATTATAAGTAATCTAGAGATGGTTTAACATATTTG 20049

Pan TACATAGCATTACATTGTATTTGGTATTATAAGTAATCTAGAGATGGTTTAACATATTTG 19496

Drosophila ------------------------------------------------------------

Canis TAAAT--------------TTTGATACTTTAGCTAAT-----------TCATTCTATTCT 12106

Bos TA---------------------------------------------------------- 647

Rattus AACATTTTTATACTTTGTAGAAAATT---------------------------AGCTTAT 15707

Danio ------------------------------------------------------------

Mus AAAATTCTAATACTTAGTGGAAATTT---------------------------AGCTGAT 14013

Gallus AA--TTTTTCTGCCTTGTCTGGATCC---------------------------GGCAGTC 12658

Anopheles ------------------------------------------------------------

Homo AAGATGCATGTAGGTTATATGCAAATACCATGCCATTTTATATAAGGGATTCGAAGCATC 20109

Pan AAGATGCATGTAGGTTATATGCAAATACCATGCCATTTTATATAAGGGATTCGAAGCATC 19556

Drosophila ------------------------------------------------------------

Canis ----TGTATGCACGGTTTCTGCAAA-----------------------GTCAGATGTAAT 12139

Bos ----TGTCTGCATAG--------------------------------------------- 658

Rattus CTTGTTTTTT-------------------------------------------------- 15717

Danio ------------------------------------------------------------

Mus ATTGGTTTTT-------------------------------------------------- 14023

Gallus AAAATGTCCC-------------------------------------------------- 12668

Anopheles ------------------------------------------------------------

Homo CTTGGATTTTGGGATCCATGGGAGTCCTGGAACCAGTCCTCTGTAGATAGTTGAGGTATG 20169

Pan CTTGGATTTTGGGATCCATGGGAGTCCTGGAACCAGTCCTCTGTAGATAGTTGAGGTACG 19616

Drosophila ------------------------------------------------------------

Canis ATTTATTTTTGT------------------------TCTTCTGTAGGT------------ 12163

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ACTGTAGTCTTTGGATTGAAAGACTCACTAATTTCACTCAGATTCAAGGAGAAGGGCCAT 20229

Pan ACTGTAGTCTTTGGATTGAAAGACTCACTAATTTCACTCAGATTCAAGGAGAAGGGCCAT 19676

Drosophila ------------------------------------------------------------

Canis ------GTTTTT------------------------------------------------ 12169

Bos ------------------------------------------------------------

Rattus --------------------------------------------------------TGGT 15721

Danio ------------------------------------------------------------

Mus --------------------------------------------------------TGGT 14027

Gallus --------------------------------------------------------ATGT 12672

Anopheles ------------------------------------------------------------

Homo AGACTCCACCACCTGATGAAAAAATGACAGTGTTACATTGTTAAGAGCATGTGGAATGGC 20289

Pan AGACTCCACCACCTGATGAAAAAATGACAGTGTTACATTGTTAAGAGCATGTGGAATGGC 19736

Drosophila ------------------------------------------------------------

Canis ---CTCC-------------------------------------------------TGGC 12177

Bos ------------------------------------------------------------

Rattus CTCAGT------------------------------------------------------ 15727

Danio ------------------------------------------------------------

Mus CTTAAT------------------------------------------------------ 14033

Gallus TCAAACA----------------------------------------------------- 12679

Anopheles ------------------------------------------------------------

Homo TTCTATTGTGACCATCTTTGGAAAATACAGTTGACCACATATACCATTTCATGAGCTGTG 20349

Pan TTCTATTGTGACCATCTTTGGAAAATACAGTTGACCACATATACCATTTCATGAGCTGTG 19796

Drosophila ------------------------------------------------------------

Canis TTCTTT------------------------------------------------------ 12183

Bos ------------------------------------------------------------

Rattus --------------------TTCAACATTATTTGTAA-----------------AATATT 15750

Danio ------------------------------------------------------------

Mus --------------------TTCAACATTATTTACAA-----------------AATCTT 14056

Gallus --------------------CTCTATTCCACATTAGG-----------------CGTCTT 12702

Anopheles ------------------------------------------------------------

Homo ACAAATGTATACACCTTTGCCAGAAAGTTCTATCAGGGTATAGAACCTACACCTCTTCCT 20409

Pan ACAAATGTATACACCTTTGCCAGAAAGTTCTATCAGGGTATAGAACCTACACCTCTTCCT 19856

Drosophila ------------------------------------------------------------

Canis --------------------CAAAAAATTTTCTT-------------------TATCCTT 12204

Bos ------------------------AAACT------------------------------- 663

Rattus GGGCAAGTCA----ATCACTCTGAGGCTGCTTATTGTTATTCTTAAGTGTCTGTT---TT 15803

Danio ------------------------------------------------------------

Mus CGGCAAGTCAGTTAATCACTCTGAGGCTGCTTATTGTTATTCTT------CTATT---TT 14107

Gallus TGGCAGTCTCCT---TTACACCCACCCTACGTTTTAACATTCTCA----TCTCTT---GC 12752

Anopheles ------------------------------------------------------------

Homo AGTTATTCCTTCCCCCCACACCACCCCTAGAACCTAACATTGTTCAGATTGTTTTCATCT 20469

Pan AGTTATTCCTTCCCCCCACACCACCCCTAGAACCTAACATTGTTCAGATTGTTTTCATCT 19916

Drosophila ------------------------------------------------------------

Canis GGTTAT--------------CTGTAGTTTGAAAATGATATTCCTAGGCATAGTTT---TT 12247

Bos ------------------------------------------------------------

Rattus GTTTCTGTAGAGC--------TAAAGTCAGTGG---------------------TACATA 15834

Danio ------------------------------------------------------------

Mus GATCTTGTAGAGC--------TAAAGTCAGTGG---------------------AATGTA 14138

Gallus TGCCACGGACAGC--------ACTCTGCAGATG---------------------GGTGAA 12783

Anopheles ------------------------------------------------------------

Homo TAGTTTAGCTTGCGCAGAACTTTATGTAAGTAGAGTCATACAATACTTATATGTTGTAAA 20529

Pan TAGTTTAGCTTGCTCAGAACTTTATGTAAGTAGAGTCATACAATACTTATATGTTGTAAA 19976

Drosophila ------------------------------------------------------------

Canis TGGTTTGGTGTGC--------TTTTTTTGGTGG-------------------GTTTTGGT 12280

Bos ------------------------------------------------------------

Rattus AGGGTACTGTTGATTG-------------------------------------------- 15850

Danio ------------------------------------------------------------

Mus AGGGTACAGTTGATTG-------------------------------------------- 14154

Gallus CAAGTAAGGTT------------------------------------------------- 12794

Anopheles ------------------------------------------------------------

Homo AAGTTTCTTTTTGCTCAACATAATGTTTTTGAGATTCATCCATATTGTTGAATGTTTCGG 20589

Pan AAGTTTCTTTTTGCTCAACATAATGTTTTTGAGATTCATCCATATTGTTGAATGTTTCGG 20036

Drosophila ------------------------------------------------------------

Canis GGGTTTTTGTTTATTT-------TATTTTTGACATTTATCCTTCTTG------------A 12321

Bos ------------------------------------------------------------

Rattus ------------T----------GAACCATATAATTCTATAC------------------ 15870

Danio ------------------------------------------------------------

Mus ------------TTGTATTTTGTGAGCCATATAGTACTACAT------------------ 14184

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGGTTTGTGACTTCATCTGTTAAGGGACACCTGGGCTGTTTTCAGTTCCAGGCTGTTTTC 20649

Pan TGGTTTGTGACTTCATCTATTAAGGGACACCTGGGCTGTTTT-----------------C 20079

Drosophila ------------------------------------------------------------

Canis TGTTTTTTGAGTTTCCT-------GGATCTGTGGTTTGGTGT------------------ 12356

Bos ------------------------------------------------------------

Rattus ------------------------------------------TGAAAAGTAGGGATTAT- 15887

Danio ------------------------------------------------------------

Mus ------------------------------------------TGAAAAGTAGGGATTAT- 14201

Gallus ------------------------------------------TTAGAAAGATGAATTTT- 12811

Anopheles ------------------------------------------------------------

Homo AGTTCCCAGCTATTATAAA--AAGGTACAATGAACATTTGTGTAAAAAAAGAAGTCTCTG 20707

Pan AGTTCCCAGCTATTATAAATAAAGGTACAATGAACATTTGTGTAAAAAAAGAAGTCTCTG 20139

Drosophila ------------------------------------------------------------

Canis ---------CTAATATTAAT----------------------TAAAAAGGGGGTACTCT- 12384

Bos ------------------AC----------------------TAGAAGAGGGGTACT--- 680

Rattus --------------------------------------------TCTCTTTATCAGAA-T 15902

Danio ------------------------------------------------------------

Mus --------------------------------------------TATCTTTATCAGAAAT 14217

Gallus --------------------------------------------CATCTGTGCTAGAGAC 12827

Anopheles ------------------------------------------------------------

Homo TGTGGACATATATGTTTCTTTTTTCTTGGTTAGTTGATGTGTTTTTCTTTCAGCATTTGT 20767

Pan TGTGGACATATATGTTTCTTTTTTCTTGGTTAGTTGATGTGTTTTTCTTTCAGCATTTGT 20199

Drosophila ------------------------------------------------------------

Canis ------------------------------------------CTTATTTTCAG-ATATAT 12401

Bos ------------------------------------------------------------

Rattus GCTTGGGACCAGATTATGTTTCAGATTTAAGAAT----TTTTCAGATTTTGGCAT----- 15953

Danio ------------------------------------------------------------

Mus GCCTGGGACCAGACTATGTTTCAAATTTAAGAAT----TTTTCAGATTTTGGCAT----- 14268

Gallus TTCTGG---CCAGTCATATCCAGTCCCACAGGAT----TGGCAGCAACT----------- 12869

Anopheles ------------------------------------------------------------

Homo TTTTGATGAGAAGTCTGGTTATACAGTCATGTGCCGCATGCTGACATTTCAGTCAAC--G 20825

Pan TTTTGATGAGAAGTCTGGTTATACAGTCATGTGCCGCATGCTGACATTTCAGTCAACAAG 20259

Drosophila ------------------------------------------------------------

Canis CTT-----------CTGATTCTGTCTTCAAGTTC----TTCTGATAGTCC---------- 12436

Bos ------------------------------------------------------------

Rattus ------------------GTTCCTATAGACTTTACTGGTTGAACATATCTA----ATCTG 15991

Danio ------------------------------------------------------------

Mus ------------------GTTCCTATAGACTTTACTGTTTGAACATACCTA----GTCTG 14306

Gallus ------------------ATACCCAGGGAAGCTGGGATGAGAAAGGATATA----GGAGG 12907

Anopheles ------------------------------------------------------------

Homo AGATCATAGTTGACAATAGTCATTTAAGATTATACCACCATATTTTCACTGTACCTTTTC 20885

Pan AGATCATAATTGACAATAGTCATTTAAGATTATACCACCATATTTTCACTGTACCTTTTC 20319

Drosophila ------------------------------------------------------------

Canis --------------------CATTACGTGTTATACTTCTGTAGTTTTTCCACAGTGCTTG 12476

Bos -------------------------------------------------------GTTTG 685

Rattus AAAATTCAAAATCGGAAATACTCCTAAATCCAAACCTTTTTGAGTTGCTGACATGAT--- 16048

Danio ------------------------------------------------------------

Mus AAAATTCAAAATCGGAAATATTCCTAAATCCAGCCCTTTTTTATTTGCTGCCATGATGAT 14366

Gallus GAAAGT--GATTTGTTAAGGTTCC--ATTCTGCTGATATCCATACTGTTGAAATGGAGCA 12963

Anopheles ------------------------------------------------------------

Homo TAGGTTTAGATGTATAAATACTTA-----CACTTTG--TTACAGTTGCTTACAGTATTCA 20938

Pan TAGGTTTAGATGTATAAATACTTA-----CACTTTG--TTACAGTTGCTTACAGTATTCA 20372

Drosophila ------------------------------------------------------------

Canis CATATTCTGTTTTGTAT-TTTTTT-----CTCTTTGCTTTTCAGTTGTCAGAAGTTTCTT 12530

Bos ----------------------------------TGCTTT-------------------- 691

Rattus TTAAAA------------TTTTTTGGATTTTGGAGTGG---------------------- 16074

Danio ------------------------------------------------------------

Mus TTAAAA------------CATTCTGGATTTTGGAGTAG---------------------- 14392

Gallus TGAGA--------------TTTTTAGATCTCAGTACAG---------------------- 12987

Anopheles ------------------------------------------------------------

Homo TTCAGTATAGTAACATGCTGTACAGCTTTATAACCTAGGAGCACCCGGGCTATACCATGT 20998

Pan TTCAGTACAGTAACATGCTGTACAGCTTTATAACCTAGGAGCACCCGGGCTATACCATGT 20432

Drosophila ------------------------------------------------------------

Canis TTGATT----TGTCTTCAAGTTCAGTTTCTTTCTTCAG---------------------- 12564

Bos ------------------AGTTC------------------------------------- 696

Rattus TTTTGAATTTTGGATTTAATC--TCTTCTCAA-----------ATGAAGAGATTATTTAA 16121

Danio ------------------------------------------------------------

Mus TTTTGGATTGAGAATATACCTCATTTTCTCAA-----------ATGAAGAGACCATTTAA 14441

Gallus T----------AAATTCAGTC-----------------------TTAAGGTATCTTGTAA 13014

Anopheles ------------------------------------------------------------

Homo ATCCTAGTTCTGTAGTAAGCTATACCATCTAATCTAGATTTGTGTAAGTACGTTCTATGA 21058

Pan ATCCTAGTTCTGTAGTAAGCTATACCATCTAATCTAGATTTGTGTAAGTACGTTCTATGA 20492

Drosophila ------------------------------------------------------------

Canis TTTCCAGTTCACTGTTAAGCT----CAT----------------TAAAGACATTTTACAT 12604

Bos --------TTACTGTTAG------------------------------------------ 706

Rattus GAAA---------------------CAATATACTGGAAAATAGTTCAGAAGGGTTTTCTT 16160

Danio ------------------------------------------------------------

Mus GAAAA--------------------CAATATACTGAAGAATAGTTCATAAAGGTTTT--- 14478

Gallus CAGA------------------------TGCTCCAAGGTTCAGT--------GTCTTGAT 13042

Anopheles ------------------------------------------------------------

Homo TATTTGCACAATGATTACCATGCTGAGAGTTGTTGGGGTTTTGTTTTTTTTTTCTTTTTG 21118

Pan TATTTGCACAATGATTACCATGCTGAGAGTTGTTGGGGTTTTGTTTTTTTTTTCTTTTTG 20552

Drosophila ------------------------------------------------------------

Canis TTTT------------------------GTTATGGGGCTTTTGAACTTGGGCTTTTTTTG 12640

Bos --------------------------------------------------------TTTG 710

Rattus ---TCCTATAATGATTATTCTTCTAATAAATTTTATATTG--ACTACTGATTTAAAGCTT 16215

Danio ------------------------------------------------------------

Mus ----CCTGTGATAATTATTCTTCTAAT----TTTATATTG--ACTACTGATTTAAAGCTT 14528

Gallus ---CCATGATAAGTTTACTTTGTAGAT----------CTA--GATTTCGTTACAAAACTT 13087

Anopheles ------------------------------------------------------------

Homo AATCTGTACATTTATGGTTTTCCTTAAATTTGGAAGATTGTTGCCATTGTTTCTTCTATA 21178

Pan AATCTGTACATTTACGGTTTTCCTTAAATGTGGAAGATTGTTGCCATTGTTTCTTCTATA 20612

Drosophila ------------------------------------------------------------

Canis ----TTTGGGTCTTTGGTTTTTTTTCTGCTT---ACATTGTT-CAACTGTTCTTTCATGC 12692

Bos ----TTT----------------------------------------------------- 713

Rattus TGAAGATTATGATTTGAACAATGAATTGGGT----------------TTATGCTAGTGTT 16259

Danio ------------------------------------------------------------

Mus TGAAGATAATGACTTGAACAATGAATTGGGT----------------TTATGCTAGTGTT 14572

Gallus AGA------TGAGCTAACAACTTAGTGAGGT----------------TCATGCTGG---T 13122

Anopheles ------------------------------------------------------------

Homo TATATAT----TTTTTACCACCTTTACTCCTCTTTCATCATTTCCTCTTTTTCTGGGACT 21234

Pan TATATATATTTTTTTTACCACCTTTACTCCTCTTTCATCATTTCCTCTTTTTCTGGGACT 20672

Drosophila ------------------------------------------------------------

Canis TGTCTAC-----TTTATCCATTAGAACGCTT-----------------------AGCATT 12724

Bos ----------------------------------------------------------TT 715

Rattus CTAACTAA-GGTTTGTTTAATTTATTAGAATTATTAAGCCTACGTTCAGATCAAGTTAGC 16318

Danio ------------------------------------------------------------

Mus CTAACTAAAGGTTTGTTTAATTTATTAGAATTATTAAGCCTACGTTCAGATCAAGTTAGC 14632

Gallus TTGGATGCTGTTTTGCTTAA--TGTGGGGGCTGTAAGTTCTGCATTTGGT--------GC 13172

Anopheles ------------------------------------------------------------

Homo CCAGTTACACATATGTTAGACTGTTTGGTATTATCCACAGGTCATTAACATCATATTCAT 21294

Pan CCAGTTACACATATGTTAGACTGTTTGGTATTATCCACAGGTCATTAACATCATATTCAT 20732

Drosophila ------------------------------------------------------------

Canis TTAATCATAGTTGTTTTAAATT-TCTGGTGT---------GCTAATTCTAACATCCCTGC 12774

Bos TTAATC------------------------------------------------------ 721

Rattus AGCTAGACTGGTGTGACAACCTGTTTTTAATCAGTGACTCAAAGCTGTTATCACCCTGAT 16378

Danio ------------------------------------------------------------

Mus AGCTAGACTGGTGTGACAACCTGTTTTTAATCAGTGACTCAAAGCTGTTATCACCCTGAT 14692

Gallus CGTAGTAAGTGTCTAACAGCTGGATCTCTGTCAG--------GCCTGGTCACAGACTTGC 13224

Anopheles ------------------------------------------------------------

Homo TATTTTTCAGTCTTTTTATTTCCCTGTGCTTCAGT---------TTGCTTTGTCTTCTAT 21345

Pan TATTTTTCAGTCTTTTTATTTCCCTGTGCTTCAGT---------TTGCTTTGTCTTCTAT 20783

Drosophila ------------------------------------------------------------

Canis TGTATTT-AGTTCTTTTGTTTGCTGTCTTTTCAGT---------ATTTTTTCCCTTTGGT 12824

Bos -----------------------------------------------TTTTCCC------ 728

Rattus GTCACCGAATGGCCACAGCTTGTAAAAGGTAATATTGAATGTTATTTTACAGTCTTTAAA 16438

Danio ------------------------------------------------------------

Mus GTCACCGAATGGCCACAGCTTGTAAAAGGTAATTTTGAATGTTATTTTACAGTCTTAGAA 14752

Gallus CT-------TGGCCATGGCTGTGAAGCTGTCACCTCAGAGCATATTCTTGAACAGTCCAA 13277

Anopheles ------------------------------------------------------------

Homo TTTACTGTTTTTTCTCCTCCCTTGTTAAATAATTTCAGATATTTCGCTTTA-TATTTCAA 21404

Pan TTTACTGTTTTTTCTCCTCCCTTGTTAAATAATTTCAGATATTTCGCTTTA-TATTTCAA 20842

Drosophila ------------------------------------------------------------

Canis A----TGCCTTGTAATTTTTCTTGATAACTG------GGTATGATTTTCTA-CGTAAAAG 12873

Bos -------------------------------------------------------AAGAA 733

Rattus AGGCTGTCATTGT--------------AAAATGAATTATGTGCTATAAAAATAACAAAAA 16484

Danio ------------------------------------------------------------

Mus AGGCTGTCATTGT--------------AAGATGAATTATGTGCTATAAAAATGACAAAAA 14798

Gallus AATCTGATGGTTT--------------TGAATCCAGCAC---------------CAGCAC 13308

Anopheles ------------------------------------------------------------

Homo GAAATTCCATTTGATTCATTTTATTCATGTATTTTTTTGAATTCTTGAGCATATTTGTAA 21464

Pan GAAATTCCATTTGATTCATTTTATTCATGTATTTTTTTGAATTCTTGAGCATATTTGTAA 20902

Drosophila ------------------------------------------------------------

Canis GAATTACTAT----------------ATATAGGCCTTTGGT------AATATGGTAGTGA 12911

Bos GAGTGA---------------------TACAGATTGTTG--------------------- 751

Rattus TGTATAGGTAGCAGGAATATTGCTAAGAATTCAGGATCTAAGAACGGAGCCATTTCT--- 16541

Danio ------------------------------------------------------------

Mus TGCATAGGTAGCAGGAATATTGCTAAGAATAAAAGACCTAAGAACGGAGCCATTTCT--- 14855

Gallus TTCATGCTTTCCTTCACAATCAT--AGGGGAGAGGTCATGAGCGCAAAACACCCTCG--- 13363

Anopheles ------------------------------------------------------------

Homo TAGCTGTTTGAAAATCAGGTTACT-----TATTGATTTCTTGAATTT-TTTCACTCTGAA 21518

Pan TAGCTGTTTGAAAATCAGGTTACT-----TATTGATTTCTTGAATTT-TTTCACTCTGAA 20956

Drosophila ------------------------------------------------------------

Canis GGTGTAGGGGGGAAGGGAAACATT-----TTATAGTCCTGTGTATAGGTCTCAGTCT--T 12964

Bos --------------------TATT-----TTATAGTTCTGTG-GTAG-CCTTA------- 777

Rattus TCATTTAATCTCCTTTCTCAGATATTTATTGTAGAGCTTTTCTTAGTTGCCCTTCCATTC 16601

Danio ------------------------------------------------------------

Mus TCATTTAACCTCCTTTCTCAGATATTTATTATAGTGCATTTCTTACTTACCCTTCAGTTC 14915

Gallus GGAAAAGTCAATTTTACTAACATTGCTATTGAGTTGTTATTCTTATGTGCTTCCACTTCC 13423

Anopheles ------------------------------------------------------------

Homo TTTGTTGGTTGGTTTTTT-CTCTTGGTCATGGGTTGTATTTTCCTAGTATTTATTTTATT 21577

Pan TTTGTTGGTTGGTTTTTTTCTCTTGGTCATGGGTTGTATTTTCCTAGTATTTATTTTATT 21016

Drosophila ------------------------------------------------------------

Canis CTAGTGAGCCTGCCTGTGCCTCTGGATTGTGA-----ACTTCACAAATATTTCTCCTTTT 13019

Bos ------------------------------------------------ATTTTTCCTTTT 789

Rattus ATGAAG-----TAGTCACCAAAGACCTGTTTTTCTGTATAGATAGA---TAAGA---AAA 16650

Danio ------------------------------------------------------------

Mus ATGAAGATAAGTAATCATCAAAGACCTGTTTTTCTGCATAGATTAA---TAAGA---AAA 14969

Gallus ATAAAA-----CACAACTAAGGTATTAGCTACTTAGAGCAACCAGG---CAAAATGCAAG 13475

Anopheles ------------------------------------------------------------

Homo TTATTTTT---TGTTTTTTACATATTTAATGATTTTTTAAGATTGGATGCTGGACATTGT 21634

Pan TTATTTTT---TGTTTTTTACATATTTAATGATTGTTTAAGATTGGATGCTGGACATTGT 21073

Drosophila ------------------------------------------------------------

Canis TTTATTTC---CTTAAGTGGAACA--GGATGACT-----AGAGTGG--GCTGGAGTTGGA 13067

Bos CTGATT------------------------------------------------------ 795

Rattus TATTTCTTAAGAATTTCGAAGGTTACAGTATGGACATTTTAAGAAATATATG-------- 16702

Danio ------------------------------------------------------------

Mus TATGTCTTAAGTATTTTGAAGATTACAGTGTGGACATTTTAAGAGATATGTG-------- 15021

Gallus TTTCTTCCTAACAAATGAGGAATTAGAGACTACACCACTAAGTGCATTTTTA-------- 13527

Anopheles ------------------------------------------------------------

Homo AATATTTT--GTTGTTGGGTGTCTAGATTTTGTTTTCTTTTAGAGTGTTTTGTTTTGTAG 21692

Pan AATATTTT--GTTGTTGGGTGACTAGATTTTGTTTTCTTTTAGAGTGTTTTGTTTTGTAG 21131

Drosophila ------------------------------------------------------------

Canis TATATCTT--AC-ACAGGTCAGTTAGGCTCTGA--------------------------- 13097

Bos ---------------------GGTAGGTTCTG---------------------------- 806

Rattus ----GAAAATAC----AGTAGTATTTTTA-------------ATATTTTATGTGGCAGAA 16741

Danio ------------------------------------------------------------

Mus ----GAAAATATCTTAAGTATTATTTTTA-------------ATATTTTATGTGGCAGGA 15064

Gallus ----CAGAACCATTTCACACCAATTCTTC-------------AGA----AAGCAGCAAGA 13566

Anopheles ------------------------------------------------------------

Homo CCACCTAAATAACTTGCTGGTCAGTTTTATCCCTTCAGGGCTACATTGGAGTTTGTCTAG 21752

Pan CCACCTAAATAACTTGCTGGTCAGTTTTATCCCTTCAGGGCTACACTGGAGTTTGTCTAG 21191

Drosophila ------------------------------------------------------------

Canis ------GAATACCTGGCAGATTAGGCTT---------GGGTTA-ACTAGTTTCTTCTGAG 13141

Bos -------------TATCAGAGT------------------TTA-A--------------- 819

Rattus GTGTAATTGTTTCTCTAGAA--ATGTTGCAT-CTTTAGTAAAACTTGTAC---TTTTCTC 16795

Danio ------------------------------------------------------------

Mus GTTTCAGTGCTTCTCCAGAA--ATGTTGCAC-CTTTAGTAAAATGAGTGTACTTTTTCTC 15121

Gallus AATAAGATTTAACTTGAGAATAAAGCACTGC-CCTACAGTAGACTTCTGTTTCTTTAAAG 13625

Anopheles ------------------------------------------------------------

Homo AGAAGGCTTTGCTTTAATGGTAGTAGCTCCTACCTAAGGCATGATCCTTCTGAGTCTTTA 21812

Pan AGAAGGCTTTGCTTTAATGGTAGTAGCTCCTACCTAAGGCATGATCCTTCTGAGTCTTTA 21251

Drosophila ------------------------------------------------------------

Canis GCCAAGCCTTG--TTAAGAGTAAAGTGCTCT------GGTATATTTCATTATAGTTCCTT 13193

Bos ---------------AAGA----------------------------------------- 823

Rattus CTAGAGAGT--------------------T---GTGGCATTAACAGTGCAGCTTTTAACC 16832

Danio ------------------------------------------------------------

Mus CTAGAGAGT--------------------TACAGTGGAGTTAAAAGTGCACCTTT--ACC 15159

Gallus CTAAGGCTTG-------------------CATAAAAGGAGATATCATCAAGCTGTCATAA 13666

Anopheles ------------------------------------------------------------

Homo CTAAATGCTCCCAGTGTCACCGTGTTCTCTTCACTCAGGTTAGAGAGAATTTTAGGAGTC 21872

Pan CTAAATGCTCCCAGTGTCACCGTGTTCTCTTCACTCAGGTTAGAGAGAATTTTAGGAGTC 21311

Drosophila ------------------------------------------------------------

Canis TT------TCCC-------------TCTCCT-GCTTGAATATGAGGGGATTTT-----TC 13228

Bos ----------------------------CTT-ACTGGAGTATGAAGGG------------ 842

Rattus TCCTTTAAAAGGATGGATTTGCGGGTTGGGGATTTAGCTCAGTGGTAGAGCGCTTGCCTA 16892

Danio ------------------------------------------------------------

Mus TCCTT-AAAAGGATGGATTTAC-------------------------------------- 15180

Gallus TACCATAAAACAGTGCTTTTAAGGATTCTTAGTTTTGT---------------------- 13704

Anopheles ------------------------------------------------------------

Homo TCCCAGTCCTTTATAAGTACTGGGAATATTTCAGCTTACTGCCCCTCTTTCACT------ 21926

Pan TCCCAGTCCTTTATAAGTACTGGGAATATTTCAGCTTACTGCCCCTCTTTCACT------ 21365

Drosophila ------------------------------------------------------------

Canis TCCAA------CATGGGCTGTGAGAAC-------CTGGTTG------------------- 13256

Bos ---AA------TGTGGA-----AGA----------------------------------- 853

Rattus GTAAGCACAAGGCCCTGGGTTCGGTCCCCAGCTCCAGGAAAAAAAAAAAAAAAAAAAAAA 16952

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AAAGACGGAGCTATAGCTCTGTCAATAACTATAAAAGGATGGGTTTTGCTAACTCATATT 17012

Danio ------------------------------------------------------------

Mus -------------------------------------------------TAGGTCATGTT 15191

Gallus ---------------------------------------------------ATCTTTATT 13713

Anopheles ------------------------------------------------------------

Homo -----------------------------------------AGCTTCATGGAGTCACTTA 21945

Pan -----------------------------------------AGCTTCATGGAGTCACTTA 21384

Drosophila ------------------------------------------------------------

Canis -----------------------------------------AGCTTCTTGACATAA-ATA 13274

Bos ------------------------------------------------TGATATGA-TGA 864

Rattus CCAGT--TCAAATTAGTTAGTGTTTTGTGGTTAAATTTTCTGTCTTTAAAGTCTATA-CC 17069

Danio ------------------------------------------------------------

Mus CCAGTGTTCAGATTATTT---GTTTTGTGATTACATTTTCTGTCTTTAAAGTTAATA-CC 15247

Gallus TCTTTGTTGGGGTTTTTTTTTTTTTTTTGGCTA--TTAGCTTTGTTTGCAGTTGATAGTC 13771

Anopheles ------------------------------------------------------------

Homo CCTTAATCGTGTACAGTTAGTACTCAGCAGTGGACTCTCAAATGGCAGATTTCTGAAGCC 22005

Pan CCTTAATCGTGTACAGTTAGTACTCAGCAGTGGACTCTCAAATGGCAGATTTTTGAAGCC 21444

Drosophila ------------------------------------------------------------

Canis TCAAAATTGTGGACACTCTGG---TGGGACTAGGTCCCC---CTGGAGTTTTTAATGGTT 13328

Bos TCA--------------------------------------------------------- 867

Rattus TAAAACTGATACTTTT----------TTTCTCACCAGTGTTACTAGGTATGTTTCAGTTT 17119

Danio ------------------------------------------------------------

Mus TAAAATTGATACTTTTAAAAGACTTTTTCCTCACCATTGTTACTAGGTATTTTTCAGGTT 15307

Gallus CACAGCTGCTAATTTGAA----CATCTTTACCTGCTCTGTCACTTGAT-TTTGATGGAGG 13826

Anopheles ------------------------------------------------------------

Homo ATTTCTCTGCCTTCTCAGACAAGCACTTGTCTGGCACTTGTCATCAATTTTACCCACTTC 22065

Pan ATTTCTCTGCCTTCTCAGACAAGCACTTGTCTGGCACTTGTCATCAATTTTACCCACTTC 21504

Drosophila ------------------------------------------------------------

Canis AGACTTTTATGTGCTGA--------CCTTCCAGGAATTTGTCCATGAT-------AGTTT 13373

Bos -------------------------CTTTCCAG-------------AT-------ATCTC 882

Rattus TCAAATTTT--------------------------------------ATTTATT-----A 17136

Danio ------------------------------------------------------------

Mus TCAAATTTC--------------------------------------ATTCATTCCTTTA 15329

Gallus AGGAACCAC--------------------------------------TCCCATTGACTTT 13848

Anopheles ------------------------------------------------------------

Homo AGCTTTCTCAGCTCTGATCTCTTGATTCTGAACTCAGTAAAACTGCTGTCTTCTCACTGG 22125

Pan AGCTTTCTCAGCTCTGATCTCTTGATTCTGACTTTAGTAAAACTGCTGTCTTCTCATTGG 21564

Drosophila ------------------------------------------------------------

Canis AGGTTTCCC-------------------------------------TGTCCTATTATAGG 13396

Bos AGA--------------------------------------------------------- 885

Rattus TTAATATTCTGGCAACCTTTAGGATAA-------CTTGGGTCAGTCTT------------ 17177

Danio ------------------------------------------------------------

Mus TTAATATTCTGGTAAACTTTAGGATAA-------CTTGGGTCAGTCTT------------ 15370

Gallus TTTCCATTGCACTGTGCTCCTAGC----------ACTGACTCAGTTAT------------ 13886

Anopheles ------------------------------------------------------------

Homo ATTTCCCCTCCATTGACTGCAGGTTGGAAATTACCTCCAGGCAGACATCCAAGCAGTGGA 22185

Pan ATTTCCCCTCCGTTGACTGCAGGTTGGAAATTACCTCCAGGCAGACATCCAAGCAGTGGA 21624

Drosophila ------------------------------------------------------------

Canis TTCCTCTGGCAATAGCCTGCTCTCTG--------CTTCAGTAAGCCAT------------ 13436

Bos ------------------------------------------------------------

Rattus GGGTTGGTAGTGGCTTTCTTATTAACTTTTGGTTGGTTTTATATTTTGAATTT------- 17230

Danio ------------------------------------------------------------

Mus GGGTTGGTAGTGGATTTTTTATTAACTTTTAGTTGGTTCTATATTTTGAATTT------- 15423

Gallus TGACTCTAGCTTTGACAATTTACACCCATACCTGTGTTTTACTAGAGAGCCTC------- 13939

Anopheles ------------------------------------------------------------

Homo TGGCTC--ACCTCCTTTGTTTTTGTCCTTTCATGCATTATAGTCCTCTGCTGCCTGTTAT 22243

Pan TGGCTC--ACCTCCTTTGTTTTTGTCCTTTCATGCATTATAGTCCTGTGCTGCCTGTTAT 21682

Drosophila ------------------------------------------------------------

Canis -GGCTC--CCTGTATTTGCCTCTCTC-----------TCCAGTCTTT------------- 13469

Bos ------------------------------------------------------------

Rattus --------------GGTCAAATTAGGAGCATGTACTGGATTCTTATTTCAAATGTATTGA 17276

Danio ------------------------------------------------------------

Mus --------------GGTAAAATTAGGAGCATGTCCTGAATTCTTATTTCAAATGTATTGT 15469

Gallus --------------TGTTTTATTCTGGAGATTTTTCAACTGCTTGTTTC-----CTTTTT 13980

Anopheles ------------------------------------------------------------

Homo CCAAGGTCTGAAAATTCTCGTTTGAGAAGGAGCAACTGTCAGATACTTTCGGATCTTTCT 22303

Pan CCAAGGTCTGAAAATTCTCGTTTGAGAAGGAGCAACTGACAGATACTTTCGGATCTTTCT 21742

Drosophila ------------------------------------------------------------

Canis ----------------------------GGGGCAGCAGTTCTATATTCT------TCTCT 13495

Bos -----------------------------------CAGATCT---------------TTT 895

Rattus CAGTAAAG----------------------------------------------AAACAG 17290

Danio ------------------------------------------------------------

Mus CAGTAAA-----------------------------------------------AAGCAG 15482

Gallus CATTTAA------------------------------------------------ATCAG 13992

Anopheles ------------------------------------------------------------

Homo CTGAAATTAGCTTTCTGTTGTGCTTGTTGTGCTTACCTCTTTGTCTAATGCTAATACCAT 22363

Pan CTGAAATTAACTTTCTGTTGTGCTT---------ACCTCTTTGTCTAATGCTAATACCAT 21793

Drosophila ------------------------------------------------------------

Canis CAGTAAT-------------------------------------------------CCAA 13506

Bos TGGTAAT-------------------------------------------------CCGA 906

Rattus TAAAGCTCTT-----------------------------------------------TAT 17303

Danio ------------------------------------------------------------

Mus CAAGCATTTTAAGAGCAGA-----------------------GAACAGTTTTATAACTAT 15519

Gallus CTGCACTTGTGA----------------------------------------------AG 14006

Anopheles ------------------------------------------------------------

Homo ATGAGGTTTTTTTTTTTTTTTTTAGAATGTTTTAAGCTATACACTTCTAAGTGTATAGCT 22423

Pan ATGAGGTTTTTTTTTTTT---TTAGAATGTTTTAAGCTATACACTTCTAAGTGTATAGCT 21850

Drosophila ------------------------------------------------------------

Canis GAAAAGTTGTTCATTTTT-------------------------------------TAGTC 13529

Bos ------------------------------------------------------------

Rattus TAGTAGGTGTTAT-------------------ATATACTTTGAGGCTTG----------- 17333

Danio ------------------------------------------------------------

Mus TAGTAGGTGTTAC-------------------ATATACTTTGTGGTTTGTAAC------- 15553

Gallus TCTTCAGTATTA---------------------TTGACTTCATAATTAA----------- 14034

Anopheles ------------------------------------------------------------

Homo TGTTGCACTTTCACACACTGAGCACCCGTTTAGCTAGCATTCAGATCAAAAAACAGCAGC 22483

Pan TGTTGCACTTTCACACACTGAGCACCCGTTTAGCTAGCATTCAGATCAAAAAACAGCAGC 21910

Drosophila ------------------------------------------------------------

Canis TGTTCAGCTTT-------------------TTACTTGTTTTTAGATTAG-----AGTAGC 13565

Bos ------------------------------------------------------------

Rattus -----------------------------------AAAGTTAACTTTAGTTTTAGGACGT 17358

Danio ------------------------------------------------------------

Mus -ACCTACTAATAGTTATAAAAATAGAGTTACTTTGAAAGTTAACTCTAGTTTTAGGATAT 15612

Gallus -----------------------------------AATGACGCTTCTTGTGTCAAGATAT 14059

Anopheles ------------------------------------------------------------

Homo AGCTCCTGCGTAGCCCCTTGTGCTCTGTGTCACTACCCCTTTTCTTCCATGTGTAACCAC 22543

Pan AGCTCCTGCGTAGCCCCTTGTGCTCTGTGTCACTACCCCTTTTCTTCCATGCGTAACCAC 21970

Drosophila ------------------------------------------------------------

Canis AGCTTCC---TAGC----------------------------TCTTCCATGTGGAACTAG 13594

Bos ------------------------------------------------------------

Rattus ATTTTGGTAACTTAATTAAAATAGTATTAAAAT--------------AGTCTGTGGGTAG 17404

Danio ------------------------------------------------------------

Mus ATTTTGGCAACTTAATTAGAATATTATTAAAAT--------------TGTCTGCA--TAG 15656

Gallus GCACC--TGATTAAAAAGCATTATTTCAAAAAT--------------AATATA------- 14096

Anopheles ------------------------------------------------------------

Homo TGTCCTGACTTCTC---ATAGCATAGATTAGATTTGCCTGTTTTCATCCTTTA----ACT 22596

Pan TGTCCTGACTTCTC---ATAGCATAGATTAGATTTGCCTGTTTTCATCCTTTATCTAACT 22027

Drosophila ------------------------------------------------------------

Canis AAATCAGAAATTGAGATATAGCATAGATTGGAT------GCTTTTATTTTCTAT----AT 13644

Bos -----------TGA---------------------------------------------- 909

Rattus ACATTCACATGTACACTATTCTCAAAAAAAT--------GTTTCTGCCGTATTTATTT-- 17454

Danio ------------------------------------------------------------

Mus ACATTCAGATGTACACAATGATCAGAAACAT--------GCTTTTGTTGTATTTATATA- 15707

Gallus ------AATTTCACTCTATTTTAGAGATGCA--------GTCTGTAGCAGAGTTGCA--- 14139

Anopheles ------------------------------------------------------------

Homo AGAATCAAGCACATTTAGTTGTGTCTGACTTCTTTTAATGTATTTGTGAGATTTATTCAC 22656

Pan AGAATCAAGCACATTTAGTTGTGTCTGACTTCTTTCAATGTATTTGTGAGATTTATTCAC 22087

Drosophila ------------------------------------------------------------

Canis GGAATGGGAGACAGT-ATTTCTGTATGACTT-----------------GAATTTA----- 13681

Bos ---------------------TGTATGATCT-----------------AAA--------- 922

Rattus ----------TTTTCTCTTGACTAAAGTAAAACTATTTGAATGGA----AGCAGCATATG 17500

Danio ------------------------------------------------------------

Mus ---------TTTTTCTCTTGACTAAAGTAAAACTGTTTGAATGGG----AGCAGCCTCTG 15754

Gallus ----------------------------AATCCTATCAGAATAGG----AAAAATCAGCA 14167

Anopheles ------------------------------------------------------------

Homo ATTGTTGGTTGTAGTAATTGTTTATGATAGTCGCTGTATATTCCATTTTAAGAATGGAAG 22716

Pan ATTGTTGGTTGTAGTAATTGTTTATGATAGTCACTGTATATTCCATTTTAAGAATGGAAG 22147

Drosophila ------------------------------------------------------------

Canis -------GGTGTACTTAGTGTGTATAATTGCATTTGTGGATTAAAT---AACATCTTGAA 13731

Bos -------------------------------------GGA-------------------- 925

Rattus CTATATTATGCCTAAGAGACCAAGAAAAGAATAAT------------------------- 17535

Danio ------------------------------------------------------------

Mus CTATACTATGTCTAAGAGATCAAGAAGAGTATAAT------------------------- 15789

Gallus GTTTTTCAGAC----GAAGTTTAGAAAATTGTAGG------------------------- 14198

Anopheles ------------------------------------------------------------

Homo TGATATTCCATTTTAAGAATATGCCATAGTTTAATCTGCTGTTACGGACATTTAATCATT 22776

Pan TGATATTCCATTTTAAGAATATGCCATAGTTTAATCTGCTGTTACGGACATTTAATCATT 22207

Drosophila ------------------------------------------------------------

Canis GTATATTTTACGTAAAATATATAAATCTCTTTAATCAA-----ATGGAGATCT------- 13779

Bos ------------------------------------AA-----ATGGTGAT--------- 935

Rattus ---------------TTAATTATTACTATACTTTTTGAATTATTTATACTCTGACATTCC 17580

Danio ------------------------------------------------------------

Mus ---------------TTAAGAAGAATAAT-TTGTTTGGATTAATTTTACTCTGATCTTTC 15833

Gallus ---------------TCCTGTGCAGCCATTTCATCTTAGATGAGTCAACTGATGCAAATT 14243

Anopheles ------------------------------------------------------------

Homo TTTGGTTTGGAACTGTTAAGAATATTGCTGCTGCTCTAAACATTTCAGTGATTGTCTTCT 22836

Pan TTTGGTTTGGAACTGTTAAGAATATTGCTGCTGCTCTAAACATTTCAGTGATTGTCTTCT 22267

Drosophila ------------------------------------------------------------

Canis ------------CTTTTCAAGATCCT----CTGCTATAGG---TTCTGATATCATGTTCT 13820

Bos ------------------AAAAT---------------------TCCAAT---------- 946

Rattus -----TGGGATTTCTTAAATCTTTAGTTTGGCTAA-ATGGTGTTTAATAACTCCCTCTGG 17634

Danio ------------------------------------------------------------

Mus -----TGGGGTTTCTTAAAT-TTTAGTTTGGCTAA-ATGGTGCTTAATAACTTACTCTAA 15886

Gallus AGCAATGAGAGTTCTTGGTTGCTTTCATCCGACTG-AAGACGTTACTGAAAGACTTGTGC 14302

Anopheles ------------------------------------------------------------

Homo TGTGAATATGTTTACT-TCTGTTTGGTATACTTAAGAGTGAAATTTTTAAGTCAT---AA 22892

Pan TGTGAATATGTTTACT-TCTGTTTGGTATACTTAAGAGTGAAATTTTTAAGTCAT---AA 22323

Drosophila ------------------------------------------------------------

Canis T-TGCATATTCTTTTTATACCTCTGATATACCTA----TGAAACTGGGAAGTTTTTTCAG 13875

Bos ----------------------------TACCAA----TGAAAACAGAAAG--------- 965

Rattus TATATGTAAATATTAAATAGAAGTCTAGTATATTTGCAATTCTTGATTGGCATTATGGT- 17693

Danio ------------------------------------------------------------

Mus TATTTGTGAATATTAAATAGAAGTCTAGTATATTTACAATACTTGGTTGGCATTATGTT- 15945

Gallus TTCAGTCCAGCATCTCACAAAAGCTTTGTTTGCT---GAAACATGCTATAGAATGTGCT- 14358

Anopheles ------------------------------------------------------------

Homo GGTATGCATATATTTAGTGTATACTCAGTTTT--TTAAAGGCATGCCGATTTTAATTATT 22950

Pan GGTATGCATATATTTAGTGTATACTCAGTTTT--TTAAAGGCGTGCTGATTTTAATTATA 22381

Drosophila ------------------------------------------------------------

Canis AAAACAGTGATTTTTATTTTTTGTTCCATTTTATTTTAAATTCTAGTATAATTAACTGT- 13934

Bos ------GTAAT------------------------------------------AAATGT- 976

Rattus --------ACTA-CATTCACATAATCTTTGTAGCTATCAGAAATATGGAAGATAGCTGTA 17744

Danio ------------------------------------------------------------

Mus --------ACTGGCATTCACATA--CTCTGTAGCAATCAGAAATTGCGAAAATAGCTGTA 15995

Gallus --------GTTAGTATTTGCACTGGATC-ACAATGACTACAGACGTTGTAGAGAGCTGGT 14409

Anopheles ------------------------------------------------------------

Homo CCATTTAAGTTAATATGTTT-TAATATCTGGTAGAGAAAGGAACATTATTAGAAACAATT 23009

Pan CCATTTAAGTTAATATGTTT-TAATATCTGGTAGAGAAAGGAACATTATTAGAAACAATT 22440

Drosophila ------------------------------------------------------------

Canis -----TATGTTAGT-TATGT-TAGTTTCAGGTGTGAGTATAGTGATTC-----AACAGTT 13982

Bos -----T------------------------------------------------------ 977

Rattus GTTGGCCATTTGACAATATGTTTGATCTATAGTTCATTTTAGAGTCTTGAAATTG----- 17799

Danio ------------------------------------------------------------

Mus GTTGGCCATTTGACAATATGTTTGTTCTATAGTTCATTTTAGGGTCTTGAAACT------ 16049

Gallus CTGAGTGCCTCCTTAGCCTTTGTGCACCTTGCTGCAT---AAAAACCTAAAAATG----- 14461

Anopheles ------------------------------------------------------------

Homo GTTTTGGTTATTCTTACATATTTAGTCTTTGAAAAA----ACGTTTCTTAAATTGGCATT 23065

Pan GTTTTGGTTATTCTTACATATTTAGTCTTTGAAAAA----ACGTTTCTTAAATTGGCATT 22496

Drosophila ------------------------------------------------------------

Canis CTTTGTGTTACTCAG-------TGCTCATCACATTA----AGGATACTCGTAATGCCCTT 14031

Bos -TTTATGTCATCC----------------------------------------------- 989

Rattus --TGCAGCAGTTCTATAATATTCTCTTGAGATATGGGTCTGTTTTTCTCTTGTCTTACAT 17857

Danio ------------------------------------------------------------

Mus ---GCAGCAGTTCTATAATATTCTCTTGAGATATAGTTCTTTTTTTCTCTTATCTTATAT 16106

Gallus --TGGATGTTCACCTTTTAGAGCCACAGAAATAAAACTTTTTTTTTCAGCTACTGGACAG 14519

Anopheles ------------------------------------------------------------

Homo TACTTAT---ATTTGTGTTAATTTGGGAAGAAATGGTATCTTTGTTCATCTATGAGTCAC 23122

Pan TACTTAT---ATTTGTGTTAATTTGGGAAGAAATGGTATCTTTGTTCATCTATGAGTCAC 22553

Drosophila ------------------------------------------------------------

Canis TACGTATTTCACCTATCTCTTTACCTGTGGTTATTATCCCCTCTGGTATCCATCAGTTCT 14091

Bos ------------------------------------------------------------

Rattus TTTTTTATATATATAT-------ATATTTTTCTTTTCATCATTCCTAACCTTCTCTAAAT 17910

Danio ------------------------------------------------------------

Mus TTTCTTATATA------------ATATTTTTTCTCTCATCATTCTTAACCTTCTCTAAAT 16154

Gallus AGATCTGTATT------------------------------GCTATAGGCTGTTTAGAGA 14549

Anopheles ------------------------------------------------------------

Homo ATTTGGAACTAGCTCAAAGGCCATGGGTCCTGATTCCTTTTTTTTTTTTTTTTTTTT-CT 23181

Pan ATTTGGAACTAGCTCAAAGGCCATGGGTCCTGATTCCTTTTTTTTTTTTTTTTTTTTTCT 22613

Drosophila ------------------------------------------------------------

Canis CTGTAGTTATGAGTC--------TGTTTTTTGGTTTGTGTTTTTTTTTCTTTGTTTGGTT 14143

Bos --------------------------------------------TTGTCTTTGT------ 999

Rattus TTTTCCCTTTCCCTGTTCACTTAGAACATTTTACTTCCTACCTGTTTAGAGGCTTCTAAT 17970

Danio ------------------------------------------------------------

Mus TTTT--CTTTTCCTGTACATTTAGAACACTTTGCTTCCTACCTGTTTAGAGACTTCTAAT 16212

Gallus AAAATACCTTTGTTGACTAAATACAGTATTAATGTTTCAATTTAATTAAAAACTTCGTAT 14609

Anopheles ------------------------------------------------------------

Homo TGTAGAGGGGAGGTATGGTGTCAAGAAAACATAGTCACCATTATTACGAAAAGTAAAATA 23241

Pan TGTAGAGGGGAGGTATGGTGTCAAGAAAACATAGTCACCATTATTACGAAAAGTAAAATA 22673

Drosophila ------------------------------------------------------------

Canis CTTAAATTCTGCATATGAG--TGAAGTCATATAGTATTTGTTTCTCT------TTGAATA 14195

Bos -------------------------------------------CTCT------TT----- 1005

Rattus TTGGCCTCCTTATTGCTAACAG----TTGTTGTCGTTTTGCA------------------ 18008

Danio ------------------------------------------------------------

Mus TTGGCTTCCTAATTGCTAACAGGTTTTTGTTGTTGTTTTGCA------------------ 16254

Gallus C----------------AACAGAAAGCAAGTTGTGCTGTTTG------------------ 14635

Anopheles ------------------------------------------------------------

Homo TGGAAGAGATGATCCCTACCATCAATCAGCTTACAACTAGAGGCACTGACAAATGTATAC 23301

Pan TGGAAGAGATGATCCCTACCATCAATCAGCTTACAACTAGAGGCACTGACAAATGTATAC 22733

Drosophila ------------------------------------------------------------

Canis --------ATTGCACTTAGCATTATACCCTTTAGATCCATCTGTGTTGT--------TGC 14239

Bos ------------------------------------------------------------

Rattus AGCCAGCTTTATCTCAAAG-TCT-AGTAATATATCAGATGTTGGAAAGTCACATTCAAAA 18066

Danio ------------------------------------------------------------

Mus AGTCAGCTTTATCTCACAG-TCTTAATAATATATGAGATGTTGGAAAGACACATTCCAAA 16313

Gallus ACCTGACTCCATCAGAGGCCTCTTTGCACTCTGCTGAGTGCTAGTGCT------------ 14683

Anopheles ------------------------------------------------------------

Homo AGATAGCTGTAATGTAAGGTATAACATAATAAATATAAGGAGAAATTAATAAATTATTTT 23361

Pan AGATAGCTGTAATGTAAGGTATAACATAATAAATATAAGGAGAAATTAATAAATTATTTT 22793

Drosophila ------------------------------------------------------------

Canis AAATGGC--------AAGATTTCTTTTTTTT----TAATGGCTGAGTAATACTCTG-TAT 14286

Bos -AATAAC--------AGAATTT-------------TAA------AGCA---------TAT 1028

Rattus ATGAGTTAGCAACTGTATGGGTTACCATTATGTTTCTCTAGCTCTTCTAGCCATTTTATA 18126

Danio ------------------------------------------------------------

Mus ATGAGTTAGCTAGTGCATGGGTTACCATCATGTTT---TAACTCTTCTAGCCATTTTATA 16370

Gallus -TGGGTGGGAGAGAGAATGGGGTGATAATGAGTGT------------------------- 14717

Anopheles ------------------------------------------------------------

Homo ATGGTATTAAGAATGTATAATAAGACATGAAGGAGATGGTGATTATGTATAAGAGTTTAG 23421

Pan ATGGTATTAAGAATGTATAATAAGACATGAAGGAGATGGTGATTATGTATAAGAGTTTAG 22853

Drosophila ------------------------------------------------------------

Canis ATG----TATATGTATATGTACACACACACACCACATCTTCTTTATCTGTTTG---TTAA 14339

Bos ATG----TGTGCGTTTGTGCGTATAC---------------------------------- 1050

Rattus TGAGATATA----------AGCTTGGGA-------ACAATCTTGGGTAGTTTCTTAAGGC 18169

Danio ------------------------------------------------------------

Mus TGAGATATA----------AGTTTGGAA-------ACAATCTTGG-TAGTTTCTTAAGGC 16412

Gallus TGAGGCTTA----------TGTTTGGAA-------ATATTTT------ATCACTTAACTA 14754

Anopheles ------------------------------------------------------------

Homo ATAACCCTGTGAGATACAGTGTTTAGAATGAGGCCAGTTTTTAACATGGCATGATAGGTG 23481

Pan ATAACCCTGTGAGATACAGTGTTTAGAATGAGGCCAGTTTTTAACATGGCATGATAGGTG 22913

Drosophila ------------------------------------------------------------

Canis TGGACACTGGGAT------TGCTT---------CCATATCTT----CGCTATTATAAATA 14380

Bos -------------------TGCTT---------C----------------------AGTT 1060

Rattus TGGTGGAGACCATTATTTCTGAGATATTTG----TTCCCTGGGGGGAAG----------- 18214

Danio ------------------------------------------------------------

Mus TG-TAGAGATCATTATTTCTGAGATATTTGCTTGTTTTCTGGGGGAAGA----------- 16460

Gallus TAGAGTAGATAATAGGTAAGAGACTAATTGGTTCCTTTTC-------------------- 14794

Anopheles ------------------------------------------------------------

Homo GGTGGGGGATAGAGGTTAGTAATGGATAGAGGACCATTTCCGAGTGAAGTCTCCTCAGAA 23541

Pan GGTGGGGGATAGAGGTTAGTAATGGATAGAGGACCATTTCCGAGTGAAGTCTCCTCAGAA 22973

Drosophila ------------------------------------------------------------

Canis GTGCTGCAGTAAACATAA--AATG---AGAATATCTTTTTGAATTAATGTTTTC------ 14429

Bos GTG-------------------------------------------------TC------ 1065

Rattus -----------------AGGGTGGGAATTTTGCATTTGTTATTACTGCCAATCCACAATT 18257

Danio ------------------------------------------------------------

Mus -----------------GGGTGGAGAATTTTTTATTTGATATCACTCCTAATCTACATTT 16503

Gallus -----------------AGCCATGGAAGTAATCAGCTGGGGTGGTCCCAGAGC----GCT 14833

Anopheles ------------------------------------------------------------

Homo GCAAAAGCATTGAAGTCAGAAACACAAATATCCAGTACATTATAGCCAATAGTCAAATGA 23601

Pan GCAAAAGTATTGAAGTCAGAAACACAAATATCCAGTACATTATAGCCAATAGTCAAATGA 23033

Drosophila ------------------------------------------------------------

Canis ---------------------------ATATTCTTTGGTAAATACCCAGTAGTGGAATTA 14462

Bos ---------------------------CCATTCTGTG----------------------- 1075

Rattus T-CAGTTCTTAT---------GTAAATGTGTAATAAAC---------------AGAAAA- 18291

Danio ------------------------------------------------------------

Mus TTCAATTCTTAT---------GTAATTTTGTGATAAAC---------------AGAAAAA 16539

Gallus CTGGGCCCGAGT---------TTTGCTGAGTGATCATT---------------GGCTGCC 14869

Anopheles ------------------------------------------------------------

Homo TGGGACTAGATCTGGTAACTGGTGATGATGTCATATAGTGGGCAGTAGTGCTGGGATGGC 23661

Pan TGGGACTAGATCTGGTAACTGGTGATGATGTCATATAGTGGGCAGTAGTGCTGGGATGGC 23093

Drosophila ------------------------------------------------------------

Canis TGGGATCATAG---------GGTAATTCTATTTTAAATT---------TTTTGAGGAACC 14504

Bos ----------------------TGACCCTAT-----------------------GG---- 1086

Rattus T--------------------------ATAAATAAACCACTAAGAAAATCTAAACT---- 18321

Danio ------------------------------------------------------------

Mus T--------------------------ATAAATAAACTACTAAGAAAATCTAAACT---- 16569

Gallus A--------------------------CCTGAGTGACAAAGTAAAGGACCAAGCCTTCA- 14902

Anopheles ------------------------------------------------------------

Homo TGGGGTCAGGGCCACATGGCAGGGGCCTCAAATAAAATGTGAAGGAGTTAGAAATTTATT 23721

Pan TGGGGTCAGGGCCACATGGCAAGGGCCTCAAATAAAATGTGAAGGAGTTAGAAATTTATT 23153

Drosophila ------------------------------------------------------------

Canis T----------CCATACTGTA------TTCTATAAGTGGTTGCACAGTTTGCATTTCAAC 14548

Bos ---------------ACTGTA------GCCCGCCAG------------------------ 1101

Rattus -------------------ATCTGAGCTGTTGAGGTCCAAT------------------- 18343

Danio ------------------------------------------------------------

Mus -------------------GTCTGAGCTTTTGGGGTCTGTT------------------- 16591

Gallus -------------------ATTTAAACCAGTGGAGCCAGAT------------------- 14924

Anopheles ------------------------------------------------------------

Homo CTGTTG-GCATGAGAAAGTGTTAAAGCTTTTGAATATAGAATGATATGTGTAACTTTGAG 23780

Pan CTGTTG-GCATGAGAAGGTGTTAAGGCTTTTGAATATAGAATGATATGTGTAACTTTGAG 23212

Drosophila ------------------------------------------------------------

Canis CTACAGTGCGTGATGAGA-ATTCCTTTTTCTGAAACTGGGA-----------------AG 14590

Bos -------------------GCTCCTCTGTCCA-----GGGC-----------------AT 1120

Rattus --TTTAATCGTACCCTTTTTCCTTTCTTTCTATGTGTGTGCGTTACTGACTTGGAACCTA 18401

Danio ------------------------------------------------------------

Mus --TTTAATCGTATCTTTTTTCCTTT--TTCTTTGTGTGTGTGTTACTGACTTGGAATCTA 16647

Gallus --CACAGG------------------------------------AAAGAATTGACAGGTA 14946

Anopheles ------------------------------------------------------------

Homo TTTTTAGGAAGATAATTCTAGTGGCAAAGTTGAGGATAAAGGCAAAAGGGAAACCAGATG 23840

Pan TTTTTAGGAAGATAATTCTAGTGGCAAAGTTGAGGATAAAGGCAAAAGGGAAACCAGATG 23272

Drosophila ------------------------------------------------------------

Canis TGTTCTGACAGTTATTTCCCTT--------TATGGTTAAATACTGGAAAAAGGTAGGATT 14642

Bos TCTCTAGGCAG--------------------------GAGTACTGGAA------------ 1142

Rattus AATGAATTGCAGTGAGTGTTAA-------TTTAAAAGTATAGCAAAGAAGTGAAATTTCT 18454

Danio ------------------------------------------------------------

Mus AATGAATTACAATGAGTATTAT-------TTTGAAAGTCAAGCAAAGAAGTGAAATTTCT 16700

Gallus AA-------------ATACGCT-------TTCGAAAACGTAGAGGAGAGAGGAGAGTCC- 14985

Anopheles ------------------------------------------------------------

Homo AAATAATGGGGCACTGTAGTAGGACAGTGTTGGTAAGTTTGAGGAAAAAAGGAGTAAGAG 23900

Pan AAATAATGGGGCACTGTAGTAGGACAGTGTTGGTAAGTTTGAGGAAAAAAGGAGTAAGAG 23332

Drosophila ------------------------------------------------------------

Canis AATTGAC-----ACTGTTATA---------TAGTTACTATCAGAAATTGAAGGATCTTTA 14688

Bos ---TGA--------------------------GTTGCCAT-------------ACCCTCC 1160

Rattus TTGACACTAAAGAAAC-------------GAATTCAGTAACTTTTAAG-----------A 18490

Danio ------------------------------------------------------------

Mus TTGACACTAAAGAAGT-------------GAATACATTAATTTTTAAG-----------A 16736

Gallus ---ATGCAGTGTAAAT-------------GAAGCAAATAACATAAAAG-----------A 15018

Anopheles ------------------------------------------------------------

Homo ATATTTTTAAGGAAATTCATAGGGTTTGAGTATAAATTAGAAGGCAAGTACAAGGGAATA 23960

Pan ATATTTTTAAGGAAATTCATAGGGTTTGAGTATAAATTAGAAGGCAAGTACAAGGGAATA 23392

Drosophila ------------------------------------------------------------

Canis TTAACATTTCATAATTTGCTAGGTTCTGAGAACATAATTGTAAGGAAGCT-----ATTTA 14743

Bos T-----------------CCAGG----GAAAGCACA--------------------TATG 1179

Rattus TTCTTTTTTGTT------------------------------------------------ 18502

Danio ------------------------------------------------------------

Mus TTTTTTGTTGTTGTTTTTTGTTTTTTTAAGACAGGGATTTCTCTCTGTGTAGTCCTGGAA 16796

Gallus TGGACCGCCAGTG----------------------------------------------- 15031

Anopheles ------------------------------------------------------------

Homo AGCGTGGTCTTTAGAATCAGACAAATTAGGGTTTGAATCTTAACCTTGC----------- 24009

Pan AGCATGGTCTTTAGAATCAGACAAATTAGGGTTTGAATCTTAACCTTGC----------- 23441

Drosophila ------------------------------------------------------------

Canis GTCATGTCTCTTAGGG------AGCTTACCATTTAAATAATAGTTATAAG---------- 14787

Bos CTTGTGGTTTTTAAAG------AAGTTTCTA----------------------------- 1204

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus CTCACTCTGTAGACCAGACTGGCTTCAAACTCAGAAATCCAATGCCTCTGCCCTCCAACT 16856

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------TTAAAATTTTATGTGTAA 18520

Danio ------------------------------------------------------------

Mus TCTAGGATTAAAGGCGTGCGCCACCATTGCCTGGCTAAGATTTTTAAATTTTCTGTGTGT 16916

Gallus ------------------------------------------GCAAAACTTGATCCTTTA 15049

Anopheles ------------------------------------------------------------

Homo -------ATTTACTAAAGGACTGAAAGCTAGTTCCCTAAGAGAAAAATTTTCTCTTTTGT 24062

Pan -------ATTTACTAAAGGACTGAAAACAAGTTCCCTAAGGGAAAAATTTTCTCTTTTGT 23494

Drosophila ------------------------------------------------------------

Canis -------ATGTACTGAGAG--TAGGTACACGTTG-CTGTGGGAGCAA------------- 14824

Bos -------ATGCAT----------------------CTGTA----CAA------------- 1218

Rattus GAGCTTTTGCTTGCAGGTATGTACGTGTGTACTAGATACAAATGTGTACCTGATTTTCAT 18580

Danio ------------------------------------------------------------

Mus GAG-TTTTACTTGCAGGTATGTATGTGTGTACCAGATGCACATGTGCACCTGATACTCAC 16975

Gallus AAATTTAGCTTTAGCCAGCTTCGTTTTGGGGAAAGACATACAGCAGAGCGTAAGTCACTT 15109

Anopheles ------------------------------------------------------------

Homo AAGATGCTTATTCTATAAACATTTGCAAGCACTGGAAGTATAAAAGCAAATGATACACAT 24122

Pan AAGATGCTTATTCTATAAACATTTGCAAGCACTGGAAGTATAAAAGCAAATGATACACAT 23554

Drosophila ------------------------------------------------------------

Canis -AGATGG--AATATGAAATCATCTTGGAA-----ATGGTATGTAAGCTGAG--------- 14867

Bos -AGA------------AATCA---------------AGTA-----ACTAAG--------- 1236

Rattus AGAGGCCAGAAGAGGGCATCAGACCTGGAACTGGAGTT--------------TCTGATGG 18626

Danio ------------------------------------------------------------

Mus ATAGGCCAGAAGAGGGCATCAGTGCTGGAACTGGAGTT--------------TGTGATGG 17021

Gallus GTTCTTCCCTTTCAAACACAGAGCCTCCATAAAGAGCT--------------AGTACTAA 15155

Anopheles ------------------------------------------------------------

Homo GTTCTCTTGAAGTCTGGTCTAGTCTGTAAGAAGAGGCTGCACTGGCAGGTTTTGACCAAA 24182

Pan GTTCTCTTGAAGTCTGGTCTAGTCTGTAAGAAGAGGCTGCACTGGCAGGTTTTGACCAAA 23614

Drosophila ------------------------------------------------------------

Canis ----TCTTTGAGGATGACTCAGT--ATAAAAAGGGATC---------------------A 14900

Bos ----TTCTTATAAATGA------------------------------------------- 1249

Rattus TTGTGAGCAA-----TGGGTGCTGAGAGGCAAACCTCAATTTCT-CTGGGAAC------- 18673

Danio ------------------------------------------------------------

Mus TTGTGAGCAGCTGTGTGGGTGCTAAGAGGCAAACCTTGATTTCT-CTGGGAGC------- 17073

Gallus TTG--------------AGTTGTAGAAGGGAAAC---AATTTAT-CAAATGTT------- 15190

Anopheles ------------------------------------------------------------

Homo TTGTGTAGAATCTCATCTGACGTGATTGGGAGCTTTGGCTTTATTCTGGAAGCAACTAAA 24242

Pan TTGTGTAGAATCTCATCTGACATGATTGGGAGCTTTGGCTTTATTCTGGAAGCAACTAAA 23674

Drosophila ------------------------------------------------------------

Canis TTGTAT---------TCTAGCCTAGAAGAAAACTTTT-CTATAGACTTGGAGC------- 14943

Bos ------------------------------AAC-----------------AGC------- 1255

Rattus -------AGCAAGTGCTCTTAACCAGTGAGCCACTTTTCCATCCCCT--AACTTAAGGAT 18724

Danio ------------------------------------------------------------

Mus -------AGTAAGTGCTCTTAACTAGTGAGCCTCTTCTTTATCCCCT--AACTTAAGAAT 17124

Gallus -------ATT--GTAGTTAGAACCTATGATTCATGTTTATATACACC--AGATATTTAAA 15239

Anopheles ------------------------------------------------------------

Homo AGCAATCAAAAAAGACTGGGGAATAATGTGAGAATGTAGAAATGTAGGGGAATTTCTAAG 24302

Pan AGCAATCAAAAAAGACTGGGGAATAGTGTGGGAATGTAGAAATGTAGGGGAATTTCTAAG 23734

Drosophila ------------------------------------------------------------

Canis ------CAAAGAAGAGAGCAAAACAA------ATTCTTTGAACTCTAGGAAGTTC---AA 14988

Bos ------CACAG----------------------TTGTTTAAACT---------------- 1271

Rattus CATTGTTTAAAAAAAAAATTAAAAAAACTTTTATAACCATGAGCCAAAATAAGACCTTTA 18784

Danio ------------------------------------------------------------

Mus CATTGCTT-----------TAAAAAATCTTCCATAACCATAAGCCACAACCAGCCTTTTA 17173

Gallus TGCTTTTT------------GTCTTGACATCAGGTGCTTTCCGCTGGTTCAAGAGATGTG 15287

Anopheles ------------------------------------------------------------

Homo GATGAATTGGTAGCAATTGGTAAACAATTTGATATACTGGGAAAGAGAGAGACTCTTT-A 24361

Pan GATGAATTGGTAGCAATTGGTAAACAATTTGATATACTGGGAAAGAGAGAGACTCTTT-A 23793

Drosophila ------------------------------------------------------------

Canis TATTGATTGAATGTAG----------ATTTGG----GTGGTAGGAGGAAATGTGCTTAAA 15034

Bos --TTGACTAAA-------------------GG----CTGGTATGAG-------------A 1293

Rattus TAAATTTTTTGTCT---------------------------------------------- 18798

Danio ------------------------------------------------------------

Mus TAAACTTTTTGTTTAAGTTGAATATCTGAAGTCAGTGATAAATTTACAAATCAAGTCTTT 17233

Gallus GGGTGTTTTTGTT----------------------------------------------- 15300

Anopheles ------------------------------------------------------------

Homo GAATATGACTGAGAATCTTCCAATTTGAGCAGCTGGACTGATAGTGCTACCATCATTACC 24421

Pan GAATATGACTGAGAATCTTCCAATTTGAGCAGCTGGACTGATAGTGCTACCATCATTACC 23853

Drosophila ------------------------------------------------------------

Canis AAATGTGGCTGGAAGTA---------GGAAGCCTTGATAGGTAGTGAAAG-GCCATGACA 15084

Bos GCATGTGGTTGGG----------------------------------------------- 1306

Rattus --TTTGAAAGTCT---AAAGTCAGTGATAAGTTCAC------------------AGATCA 18835

Danio ------------------------------------------------------------

Mus AACTTGAAAGACT---AAAGTCAGTAGTAAATTCAC------------------AGATTG 17272

Gallus ------------------------------GTTCTT------------------TTTTCT 15312

Anopheles ------------------------------------------------------------

Homo TCACAGGGTTTTTCTTAGTGTGTCTTGTAAATCTTGCTTGTCCCTCATAAAGAATGGTTT 24481

Pan TCACAGGGTTTTTCTTAGTGTGTCTTGTAAATCTTGCTTGTCCCTCATAAAGAATGGTTT 23913

Drosophila ------------------------------------------------------------

Canis CTACTGAA--------------------AAGTCCTG-------------------GGTTT 15105

Bos -CACTGAA---------------------------------------------------- 1313

Rattus TCTTTGTATACAATTTTGAAA--------------ATTTAAATTA-----------ATCT 18870

Danio ------------------------------------------------------------

Mus TCTTTGTATACAAATTTGAAA--------------ATTTAAATTA-----------TTCT 17307

Gallus TTTATTTTTAGAGAGATGAAA--------------ATTCATCAGC-----------TTAT 15347

Anopheles ------------------------------------------------------------

Homo TCCTTTTCTTCAGACTAAGGACTTTTTATTACAGTACACAACTTAACACCCCCTGTATCT 24541

Pan TCCTTTTCTTCAGACTAAGGACTTTTTATTACAGTACACAACTTAACACCCCCTGTATCT 23973

Drosophila ------------------------------------------------------------

Canis TCTCCTGAT--AGACATAGGA-----------AGTAATGAAG------------GTAGGT 15140

Bos -CCCCTCCT--AGAGAAAGA---------------------------------------- 1330

Rattus TT-----CTGAACCTATTTTGGGAATT----TGAAGCATTTAAA---GATATTGAATTCA 18918

Danio ------------------------------------------------------------

Mus TTTCTTTCTTAACCTATTTTGGGAATT----TAAAGCATTAGAAATAGGTATTAAAATAA 17363

Gallus TTTTAAGTTTTGCCAGTTGTGAGTACTGTAGTGAAGTATTCA-----GGCAGTCACATAA 15402

Anopheles ------------------------------------------------------------

Homo CTCCATCACAACACTTAACTGTGCATTGTTATTGCATAATTAATTGTGGTTTTTATTTGT 24601

Pan CTCCATCACAACACTTAACTGTGCATTGTTATTGCATAATTAATTGTGGTTTTTATTTGT 24033

Drosophila ------------------------------------------------------------

Canis GTTAGGCATAGAACTGGCCTGAGT----------CATAGTCCACCTTTTTTTTTTTT--- 15187

Bos --------------TGCCCCGAGT------------------------------------ 1340

Rattus G----TTCATCTTAGAACATTGA----CTCACAGTAAAGATATATAGGGTAATAGATGTT 18970

Danio ------------------------------------------------------------

Mus A----TTTACCTTAGAACATTGATTGTCTCACAGTAAAGATATGTAGGGTAACAGAT--- 17416

Gallus C----GCTACCTAAAAGATTTAA----------ACAAGATTTTATGAAGC---------- 15438

Anopheles ------------------------------------------------------------

Homo GCCCATTTCCTTCACCACATGAGGGC-------AAGAAATTATGTCTAGTTTTTCTACCT 24654

Pan GCCCATTTCCTTTACCACATGAGGAC-------AAGAAATTATGTCTAGTTTTTCTACCT 24086

Drosophila ------------------------------------------------------------

Canis -----TTTTTTAAACCAAATGAA-------------ACATCATATAAACTT-------CT 15222

Bos ------------------------------------------------------------

Rattus TTTCTTTTTCTTTTTTTGAGTCAG-----------------------------TGTCTCA 19001

Danio ------------------------------------------------------------

Mus ---TTTTTTCTTTTTGGGAGGCAG-----------------------------TGTCTCA 17444

Gallus -------------------------------------------------------CTTTA 15443

Anopheles ------------------------------------------------------------

Homo CTGCATCTTCATCCACCTAGTAGGCACTCAAAATCTAGTAGACAGTTTTTGAATTAATGA 24714

Pan CTGCATCTTCATCCACCTAGTAGGCACTCAAAATCTAGTAGACAGTTTTTGAATTAATGA 24146

Drosophila ------------------------------------------------------------

Canis ATAAATTCTCTTCTATCTTTTT-----------------------TTTTTTTTTTTTTTT 15259

Bos ------------------------------------------------------------

Rattus CTGTGTAGAT-----------------------------------------TAGGCTGTC 19020

Danio ------------------------------------------------------------

Mus CTATGTAGAA-----------------------------------------CAGCCTGTC 17463

Gallus TTTTGCAGAC-----------------------------------------AAACTAAT- 15461

Anopheles ------------------------------------------------------------

Homo TTATGAAGAATTTGAAGGCTGAACAAGTATCAACCTACACAGTGGTTAGGGCAAATAAAA 24774

Pan TTATGAAGAATTTGAAGGCTGAACAAGTATCAACCTACACAGTGGTTAGGGCAAATAAAA 24206

Drosophila ------------------------------------------------------------

Canis TTTTGGAGAG--------------------------------------GGGCAAGTGGCA 15281

Bos ------------------------------------------------GGGCGA------ 1346

Rattus CCCATAGCAAG-------TAGATCCTGGTTTAGCGTTCTGCTGACAGGAATTATAGGAAA 19073

Danio ------------------------------------------------------------

Mus CTCATGCTAA-----------ATCCTGGTTTAGCATTCTGATGACAGGAAGTATAGCAAA 17512

Gallus -TCGTAGCATC-------TGTGTTTTTGTTCAGTGGGCTGGCTGAAAATAGTTTGTAAGG 15513

Anopheles ------------------------------------------------------------

Homo ATGAGGGGGAGAAAGTAATGAATGGCACCAATTTTTTTAGTCCTTAACCAGGACAGTGAG 24834

Pan ATGAGGGGGAGAAAGTAATGAATGGCACCAATTTTTTTAGTTCTTAACCAGGACAGTGAG 24266

Drosophila ------------------------------------------------------------

Canis G-GAGGGAGAGGGAGAATCTTAAGCAGGCTCTGTGCCCAGTACAGAGCCTGCA-GGCTGG 15339

Bos -------------------------------------CAGTGCACGGCTTG--------- 1360

Rattus GTATTGCTGTGCTCAGCTCTGGAATTTATTCTTTAACCAGATGCTCAGAATAGGGTAAAT 19133

Danio ------------------------------------------------------------

Mus GTATTGCTGTGTGCATCACTGGAATTTGTTCTTTAACCAGATGTTCAGAATAGGGAAATT 17572

Gallus ACTTTTAACT------------AAATTATTTTT-----ACTTATTTAGAGTTGTTAAGCT 15556

Anopheles ------------------------------------------------------------

Homo ATTAGGCAGAGTGAGTTCTTTGGGAAAATAATTGAGTTTGATATTAGATACGTTGAATGT 24894

Pan ATTAGGCAGAGTGAGTTCTTTGGGAAAATAATTGAGTTTGATATTAGATACGTTGAATGT 24326

Drosophila ------------------------------------------------------------

Canis ATCTCACAA--------CCCTGAGATCATGACCTGAGCTGAGATCCAG------------ 15379

Bos ------------------------------------------------------------

Rattus -----TATATTCTACCTAATACAAATGGGATGGTCTTTAGTGTTTTAGAGGTATATATTT 19188

Danio ------------------------------------------------------------

Mus GGCT-TATGTTCCACCCAATAAAAATGGGATACTCTTTGGTGCTTTATATGTAT-----T 17626

Gallus -----CATGCTTAGCCCAACGTGACACAGGACTGGTGTGACAACTGTTTTTAATCAGTGA 15611

Anopheles ------------------------------------------------------------

Homo AGATGTTAATGAGACATCCAAATGGATGTGT-ACCGTTGGTAATATGTAGTTGCAGGCAT 24953

Pan AGATGTTAATGAGACATCCAAATGGATGTGT-ACCGTTGGTAATATGTAGTTGCAGGCAT 24385

Drosophila ------------------------------------------------------------

Canis -------AGTCAGACACTTAACCGACTGAGCCACCATT--TAATA---AGCCCTATACAT 15427

Bos ------------------------------------------------------------

Rattus TCTATATTAGCTA-----------ATACACTAAAAT------------------------ 19213

Danio ------------------------------------------------------------

Mus TCTATATTAGCTA-----------ATATATTAAAAAA----------------------- 17652

Gallus CTCAAAATTGTGA-----------TCACCCTGATGT------------------------ 15636

Anopheles ------------------------------------------------------------

Homo ACCATGCCAGACATAAGGACTTAAAGATACAGAGTTAGGGGTTTGTAAGCATAGAGGTGC 25013

Pan ACCATGCCAGACATAAGGACTTAAAGATACAGAGTTAGGGGTTCGTAAGCATAGAGGTGC 24445

Drosophila ------------------------------------------------------------

Canis TCTATTTTAAATA---------GAAAGTATCACTCTTCTTGTTTATG------------- 15465

Bos --------------------------GTGTGGCTCT------------------------ 1370

Rattus TAAAGAAAATGAACAGCAGCTATAAAAACTAAAACTAGCTTATAATTTTCGGGCAAATAT 19273

Danio ------------------------------------------------------------

Mus TAAAGAAAATAACCAGCAGATATTAAAACTAAAACTAGCCTACAATTATCTAGCAAACAT 17712

Gallus --CACCGAATGGCCACAGCTTGTAAAAGGTAAGATCAAAACGTATT------------GT 15682

Anopheles ------------------------------------------------------------

Homo TATGGGAATGGATGACATTGCGCAGAAAATTGGTTTAGGTTAAGAAAAGTGGCTATTGAC 25073

Pan TGTGGGAATGGATGACATTGCGCAGAAAATTGGTTTAGGTTAAGAAAAGTGGCTATTGAC 24505

Drosophila ------------------------------------------------------------

Canis -GTGGAGATGGA---------GGAGAAGATGAGCT----------------GCCTCTGGT 15499

Bos ----GGGGTGAA---------GCAGGAAGAAGGCT----------------GT------- 1394

Rattus AATACTCC------------------------GTATACATGCTGCTGACAGTGTTTTTTT 19309

Danio ------------------------------------------------------------

Mus AATGCTCC------------------------ATATACACGGTGACGGCAGA-----TAG 17743

Gallus GGTGTTTC------------------------TCAAGGTAATTGTTAAAA-------TAA 15711

Anopheles ------------------------------------------------------------

Homo AGAAACTTGGAGAGAGGCCATGTATGAGGTAGGAAGATGAACTAGCAGAAGACCTTATTG 25133

Pan AGAAACTTGGAGAGAGGCCATGTATGAGGTAGGAAGATGAACTAGCAGAAGACCTTATTG 24565

Drosophila ------------------------------------------------------------

Canis TGAGTCTT---------------------CTCAGAGAAGAATGAGCAGAA--TCTGGCTA 15536

Bos --------------------------------AGAGGGTAGGAAACA------------- 1409

Rattus TTTTTTTTAGAGAAGTCTAATTTCCTTATTGAACCACAGGAATTATGATTAGAAT----- 19364

Danio ------------------------------------------------------------

Mus TGCTTTTTAGGGAAATCTAATTTCCTTATAGAACCACAGGAATTATGATTAGAAT----- 17798

Gallus TATTTATTTTAAGACTCTAATTT------------GTATGACTTGAAGTTAATTC----- 15754

Anopheles ------------------------------------------------------------

Homo CCTTTAGAGAGATGGAAGAAA-----------ATGAGTGGATACAACATTAGGGAAGCCA 25182

Pan CCTTTAGAGAGATGGAAGAAA-----------ATGAGTGGATACAACATTAGGGAAGCCA 24614

Drosophila ------------------------------------------------------------

Canis TTTTTGTTGAGGTACTCTAAT-----------AAGAGGGTTTTTAGAATC---------- 15575

Bos --------------------------------AGGGAGATCCTTATAACCG--------- 1428

Rattus -----GATGCATAGCATTTAAATATCTTAAAGATTTATGAACACTATTATATTTGAGTTT 19419

Danio ------------------------------------------------------------

Mus -----GGTGCATAGCATTTAAATATCTTAAAGATCTATGAACACTGTTATATTTGAGTTT 17853

Gallus -----TATAAACAGTGCTAAGGTATATTGTTTATTTAAGA---------TAAGTCAGGCG 15800

Anopheles ------------------------------------------------------------

Homo GAGGAGGTGAGGAGTCATTAGCAGTCTTAAAAGCTACAAAAATTAAGTAGGATTAAGGGG 25242

Pan GAGGAGGTGAGGAGTCATTAGCAGTCTTAAAAGCTACAAAAATTAAGTAGGATTAAGGGG 24674

Drosophila ------------------------------------------------------------

Canis -----AATGTCAATTAATTACACGTTTCATTCATTATATC--TTATGTGTCCCTAAA--- 15625

Bos -----AATGGCCAATAATTGC--------------------------------------- 1444

Rattus AAATTCTCTGTTGCAG-----AAAGAGGGAGACATTTT-CAAGAAATGCCTT-------- 19465

Danio ------------------------------------------------------------

Mus AAATTGTCTACTGCAG-----AAATTGGCAGACATTTTTCAAGGGATTTTTT-------- 17900

Gallus AAATTGACTTACACTT-----TTACTTAGAGTGATTTC----AAAGCTCACT-------- 15843

Anopheles ------------------------------------------------------------

Homo CCAAAGCACTGGGAATATACAGAAATGATGGAAACTTTACAAGAAAAATTTCAGTAGATA 25302

Pan CCAAAGCACTGGGAATATACAGAAATGATGGAAACTTTACAAGAAAAATTTCAGTAGATA 24734

Drosophila ------------------------------------------------------------

Canis --AAGGTTTTAAGAA------ATATTAATGGAAATGGTGTA-------CTTTATTAGATA 15670

Bos ------TTCTAA-------------------------TGCA-------C------ACACA 1460

Rattus ----------------------------------T-----GTAATGTTTTAGGTTTTAAG 19486

Danio ------------------------------------------------------------

Mus ----------------------------------TTTTTTATAATGTTTTAGGTTTTGAA 17926

Gallus ----------------------------------GATCTTGTCCCTGCCTGCTTTTTAAA 15869

Anopheles ------------------------------------------------------------

Homo GAAAAATAGCAGCTGAGCTAGTGGTTTTCACGTCTTTTTGGCAGTAAAAGGAAAGAAGAT 25362

Pan GAAAAATAGCAGCTGAGCTAGTGGTTTTCACGTCTTTTTGGCAGTAAAAGGAAAGAAGAT 24794

Drosophila ------------------------------------------------------------

Canis GAA------------------------------TTTGTTAGCTGTAAATGGGATTCAAAG 15700

Bos GA------------------------------------------TACACGTGCCTTAAA- 1477

Rattus GGAAATATGATTTTTCCTGCAAGTATTT--------ATCTTTGCTTTT-CTGAATA---C 19534

Danio ------------------------------------------------------------

Mus GGAAATA--GTTTTTTCTGCAAGTACTT--------ATCCTTGCTTTTTCTGAATA---C 17973

Gallus TCGCAAG-------TGCTGCG-GTGCTC--------CACTGTGCTCCTCTTAAGAG---C 15910

Anopheles ------------------------------------------------------------

Homo AAAGAAATGGTACTCTGAGGAGCTAATGGAGTTGAGGGAATTATGTTGCAAGTATTATTT 25422

Pan AAAGAAATGGTACTCTGAGGAGCTAATGGAGTTGAGGGAATTATGTTGCAAGTATTATTT 24854

Drosophila ------------------------------------------------------------

Canis CTAAAAGAGG---TCAGTGAAAATAAAA------AGGATGCTGTTCTCCCTAAATTATTT 15751

Bos --------------------------------------------------TAAACATCCG 1487

Rattus ATAGACAGTGTTTAAATGAATACAA--CTCTCAGTTC--TCTCACCA------------- 19577

Danio ------------------------------------------------------------

Mus ATAGACAGTGTATAAATGAATACAAATCTCTCAGTATAATATCACT-------------- 18019

Gallus AGAACCATCACTTAAATATCTCTGA---CTTTGCTATGACACTAAAT------------- 15954

Anopheles ------------------------------------------------------------

Homo GAAAGCAGTATTTAAA-ACTTTTTAAGTCTTAACTGCAGAATGGACTGGAATAAGGAGAA 25481

Pan GAAAGCAGTATTTAAA-ACTTTTTAAGTCTTAACTGCAGAATGGACTGGAATGAGGAGAA 24913

Drosophila ------------------------------------------------------------

Canis AAAAGCAGGATTT-------TCTGATTTACTAGGTCCTTTATTGGCT------------- 15791

Bos AAAAG----------------------TACTAA--------------------------- 1498

Rattus ----------------TTAAAATGAAGGTGATTATCCTACAACTTAGTGTGTTTGCTC-- 19619

Danio ------------------------------------------------------------

Mus ----------------TCAAAATAAAGGTGATTATCCTACACCTTAGTGT--TTGCTC-- 18059

Gallus ----------------TCTGCGTAAGTTGTTTAATGTACTTATTTAAGCAATTTGCTC-- 15996

Anopheles ------------------------------------------------------------

Homo ACTAAAGCAGGAGGACTTAGGAAAATTGTTGTAGTAGTCCTTTAATTGTGAAATGTGTAA 25541

Pan ACTAAAGCAGGAGGACTTAGGAAAATTGTTGGAGTAGTCCTTTAATTGTGAAATGTGTAA 24973

Drosophila ------------------------------------------------------------

Canis ----------------------------TCTCCATTCTCCTTTCTAGAATAATTGTATTA 15823

Bos ---------------------------------------------AGAATAAATATTTTA 1513

Rattus -AGGTTACAGTTTGCGGACACTT---------TCAAGACTATGAATACCATTTTGT---- 19665

Danio ------------------------------------------------------------

Mus -AGGTTACAGTTTGCAAACACTTCATTTAATTTCAAGACTATGAATACCACA-------- 18110

Gallus -AGTTAA----TTTTAAGTATTTG-------TCCAGGATGATTGATGATAAA-------- 16036

Anopheles ------------------------------------------------------------

Homo ACGGACAAAACTTAGACAGTTTTAATAAGTAGCATTATCCATAAATATAAGACACCATAA 25601

Pan ACGGACAAAACTTAGACAGTTTTAATAAGTAGCATTATCCATAAATATAAGACACCATAA 25033

Drosophila ------------------------------------------------------------

Canis GAGGACACAA--TAAACTGTGTTTGTT-----CACTGTAGGTTAATG------------- 15863

Bos AAGAAATCAG--T--------TTTGT--------------GTT----------------- 1532

Rattus ------------------TAATGCTGGCAACCAACTTAATGGAAAGTA------------ 19695

Danio ------------------------------------------------------------

Mus ----------------------------ACCCAACTTAATAGAAAGTA------------ 18130

Gallus --------------------------------AATTTGTAGACTTGCA------------ 16052

Anopheles ------------------------------------------------------------

Homo ACATGATGCAAAGGAGAACAGAAGTGTTGGGTGTTATAATAAAAAGTGATAGAAAAAAAC 25661

Pan ACATGATGCAAAGGAGAACAGAAGTGTTGGGTGTTATAATAAAAAGTGATAGAAAAAAAC 25093

Drosophila ------------------------------------------------------------

Canis ----------------------AATGCTCATTGTTTTTGTTATCATTT-----------C 15890

Bos ----------------------------------TTCTGTTG------------------ 1540

Rattus -------ACAGTTTTGTTTTTTTTAATACATGTTTGGCTTTGTAAATAATTATGGCTTAT 19748

Danio ------------------------------------------------------------

Mus -------ACAGTCTTGTTTTTT--AATATGTGTTTGACATTGTAAATAATTATGGCTTAT 18181

Gallus -------TACGCTTACTTTTCTCTCCTAGGGAGTTAGAGTGGAGGTAAAAGGAGGGGCTT 16105

Anopheles ------------------------------------------------------------

Homo AGTTTGTGAAATTAAGTTTTGAAACAGCTTTAGAAGGAGGTGAAGGAAAAATAGAAATGA 25721

Pan AGTTTGTGAAATTAAGTTTTGAAACAGCTTTAGAAGGAGGTGAAGGAAAAATAGAAATGA 25153

Drosophila ------------------------------------------------------------

Canis ACTTTGTAGCACTACCTTCTA-------CCCAGTTACCCATGACAGAAACTTAGGCACCT 15943

Bos ----------ACTA-------------------------------GAAAAGTATGCATCT 1559

Rattus ACTAATTCGATGTCT---------AAGTATAAT---------GACTGTAATTTCCTTTTC 19790

Danio ------------------------------------------------------------

Mus ACTAATTTGATATCT---------AAATATAAA---------GATTTTAATTTTCTTTTT 18223

Gallus GCAGAATGGA--------------GAAGTTGCT---------CCCTGTGTTGTTGGAAGC 16142

Anopheles ------------------------------------------------------------

Homo ATAAAATGAAAATTTTAGGGAGGTAGATATAGATCAACATAGGCATTTATTATTAGACTA 25781

Pan ATAAAATGAAAATTTTAGGGAGGTAGATATAGATCAACATAGGCATTTATTATTAGACTG 25213

Drosophila ------------------------------------------------------------

Canis ACAAACTACATCTTTT--------AAATATTTCTT-------GCATTAGTTTCC---TTT 15985

Bos GGAAACGG----------------GAATA------------------------------- 1572

Rattus AAACAAACATTGAGGTTTCTAAAGTTG-------GTT----------------------- 19820

Danio ------------------------------------------------------------

Mus AAAC----ATTGAGGTTTCTAAAATTT-------GTT----------------------- 18249

Gallus GAGCCACCATCTGAATTTGCTAGCTCATACTGCAGTA----------------------- 16179

Anopheles ------------------------------------------------------------

Homo TACTTATTTATAAGATTATTAGACTGAGCCCTCTGTTGAAGAGATAAAGTAAGAGAACTA 25841

Pan TACTTATTCATAAGATTATTAGACTGAGCCCTCTGTTGAAGAGAGAAAGTAAGAGAACTA 25273

Drosophila ------------------------------------------------------------

Canis TATTCATTCCTGCTATTATTACTTTCTTTCCCTGGTC----------------------- 16022

Bos ------------------------------------------------------------

Rattus --------GTTAACTGTGTTACGAC--------------AATCTGTTTT----------- 19847

Danio ------------------------------------------------------------

Mus --------CTTAAATGTGTTGTGAT--------------AATCTGATCT----------- 18276

Gallus --------TTCAGATTAGTT--GGT--------------GTCTTGATCA----------- 16204

Anopheles ------------------------------------------------------------

Homo TGTCTGGTATTAGGATTCTTATGGTTAAATTGGCAAGTGAGTGTGCCTAATATTTGTAGT 25901

Pan TGTCTGGTATTAGGATTCTTATGGTTAAATTGGCAAGTGAGTGTGCCTAATATTTGTAGT 25333

Drosophila ------------------------------------------------------------

Canis -------TTTTACAATACTCATTACCTA----------GATTATGCCTA----------- 16054

Bos -----------------------ACCCA----------GAATATA--------------- 1584

Rattus -------GCTTACTTTTTTTC--------------------------------------- 19861

Danio ------------------------------------------------------------

Mus -------TTCTACTTTTTTTT--------------------------------------- 18290

Gallus -------GTTTCTATGATCTT--------------------------------------- 16218

Anopheles ------------------------------------------------------------

Homo GCTTACAGTTTTTGTTATTCTGTATTTTTATAGATTTGGTATATTTCCTCCATGATTATG 25961

Pan GCTTACAGTTTTTGTTATTCTGTATTTTTATAGATTTGGTATATTTCCTCCATGATTATG 25393

Drosophila ------------------------------------------------------------

Canis --CCTCAACTTTTGCCAGCTT--------------------------------------- 16073

Bos ------------------------------------------------------------

Rattus ---CTTAGTTTTAAATCTTTTAAAACA----CCCTTTTATCAGAATTT---------AAG 19905

Danio ------------------------------------------------------------

Mus --TCTTAGTTTTAAATCTTTTAAAGCA----CCCTTTCATTGGAATTT---------AAG 18335

Gallus --ACTCAGAGCTGGAATTTGTAAGAGC----ATTTGCTCTGAGATTTTTCTTTGAACAGA 16272

Anopheles ------------------------------------------------------------

Homo TGTTCCTAACTCATAATTTGGAAGGCAGGGCTTCTTAAAATGAGATCTGTGTGTCATGTG 26021

Pan TGTTCCTAACTCATAATTTGGAAGGCAGGGCTTCTTAAAATGAGATCTGTGTGTCATGTG 25453

Drosophila ------------------------------------------------------------

Canis TGATCCCAGTTTACAAAATGGAATTAA-----TCATAAAGGGAGATTTG---ACTTAGTC 16125

Bos --ATCC--------------------------------AGGGGAATT------------- 1597

Rattus TCTTG----------------------------TTTTCAAATT------CC------TTA 19925

Danio ------------------------------------------------------------

Mus TCTTG----------------------------TTTTCCAGTTTATCTTCC------TTA 18361

Gallus ACTTG----------------------------TTTTGGATCTGTCATGCTACATAGTTG 16304

Anopheles ------------------------------------------------------------

Homo AAGTATATGTTAAAATGCAAATTCATTTCTGCGTTCTTGGGTTGGTCTGAAAAAAATTAA 26081

Pan AAGTATATGTTAAAATGCAAATTCATTTCTGCGTTCTTGGGTTGGTCTGAAAAAAATTTA 25513

Drosophila ------------------------------------------------------------

Canis ACTTACTTGCTTAAACTC---------------TTTTGTGATTTGTATTACAGATATT-- 16168

Bos ------------------------------------------------------------

Rattus CTTGTATTTTTATA--CCTTTTTTT-GGAATTCGCTAATATTTTTCCTTAATTACATTTT 19982

Danio ------------------------------------------------------------

Mus CTTATATTTCTATA--CCTTTTTTTTGGAAATCACTAATATTTGTCTTTAATTACATTTT 18419

Gallus TTTGCAGTATTATT--GCCTTCCTAGAAGAATAACAAGGTTTCCTGTTTCTAAACAGTT- 16361

Anopheles ------------------------------------------------------------

Homo AAAAAAAATTCATTTACCCCTACTTCATGCACTGAATGAAAATCTTTGCGAGTAGAGCCC 26141

Pan AAAAAAA-TTCATGAACCCCTACTTCATGCACTGAATGAAAATCTTTGCGAGTAGAGCCC 25572

Drosophila ------------------------------------------------------------

Canis --------CTTATG---TCATGGTTTATGAATGGTATATAAATCT--------------- 16202

Bos ------------------------------ATGATATATA----T--------------- 1608

Rattus A---------------------------CAGATCATCAGGAGAATCCCAGTCTGAGGACA 20015

Danio ------------------------------------------------------------

Mus A---------------------------CAGATCACCAGGAGAATCCCAGTCTGAGGACA 18452

Gallus -------------------------------ACTATAAACAGCTTCTCAAC----AAATA 16386

Anopheles ------------------------------------------------------------

Homo AAGTAGTTGCATTTTTAGATTTCCCCAGGTAATTCTATTATAGACTGAAGTTTGAAAGTC 26201

Pan AAGTAGTTGCATTTTTAGATTTCCCCAGGTAATTCTATTATAGACTGAAGTTTGAAAGTC 25632

Drosophila ------------------------------------------------------------

Canis ----------------------------GAAATTTTTTGTAAGATTGGAGTACATGTGCA 16234

Bos ----------------------------AAAACCTTTAAGAAGA---------------A 1625

Rattus TTGAAGCTAGCC---GAATGTAAGTATTACTTGGTTCAGGTTATTCT------------- 20059

Danio ------------------------------------------------------------

Mus TTGAAGCTAGCC---GAATGTAAGTATAACTTCGTTCAGGTTATTTT------------- 18496

Gallus AGTACAATTGCT---GTAAATAAATTGGCCTTTCATATTGTTTTAAT------------- 16430

Anopheles ------------------------------------------------------------

Homo AGTCTCTAAAACCTTAAAAGTTGGTTAATTTTATTTCAAAATGTTTTATATGCAGTGTAT 26261

Pan AGTCTCTAAAACCTTAAAAGTTGGTTAATTTTATTTCAAATTGTTTTATATGCAGTGTAT 25692

Drosophila ------------------------------------------------------------

Canis TTTTTATGGGGA---GAAAATCAGTCACCTTTATT--AGATTACTCC------------T 16277

Bos TGTTTATA----------------------TTAAT--ACA-------------------- 1641

Rattus ------------------------------------GTGTCTTAAG-------------T 20070

Danio ------------------------------------------------------------

Mus ------------------------------------GTGTCTCAAG-------------T 18507

Gallus ------------------------------------GAGTATTGAAAGCTCAT-CATATT 16453

Anopheles ------------------------------------------------------------

Homo TCACTTTCTACCATCAACCTCTAGGACACTGGATAGGTTTCTTAACCTTTGAGATTTGCT 26321

Pan TCACTTTCTACCATCAACCTCTAGGACACTGGATAGGTTTCTTAACCTTTGAGATTTACT 25752

Drosophila ------------------------------------------------------------

Canis CTGCTGACTAAAATCA-------------------GAATTCTTA---------------- 16302

Bos -------------------------------------------A---------------- 1642

Rattus TGTCCTACA------------------------------CTGTTTTATTTGAAAATACC- 20099

Danio ------------------------------------------------------------

Mus TGCCCTACA------------------------------CTATTTTATTTGAAAATACC- 18536

Gallus TGCTGCTTA------------------------------CTTTGTCATCTGAAA---CC- 16479

Anopheles ------------------------------------------------------------

Homo TTCTTTATATGTAATGCAGTACATGAAAGGACTTTATTTTTGTTCCATTGAGGAATGTTC 26381

Pan TTCTTTATATGTAATGCAGTACATGAAAGGACTTTATTTTTGTTCCATTGAGGAATGTTC 25812

Drosophila ------------------------------------------------------------

Canis TTTTTTATA-----------------AAGTCTCATAATCTGGCTCCTTCCTGCCACTTC- 16344

Bos TGTTTGATA-----------------AAAT------------------------------ 1655

Rattus --------------------------------------TTTCAGGATTTAAATAAAAAA- 20120

Danio ------------------------------------------------------------

Mus --------------------------------------TTTCAGGCTTAAAATAAAAAAA 18558

Gallus --------------------------------------TGTTAAAATCCATTTATTGAGT 16501

Anopheles ------------------------------------------------------------

Homo TGATTGTATACAAACAAGTTAAGAATTTACAGTGATAATTTAGGGGCTTGCTTTAAGCTT 26441

Pan TGATTGTATACAAACAAGTTAAGAATTTACAGTGATAATTTAGGGGCTTGCTTTAAGCTT 25872

Drosophila ------------------------------------------------------------

Canis ----------------------------------ATATTTTCGAGTCCTTTTTTAAACTT 16370

Bos ----------------------------------ATATT--------------------- 1660

Rattus GG------TAAAATTGAA---------GAAAAAGAAGGAACAACTTTACACTATATCTAG 20165

Danio ------------------------------------------------------------

Mus GG------TAAAATTGAATTAAAAAAAGAAAAAGAAGGAACAACTTTAAATTGTATCTAG 18612

Gallus GGA----TTAAAATTTCTGCAAGTCACTCTTATGGTAGATCTGCTC-ACGTTACAGCAAA 16556

Anopheles ------------------------------------------------------------

Homo CAGGATTTTTTTTTAAGAGTTAAGTTTTGATATATATTAAGTGGTTGATTTAATAAATTA 26501

Pan CAGGATTTTTTTTTAAGAGTTAAGTTTTGATATATATTAAGTGGTTGATTTAATAAATTA 25932

Drosophila ------------------------------------------------------------

Canis TA------TACTATTGAACTTAAGTTGTCATAAG----ATGTTCTCGGGCTC-----CTG 16415

Bos -----------------AATTAAGTTGGGATACA----GAGT-----------------A 1682

Rattus AGATTG---GAACATATATATTTAT--CCCTTTACCAAAT----ACTTCCAAACCTCTGC 20216

Danio ------------------------------------------------------------

Mus AGATTG---GAACATGTCTACTTATATCTCCTAACCAAAT----ACTTCCAAACCTCTGC 18665

Gallus AGATAATCTGAAGGAATTTGAACCCTTTTCTTGTTGAACT----ACTTACCAAACTTTTT 16612

Anopheles ------------------------------------------------------------

Homo TAATTATCGTCGTATATTGAAGTCCTGTTTTGTGCCAGGTAGGCATTATACTATAACTTT 26561

Pan TAATTATCGTCGTATATTGAAGTCCTGTTTTGTGCCAGGTAGGCATTATACTATAACTTT 25992

Drosophila ------------------------------------------------------------

Canis TGCCTTTACTCACTCATTTCCTTCTTACCTTGTCCTAAGTTG-CCTTTCTTTATATTGCC 16474

Bos TATCTT-------------------------------------CCTTTTTTTAT------ 1699

Rattus AAACCATTAGATGTTT----GTAACTAGATAATTTCATATATGATTCTGATTTCTTAATG 20272

Danio ------------------------------------------------------------

Mus AAAAAATTAGATGTCTAATGGTAAGTAGATAATTACATACATGATTCTGAATTTTCAATG 18725

Gallus AAAACTCAGCTAGTCT----------------------TTTTTCCCCTGAACTTTCCTGG 16650

Anopheles ------------------------------------------------------------

Homo TTAACGCATTTTCTCTGCT-------------ACAATAACCTGACATTGGAGACTCAAGG 26608

Pan TTAACGCGTTTTCTCTGCT-------------ACAATAACCTGACATTGGAGACTCAAGG 26039

Drosophila ------------------------------------------------------------

Canis ATAACTCTGTATTTCC-----------------------TATGATATTAAAATCCTCTGG 16511

Bos ------------------------------------------------------------

Rattus TTT-----------------TT-GTGCCCTTAGCAGTTG--------------------- 20293

Danio ------------------------------------------------------------

Mus TTT-----------------TTTGTGCCCTTGGCAGTTG--------------------- 18747

Gallus AAC-----------------TTTGTCTTCTCATATATTA--------------------- 16672

Anopheles ------------------------------------------------------------

Homo GTCAGAGGGTCGGCCCAAGGCTGCTACTCTAGAAAGTGGTAGATGCCCAGATTTGTACCT 26668

Pan GTCAGAGGGTCGGCCCAAGGCTGCTACTCTAGAAAGTGGTAGATGCCCAGATTTGTACCT 26099

Drosophila ------------------------------------------------------------

Canis CTT-----------TCAAAAC--CTCCTTTAAACAGTAA-----------------GTTT 16541

Bos ---------------------------TTGATACAATA---------------------- 1710

Rattus --------------------------------------------------TGGCTAAATA 20303

Danio ------------------------------------------------------------

Mus --------------------------------------------------TTGATAAATA 18757

Gallus --------------------------------------------------TACATAAACT 16682

Anopheles ------------------------------------------------------------

Homo AACATAGCCGATGCTTAGCATATAGAATTTAATTAAAAACAAAATTGCTATAGGTATTTG 26728

Pan AACATAGCCGATGCTTAGCATATAGAATTTAATTAAAAACAAAATTGCTATAGGTATTTG 26159

Drosophila ------------------------------------------------------------

Canis CAGACAGCC-----------------------------------------CGGGTGCCTC 16560

Bos ------------------------------------------------------------

Rattus GGGAAATTAGAGGAAGATTGAACCATCTTAGTGCCTGCTATTAATTTATAACTCCTGAAA 20363

Danio ------------------------------------------------------------

Mus GGGGAATTAGAGGAAGATTCAAACATCTATGTGCCTGCTATTAATTTATAATTCCTGAAA 18817

Gallus ATAGGGGTAGGAAAAGACATTGGATATACTGATAGAGTTGTTTACTTGTCTGCACTGCAG 16742

Anopheles ------------------------------------------------------------

Homo AAAGGATTAGAGGGATATAGTCAAA----TAGTTTTCATATGTGTTTAGCCCTTTTGGAG 26784

Pan AAGGGATTAGAGGGATATAGTCAAA----TAGTTTTCATATGTGTTTAGCCCTTTTGGAG 26215

Drosophila ------------------------------------------------------------

Canis AGTGGTTTAGCGCCGCCT-----------TCGGCCCAGGGTGTGATC-------CTGGAG 16602

Bos ------------------------------------------------------------

Rattus GCAAGAATGTTTAAATA------------TGATCTCTGTTTCCTGAAAGCAAGAATGTTT 20411

Danio ------------------------------------------------------------

Mus GCAAGATTGTTTAAATA------------TGACCCCTGTT-------------------- 18845

Gallus -------------AATG------------CCATCTCGGTTTT------------------ 16759

Anopheles ------------------------------------------------------------

Homo GGAGGATAGAGTAAATAAATAGAAGGCACTAAGCTTTATGGATGAATATGGGAAATATGG 26844

Pan GGAGGATGGAGTAAATAAATAGAAGGCACTAAGCTTTATGGATGAATATGGGAAATATGG 26275

Drosophila ------------------------------------------------------------

Canis GCCCCCTGGATCAAGTCCC------ACGTCGGGCTCCCTGTGTGGA-------------- 16642

Bos ------------------------------------------------------------

Rattus AAATATGATCTCTGTTTACTCTCAATATTAATTATCAGGTCCTGTGTTTTGGATATA--- 20468

Danio ------------------------------------------------------------

Mus --------------------CTAAATATTAATCATCAGGTGCTATGTTTTGGGTATA--- 18882

Gallus -------------------------------TCTTTACAACATTAGGTTTGGATGTT--- 16785

Anopheles ------------------------------------------------------------

Homo CTTTGCCTGCTGAAAGCACTCAGGCCACAGGGCCTGCCTACCTATGCTTTCCTCATCCCG 26904

Pan CTTTGCCTGCTGAAAGCACTCAGGCCACAGGGCCTGCCTACCTATGCTTTCCTCATCCTG 26335

Drosophila ------------------------------------------------------------

Canis ----GCCTGCTT----CACCC---------------TCTGCCTGTGTCTCTGCCTCTC-- 16677

Bos ----GCTTGCT-----CACC---------------------------------------- 1721

Rattus -----------AAAATGATTGAGACTTAGTTCCTAC--CTTCAGAAGGAGCACAATCTGA 20515

Danio ------------------------------------------------------------

Mus -----------AAGATGCTTGAGACTTATATCTCAATGCTTCAGAAAGAGCAGAATCAGA 18931

Gallus -----------AATCTGCT---GTTCTTTTCTGTAATTTTTCATATGG---------TTG 16822

Anopheles ------------------------------------------------------------

Homo GCAACAGCAGTAATTTGTTTCTTGATACGTTTTTGGATGTTCATAATTATAGAAAATAAA 26964

Pan GCAACAGCAGTAATTTGTTTCTTGATACGTTTTTGGATGTTCATAATTATAGAAAATAAA 26395

Drosophila ------------------------------------------------------------

Canis -------------TCTCTCTCTCTGTCTCTCTCTGTCT-CTCATGAATGAATAAATAAAA 16723

Bos ---------------------------------------------------------AAG 1724

Rattus TATTTTTTAGTTATTGAAATAGAATTATACTTGG-ATACAG-----------------CG 20557

Danio ------------------------------------------------------------

Mus T--TTTTTAATTATTGAGATAGAATTATACTTGGTATACAG-----------------TG 18972

Gallus TGTTTTTAAAGGATCAAGGT-GACTAACACTCTTGACTTCT-----------------TG 16864

Anopheles ------------------------------------------------------------

Homo TTTGCCTTTATGA-TGAAATTTAGTACCTTTTTTTTTGAAAGTTCATCCAGTTGTTTATG 27023

Pan TTTGCCTTTATGA-TGAAATTTAGTACCTTTTTTTTTGAAAGTTTATCCAGTTGTTTATG 26454

Drosophila ------------------------------------------------------------

Canis TCT-----------TTAGAAACAATAATAAGTTTCTTGAAG------------------- 16753

Bos T----------------GAAACACCGATATTTTTGTTGAAA------------------- 1749

Rattus GGAATACAGAGGAGTA--------------------CAAAACTGTGCAAAAGAAATATAG 20597

Danio ------------------------------------------------------------

Mus GGAATACAGAGGAGTA--------------------CCAAATTATGCAAAAGAAATCTAG 19012

Gallus ACACCACTGTTTCATG--------------------TGTATTTTCATA---GAAATTTAA 16901

Anopheles ------------------------------------------------------------

Homo TAAAAAGAATTGAGTGAGGTGTTTTATATTTTAGGTTAAAAATCTGTAAGAGCCTGATTT 27083

Pan TAAAAAGAATTGAGTGAGGTGTTTTATATTTTAGGTTAAAAATCTGTAAGAGCCTGATTT 26514

Drosophila ------------------------------------------------------------

Canis --AAAAGAGCC-------------CATAT---------GAAAACAGTAAGAG---GACCT 16786

Bos --CA----------------------------------GATAACAGTAGG---------- 1763

Rattus TGCATAGTAGGAAAATTGGTATAACTGAGTAAAACTATGCTGAATCCCGAAATGTTATTG 20657

Danio ------------------------------------------------------------

Mus TGCATAGTAGGAACATTGGTATAGCTGAGTAAAACTAGGTTGAATCCTGAAATGTTACTG 19072

Gallus AGCAT--TGCCATTATCTGTA-------GCTTCACTGGGTTGCATTGCATACGAGTAAAG 16952

Anopheles ------------------------------------------------------------

Homo TAGAATTCACCAGCTCCTCAGAAGTTTGGCGAAATATGGTATGTTTTTGTTTTATTTTTT 27143

Pan TAGAATTCACCAGCTCCTCAGAAGTTTGGCGAAATATGGTATGTTTTTGTTTTATTTTTT 26574

Drosophila ------------------------------------------------------------

Canis AGAATAGGACTAGATTTTCAA-------GCAGAGTTTGAACTATGCTGAAGGAGACATTT 16839

Bos ----------CAGCTTCCCAA-------ATA----------------------------- 1777

Rattus GGGATTAA----GCAGTTGCATGTTTGAACAATGTTGTAGGCCAAGTCCTCATCAAGG-- 20711

Danio ------------------------------------------------------------

Mus GGGATTAA----GCAGTTGGATATTTGAACAGTGTTCTAGGCCAAGTCATTGCCAAGG-- 19126

Gallus CAGAGAAA----GCGACTGC---CTCAAACTTCCAAATTGGCCGTGTTCTC----AGT-- 16999

Anopheles ------------------------------------------------------------

Homo GGAATTCGTATTGCATGTGTATCTTAATGTCATAATAATGACAGATGTGTTCAGCAAATT 27203

Pan GGAATTCGTATTGCATGTGTATCTTAATGTCATAATAATGACAGATGTGTTCAGCAAATT 26634

Drosophila ------------------------------------------------------------

Canis GGAAGTCAT----CAGGTATTGCTT-----TGAAGGAAGAAGGAAACTGTCCAAAGAG-- 16888

Bos ------------------------------------------------------------

Rattus --------------TTCTGAAGTAGGACACTTGA-GTACAGAAAAAAG----TAGGGAAT 20752

Danio ------------------------------------------------------------

Mus --------------TTCTGAAGCAAGACACTTGA-GTGTAGGGAAAAG----TAGGAAAT 19167

Gallus --------------TTCTGAAGTCATGCGTGTTA-ATAGAGGAGCTAGCCAGTATGACTA 17044

Anopheles ------------------------------------------------------------

Homo TGGGCCCCTGCCATTTTTAAAGCATTGTGTCAGGTGCTCACTAACTACACTTCCAAGACT 27263

Pan TTGGCCCCTGCCATTTTTAAAGCATTGTGTCAGGTGCTCACTAACTACACTTCCAAGACT 26694

Drosophila ------------------------------------------------------------

Canis ------------AATTTAAAAG------AGAAAGTGTCTAATGGCTGGTCCCTGGGGAGT 16930

Bos ------------------------------------------------------------

Rattus ------------------------TGAGA-CCTTTTCAAAACTTGACAATGAGGAATGAA 20787

Danio ------------------------------------------------------------

Mus ------------------------TGAGAACCTTTTCAAAATTTGACAATGAGGAATGAA 19203

Gallus ------------------------TAGACTTCTCTCCTTCACTCCTCAAATTGAATGGCT 17080

Anopheles ------------------------------------------------------------

Homo GTATGAGGGACCCAGGTAGGGTGCTGAAAAAATTTACAAGAGATTAGTGTGCTATGAGAG 27323

Pan GTATGAGGGACCCAGGTAGGGTGCTGAAAAAATTTACAAGAGATTAGTGTGCTATGAGAG 26754

Drosophila ------------------------------------------------------------

Canis ATA-------------------------AACATTTCTA---GATTA----------AGAA 16952

Bos ---------------------------------TTCTA---GAATA----------GGAA 1791

Rattus AAATGAAAATAAGAATAAATAGAAGGAATTAAGCAGA--GGACTGTGGTACTGACTTGCC 20845

Danio ------------------------------------------------------------

Mus AAATGAAAATAGGAATAACTAGAAGGAATTAAGCAGG--GGACTGTGGCAAAGACTTGGT 19261

Gallus TCAAGCACTTGTATATTTATGTGAATAATTAGGAAGA--GGTTTGCTCTTCTCTGTTAAG 17138

Anopheles ------------------------------------------------------------

Homo GTAAAATAATATGCATAAAAAGATTGAGAGGGCAGGTTTGGATTTTGG-GCTATGAGTAT 27382

Pan GTAAAATAATATGCATAAAAAGATTGAGAGGGCAGGTTTGGATTTTGG-GCTATGAGTAT 26813

Drosophila ------------------------------------------------------------

Canis GGGAACTCTGAAGAACAACCAGAGAGAAAGGAGGAAATCAGAAAATGGTGTCCTGAAAGC 17012

Bos --------------ACA------------------------------------TGAAAG- 1800

Rattus GAGTATAGCACTT----------------------------------------------- 20858

Danio ------------------------------------------------------------

Mus GAATATAGCACTT----------------------------------------------- 19274

Gallus TTTCTGGGAACTT----------------------------------------------- 17151

Anopheles ------------------------------------------------------------

Homo TAATAATAGCTTTCATTTGTTGTTGTTGTTGCTGCTGCTGCTGCTGCTGTTGTT---TTT 27439

Pan TAATAATAGCTTTCATTTGTTGTTGTTGTTGCTGCTGCTGCTGCTGCTGTTGTTGTTTTT 26873

Drosophila ------------------------------------------------------------

Canis CCACAGTAAATTTCC--------------------------------------------- 17027

Bos ------------------------------------------------------------

Rattus -------GACATGTAAATAT---GAAGATTGGA--------------------------- 20881

Danio ------------------------------------------------------------

Mus -------GCTATGTAAGTATTAAGAAGACTGGA--------------------------- 19300

Gallus -------GGTTTG----------GAGAGTCAAA--------------------------- 17167

Anopheles ------------------------------------------------------------

Homo GAGACAGAGTCTTGCTCTGTTGCCCAGGCTGGAGTGCAGTGGCACCTTCTTGACTCACTG 27499

Pan GAGACAGAGTCTTGCTCTGTTGCCCAGGCTGGAGTGCAGTGGCACCTTCTTGACTCACTG 26933

Drosophila ------------------------------------------------------------

Canis ---AGAAGGTCTACATTTCTCAGCAAGGTTAAA--------------------------- 17057

Bos ------------------------------------------------------------

Rattus -----------------GTAGGAGGCAAGCTGGCTGCTAGGCTAGTAGAATTGACAAGCT 20924

Danio -------------------------CAAGATGGCCGCGA--------------------- 14

Mus -----------------GTAAGAGGCAAGCTGGCTGCTAGGTTAGCATAATTGACAAGCT 19343

Gallus -----------------GGGAAAATTAAACTTTCATTTG--------------------- 17189

Anopheles ------------------------------------------------------------

Homo CAACGTCCATCTCCCAGGTTCAAGTGATTCTCATGCCTTGGCCTCCCAGGTAGCTGGGAT 27559

Pan CAACGTCCATCTCCCAGGTTCAAGTGATTCTCATGCCTTGGCCTCCCAGGTAGCTGGGAT 26993

Drosophila ------------------------------------------------------------

Canis ------CCAAATAAGAAGTGAAAAA-----TGATGACTTGGC-------------GAGAT 17093

Bos ------------------------------------------------------------

Rattus TTGAGTACAGTGAAAAACAGCCT--CTGACTTCTA------------AACACACCCCACT 20970

Danio ------------------------------------------------------------

Mus TTGAGTATAGTGAAAACAAGCCT--CTGACTTCTA------------AACACACCTCTCT 19389

Gallus ---------------------TT--CTGCTGTTGA------------GCGTTATTTTTCT 17214

Anopheles ------------------------------------------------------------

Homo TACAGGCGTGTGCCACCACACCTGGCTAAGTTTTGTATTTTTAGTAGAGACGGGGTTTCA 27619

Pan TACAGGCGTGTGCCACCACACCTGGCTAAGTTTTGTATTTTTAGTAGAGACGGGGTTTCA 27053

Drosophila ------------------------------------------------------------

Canis TAT---------TTTCTACATC--ACTAGATACTG------------AAGCTAGGTTATA 17130

Bos ------------------------ACTA-------------------------------- 1804

Rattus ACATGTACTAAAAATCTACCTTCACCACATAAGCTAATGCAG---GCACACTAACACATA 21027

Danio ------------------------------------------------------------

Mus ACATGTAT---AAATCTACCTATACCATCTATGTTAATGCA---------------CACA 19431

Gallus AC---------------------------------------------------------- 17216

Anopheles ------------------------------------------------------------

Homo CCGTGTTGGCCAGGCTAGTCTCGAACTCCTGGCCTCAAGTGATCCACCCGCCTTGGCCTC 27679

Pan CCGTGTTGGCCAGGCTAGTCTCGAACTCCTGGCCTCAAGTGATCCACCCGCCTTGGCCTC 27113

Drosophila ------------------------------------------------------------

Canis AGGTGC------AGTAAGCCTTGA---CCTGTTC----------------------CTTT 17159

Bos ------------------CCTTG----TTTGCTC----------------------ATTT 1820

Rattus CACACACAGTCCTCTCTTAAGAAATTAGGAGGAAGTAAAGATA-ATTTGTGGAGCTTTGT 21086

Danio ----------------------------------------ATA-TTTTGTGGAG------ 27

Mus CATATGCATTCCTGTCTTAAGAAATGAGGAGGAAGTAAAGATAGATGTGTATAGCTATGT 19491

Gallus -----------------------------------------------TGCAGCTCTTTTG 17229

Anopheles ------------------------------------------------------------

Homo CCAAAGTGCTGGGATTACAGGCGTTAGCCACCACGCCCAGCCATTTGTGAGCACATTATG 27739

Pan CCAAAGTGCTGGGATTACAGGCGTTAGCCACCATGCCCAGCCATTTGTGAGCACATTATG 27173

Drosophila ------------------------------------------------------------

Canis CCCACACACTGTTATT---------------------------CTTGTTCTCAACTGATG 17192

Bos CCAGTACATTGC------------------------------------------------ 1832

Rattus TTAAGGTGTGGTTGAAAAAG--------TCAAGGTTTTCCTTACTAAAAGCAGATTACAT 21138

Danio --GGGTTGGAGTTGAATA-----------CACG-----CCGCACTAGAAGCGA------- 62

Mus TTAAGGTGTGGTTGAAAAAG--------TCCAGGTTTTCCTTACTAGAAGCAGATTACAT 19543

Gallus TCAGTCCTGAGTTTGAATAA--------GTAAGGTAAGGATCATTTGGAAGGAA------ 17275

Anopheles ------------------------------------------------------------

Homo TCAGGCACTGTTCTGAGATACTTAGATGTTAGCTTGTTTATCCATGACAGCTCTATGGA- 27798

Pan TCAGGCACTGTTCTGAGATACTTAGATGTTAGCTTGTTTATCCATGACAGCTCTATGGA- 27232

Drosophila ------------------------------------------------------------

Canis C---------TTCTGGATTATTC---TCTCAGTATGCTGCTCTTTTGAAGCTGTGCATT- 17239

Bos --------------------------------------ACTCTATTAAAA---------- 1844

Rattus CCATTTAAATGCTTGTGTA-CATTATGAATTCT-AAGACATAACTATGA-AATATCCTTT 21195

Danio ------------TTGTG-------ATG--------------------------------- 70

Mus CCCTTTAAATGCTTAAGTA-CATTGTGAAGTCTTAAGAAACAACTATGA-ATTATCCTTT 19601

Gallus -------------TAAAAA-GATCA----------------------------------- 17286

Anopheles ------------------------------------------------------------

Homo ------------ATAGGTACTATTATCCTAGTTCTACCTATAAGGAAACTGAGACTCGGA 27846

Pan ------------ATAGGTACTATTATCCTAGTTCTACCTATAAGGAAACTGAGACTCGGA 27280

Drosophila ------------------------------------------------------------

Canis ------------CTCAGTA-TGTCATCCTCTGTCTTTCTT-------------------- 17266

Bos ------------------A-TGTCAGCTTTTAT--------------------------- 1858

Rattus AAATTTATGAGACCGTATAACTTCTCTAATAACTTTAAAACACTTAA----GAAATGTAT 21251

Danio ----TTGAGAGACC---------------------------------------------- 80

Mus AAATTTTTGAGACCATGTAACTTCTCTGATAACTTTAAAACACTTAT----AAAATGTAT 19657

Gallus --ATTTTTGAGGCTGGGTTGTTTCTCT--------------------------------- 17311

Anopheles ------------------------------------------------------------

Homo GAGGTTAAGTAACTTGCCCAAGATTTCTCAGCTAGTGAATGACCAAACAGAGACATAAGT 27906

Pan GAGGTTAAGTAACTTGCCCAAGATTTCTCAGCTAGTGAATGACCAAACAGAGACATAATT 27340

Drosophila ------------------------------------------------------------

Canis ---GTTTAGTGATCTCCCAGTCACTTCTCAGTCTTTGAAGAATTCA-------TACTCTT 17316

Bos ---------------------------------------AAATT---------------- 1863

Rattus AAAATTTACTCTTTACTGTCTTAAAGTATATAAACC-------------------AGTGG 21292

Danio -AGATTCATTCGT----------------------C-------------------AG--- 95

Mus AAAATTTACTCTTTATTGTTCTAAAGTATATGAGCC-------------------AGTGG 19698

Gallus -AACTTTTTGTTTTAGTTGGACAATATGTGCATTCT-------------------AA--- 17348

Anopheles ------------------------------------------------------------

Homo CCAGCCTGGCCTTGGAGCCTTTTGAGCACCGGATCTCATAAAAGAGGGGACTGGAAGAGA 27966

Pan CCAGCCTGGCCTTGGAGCCTTTTGAGCACCGGATCTCATAAAAGAGGGGACTGGAAGAGA 27400

Drosophila ------------------------------------------------------------

Canis CCACTCTACCC------------------CAGATCT--------------------GTGA 17338

Bos ----------------------------------------------------------GA 1865

Rattus TATTGTTAATAT----ATTTTTGAGCATTTGTCATCAAAACCATTTGCATTTTGTATTAC 21348

Danio --------------------------------CATCAGAAC------------------- 104

Mus TATTGTAAATATTAATATGTTTGAGCATTTGTCATCAGAACTGTTTGCATTTTGCCCTAC 19758

Gallus -------------------------------GCATGAGTGT------------------- 17358

Anopheles ------------------------------------------------------------

Homo GGACTTGACTCTAGTTTTCAAAATACATATAGCTCTTTAATTACATTGAGGTCAATTAGT 28026

Pan GGACTTGACTCTAGTTTTCAAAATACATATAGCTCTTTAATTACTTTGAGGTCAATTAGT 27460

Drosophila ------------------------------------------------------------

Canis TGTCTTTGTTT-----------ATATGCTTAACTTCCAACTCCCTAGCATCACAATTCCC 17387

Bos TGT-------------------ATA----------------------------------- 1871

Rattus TGAAACTTTGTGTGCATTAAAAAGTGACTTTTCTTT-----------------CCCACTG 21391

Danio -------------ACCTCCAAAAGTAA--------------------------------- 118

Mus TGAAACTTTGTATGCATTAAATAGTGACCTGTTTCT-----------------TCCACTG 19801

Gallus --AAACTT------CGTTGGATAGTAAGTTGAGTC-------------------CCATCT 17391

Anopheles ------------------------------------------------------------

Homo C--AATTAAAAGATATTTTAACTTTATTATTTTTGTGTTTACAAGATGGAAAGTTAGACT 28084

Pan C--AATTAAAAGATATTTTAACTTTATTATTTTTGTGTTTACAAGATGGAAAGTTAGACT 27518

Drosophila ------------------------------------------------------------

Canis T--AACTATTTTATCTTTGAGCGATTTTATCTTTC----------------ACCTCTGCT 17429

Bos ------------------------------------------------------------

Rattus TGGCTGGCAGTTATAATTTTACTTTTTGT----GAGTTTGGTGCTTCTAACTACTTCAAG 21447

Danio ------GCTGTCAAAACCTTA--------------------------------------- 133

Mus TGGCTGGCAATTA-AATTCTACTTTTTGTCTGTGGGTTTGGTGCTTCTAACTATCTCAAG 19860

Gallus CTAGTGTCAGTTG-AATTTTG------------------------------TAACTTAGT 17420

Anopheles ------------------------------------------------------------

Homo TGTTTGAATCTTCTAATTCCACATACCATTAGTCTCTTGAGAACCCAAGGGGAAGCTGTA 28144

Pan TGTTTGAATCTTCTAATTCCACATACCATTAGTCTCTTGAGAACCCAAGGGGAAGCTGTA 27578

Drosophila ------------------------------------------------------------

Canis TTGCTGTGTCTTCCCATTCC---------------CTTGGGCATGCTAATGTTTGTTGTT 17474

Bos -----------------------------------------------AATG------GTT 1878

Rattus TAAGTGTAGTCACAGCTTTTTTTGTTTG-----------------TTCGTTTTGATGATT 21490

Danio --------ATCGC-GCTTCTTCTGT----------------------------------- 149

Mus TAAGTGTAGTCAC-ACAGTTTTTGTTT--------------------TGTTTTGATGACT 19899

Gallus GAAATATAAACAAATAACTTCCTGT-----------------------GTTCTGCATCAT 17457

Anopheles ------------------------------------------------------------

Homo TCATG---ACCACATTGTTTATTTTAGGGAAGGTGGTGTTTCCCATATGACCTCAGCAAT 28201

Pan TCATG---ACCACATTGTTTATTTTAGGGAAGATGGTGTTTCCCATATGACCTCAGCAAT 27635

Drosophila ------------------------------------------------------------

Canis TAATGTTAATTAAAACACTCACCACAGG-----TTGTAGTCTTTGTATGCTTTC-----T 17524

Bos TAA-------------------------------------------ATGTTTTT-----G 1890

Rattus GGCTTATTTTATATAATATAATGTCCTCGAAGTTCATGTGTATAACCTATACTAGAACTT 21550

Danio -------------------------CCCGA------------------------------ 154

Mus GGCTTATTTTATATAACACAGTGTTCTTGAAGTTTATGTGTA--GCATATACTAGAACTT 19957

Gallus ATGTCACTGCATAGTATCCAGTTAGCTTAGGAAT-------------------------- 17491

Anopheles ------------------------------------------------------------

Homo GTCTAAGTTCTTATTAGGCAATGTATAGTTAGGATAGGAGTATCTGGGAGATTGCGTTAT 28261

Pan GTCTAAGTTCTTATTAGGAAATGTATAGTTAGGATAGGAATATCTGGGAGATTGCGTTAT 27695

Drosophila ------------------------------------------------------------

Canis TACTTGCTTTCTCTCATCTCATATGTTTTGATCTCACTTGTCTTTGAGAGGT-------- 17576

Bos CATTTGC-------------ATA-------ACCTAA-------TTGAGAG---------- 1913

Rattus CCT----------------TTTTTTGTTTTAGAATGAGTAACATTCGCTT---------- 21584

Danio --------------------------------------------CCGC------------ 158

Mus CCTC--------CTTTTTTTTTTTTTTTTTTGGCTGAATAACACTTGCTT---------- 19999

Gallus --------------------------------------TTAAAATTGTGT---------- 17503

Anopheles ------------------------------------------------------------

Homo TTCTTACAGATACTATAAATCCCATTTATTGGAATCCCCTGCAATTATTTTTATATATTC 28321

Pan TTCTTACAGATACTATAAATCCCATTTATTGGAATCCCCTGCAATTATTTTTATATATTC 27755

Drosophila ------------------------------------------------------------

Canis ------------------GTCCTGTT--------ACCCCTGTAATTGTCTT--------- 17601

Bos ----------------------------------AACTTTAAAATTGT------------ 1927

Rattus --GCTTGTATATGCTATAGTCTGCTCATCTGTTAATGGGTTATTTCTGTGCTTTAGCAAT 21642

Danio --GCCTG----------------------------------------------------- 163

Mus --GCTTGTATATGCTATATTCTGCTCATTTGTTAATGGGTTAATTCTGTGCTTTAGCAAT 20057

Gallus --GCCAG-AAATGCT--------------------------------------------T 17516

Anopheles ------------------------------------------------------------

Homo AGGCCAATCCTCACCTAATCTGGATTTTGAAGCCCTGCGTTCATA--GCTGCATAGGTAT 28379

Pan AGGCCAATCCTCACCTAATCTGGATTTTGAAGCCCTGCGTTCATA--GCTGCATAGGTAT 27813

Drosophila ------------------------------------------------------------

Canis ---CCAGTCTCAGCCC--TCTAGTTTCTCTATTTCC-----------------------T 17633

Bos ------------------------------------------------------------

Rattus TGTGAATAATGT---GATTAACATGGGTCCATTCTTTGAGAACTTGTCTAAAATTCTTTT 21699

Danio ---GAGCACCGC---GA--------------------------------GAAGCGCTATT 185

Mus TGTGAATAATGTTGTGATTAGCATGGGTCTAATCTTT---------TGTCAAATTCTTTT 20108

Gallus TCTAGGCACTGCATCTATTAATATAATACAGTTTGGT-------------AAATTCTAGA 17563

Anopheles ------------------------------------------------------------

Homo GGGCTCAAACATTCATGTTTTAACCGTTGGTATTCGC------------AGATACCTTGC 28427

Pan GGGCTCAAACATTCATGTTTTAACCGTTGGTATTCGC------------AGATACCTTGC 27861

Drosophila ------------------------------------------------------------

Canis GACATTAAGTGTTCAGATCCAGAAGATTGA-----AT------------AGA-------- 17668

Bos ---ATCAAG-GCCCAGCTT----------------------------------------- 1942

Rattus GGGCCTATAGTATTT--CATGGTAATTGTGTTTTTAATATTTTGAGAATATGTCATGCTG 21757

Danio AGGCC------------------AGTTA-----------------------GCCGCGCTG 204

Mus GGTCCTATAGAATAT--CATGGTAATTGTATTTTTAATATTTTGAGAATATATCATGCTG 20166

Gallus AAGTTGGTAAGATCTGGTGTGTCAGTAGAGGAACTAAGGTTTTAGTAG------AGAATA 17617

Anopheles ------------------------------------------------------------

Homo TGTTTTATATTGGGTTCTGAATCCACACTGGTAACCACCTTTTACGCTTGACTATTGTTG 28487

Pan TGTTTTATATTGGGTTCTGAATCCACACTGGTAGCCACCTTTTACGCTTGACTATTGTTG 27921

Drosophila ------------------------------------------------------------

Canis ----TCATATTCTGTAGTCTTTTCACTCAATTGATTGTTTCCT--------------TTG 17710

Bos ----TTATATTCAGT--------------------------------------------- 1953

Rattus CTTTAAACAACAGCTATACCATTTTAC----GTTCCTTACAATAAAAGCATTATAA---T 21810

Danio CT---------------------------------------------------------- 206

Mus TTTTAAACAATAGCTATACCATTTTACTTACATTTCTTAGAATAAAAGTTTTATACATTT 20226

Gallus CTGAGAACATTAGCTGTGCTAACCGAAG-------------------------------T 17646

Anopheles ------------------------------------------------------------

Homo CTTTGAGGATGTTAATTATGAAAGGTTTCTTCCTCCTAATTTCCTCATCTTTCCGTAGTT 28547

Pan CTTTGAGGATGTTAATTATGAAATGTTTCTTCCTCCTAATTTCCTCATCTTTCCGTAGTT 27981

Drosophila ------------------------------------------------------------

Canis CTGTACACAAGTTAAGT----------------TCACTGTAGTCCCATTT-------GTT 17747

Bos ------------------------------------------------------------

Rattus TTGTTTAACAACTT---------------------------------------------- 21824

Danio ---------AACCC---------------------------------------------- 211

Mus TTTTTTTACAACTT---------------------------------------------- 20240

Gallus CCCCTGGCAAACTT---------------------------------------------- 17660

Anopheles ------------------------------------------------------------

Homo GATGCCTCAGATTTGGCCTGGATAGGGGAATCGTGAGGGGAAAGAACTAGTTGCACAAAA 28607

Pan GATGCCTCAGATTTGGCCTGGATAGGGGAATCGTGAGGGGAAAGAACTAGT-GCACAAAA 28040

Drosophila ------------------------------------------------------------

Canis TTTGCTTTTGTTTT---------------------------------------------A 17762

Bos ------TTTGTTTA---------------------------------------------A 1962

Rattus -GACCTGTGTATTACAATTTCTTTGGGGAGTAGTA------------------------- 21858

Danio -G------------------CTCCGGGGAGGG---------------------------- 224

Mus -GACCCGTATATTAAAATTTCTTTGGGGAACAATA------------------------- 20274

Gallus -GGTT----------GAAACCTACAAAATGAGTGA------------------------- 17684

Anopheles ------------------------------------------------------------

Homo TGATCTTTTGATACTGGGATATTTCAGATGTATGGTATCTTTGCCAGAACTACAGTGTCA 28667

Pan TGACCTTTTGATACTGGGATATTTCAGATGTATGGTATCTTTGCCAGAACTACAGTGTCA 28100

Drosophila ------------------------------------------------------------

Canis TGTGCTTTTAATGTT---ATATTGAAGATGCATTG------------------------- 17794

Bos TAT--------------------------------------------------------- 1965

Rattus ----------------------------------------------------GTCATTCT 21866

Danio ------------------------------------------------------------

Mus ----------------------------------------------------GTCATCCT 20282

Gallus ----------------------------------------------------GTTATCTT 17692

Anopheles ------------------------------------------------------------

Homo GTAAAGAGGCCTGCTAAATTTGAACTGTGACAATCAGAAAAGTTCAGCTAAGGCCATGTA 28727

Pan GTGAAGAGGCCTGCTAAATTTGAACTGTGACAATCAGAAAAGTTCAGCTAAGGCCATGTA 28160

Drosophila ------------------------------------------------------------

Canis -----------------------------------------------CCAAGTCCATT-- 17805

Bos -----------------------------------------------CGAAGT------- 1971

Rattus AAGGGATGTGAGGTGGTATTTTTA------------------------------------ 21890

Danio -AGGGACG-GAG-------CTTTC------------------------------------ 239

Mus AATGGATGTGAGGTTATA-TTTTA------------------------------------ 20305

Gallus TACAGATAGTAGCTCACTTCTGTT------------------------------------ 17716

Anopheles ------------------------------------------------------------

Homo AGGGGTTAAAAAGATATTTGGTTGAGGGAGGAGGATATGCTTTCATCTTTTGCCATACTT 28787

Pan AGGGGTTAAAAAGATATTTGGTTGAGGGAGGAGGATATGCTTTCATCTTTTGCCATACTT 28220

Drosophila ------------------------------------------------------------

Canis ----GTCATGAAGCTATTTCCCTG-------------TGTTT------------------ 17830

Bos --------TGAAACT--------------------------------------------- 1978

Rattus ------------------TTGTAGTTTAGTAGCCAGGTAACT---GTTGTTGATTTTGTT 21929

Danio ------------------TGGTA-------AACAAGGGAAAT---ACCGTTAATCCCG-- 269

Mus ------------------TTGTAGTTTAGTAGCCAAATAACTTTTGTTGTTGTTGTTGTT 20347

Gallus ------------------TTGAGAAAGCTCTGTCATGAAAGA--CGTTTTTGTTCATGTA 17756

Anopheles ------------------------------------------------------------

Homo TTTCATGAAATTAAATCTTAGTAGATTTATGGCCAAGAAAGAGTAGAATATATTTTTATG 28847

Pan TTTCATGAAATTAAATCTTAGTAGATTTATGGCCAAGAAAGAGTAGAATATATTTTTATG 28280

Drosophila ------------------------------------------------------------

Canis --------------ATTTTGGGAGTTTTTT--------AATGTCAGATTTTATGTATAT- 17867

Bos ------------------------------------------------TATGTGTACAT- 1989

Rattus GTTTAAAAGAAAAAA-GTTTATTTTGTATACCTAGATAGCTGCAGGTGCAGGTGTAGCAG 21988

Danio ---------------------------ATATC---------------------------- 274

Mus GTTTAAAAGAAAACTCGTTTATTTTGTATACCTAGATAGCTGCA------GGTATAGTAG 20401

Gallus AGCTACCAAGTG---------------TTGCTGTAATGACTGTG---------------- 17785

Anopheles ------------------------------------------------------------

Homo CAGTACTTAAGGGGTTTTGACTGATGTTTTTTATTAT------------TATTAT---AC 28892

Pan CAGTACTTAAGGGGTTTTGACTGATGTTTTTTATTAT------------TATTATTATAC 28328

Drosophila ------------------------------------------------------------

Canis --GTCTTTAATCCATTTTAACTTTTTTTTTTTGTAATG-----------TAATATAAGAT 17914

Bos --GGCCT-------------CTTT------------------------------------ 1998

Rattus AAACTAAACAATTGCCTTTCCCATGTACATTTTTTTTTCCTCCCCCTCTAGATACGGTTT 22048

Danio -----------------------------------------------CTAAATACGT--- 284

Mus AAACTAAAGAACTGCCTTCCCCATGTACCTTTTTTCCCCCTCCCCATCGAGATAGGGTTT 20461

Gallus ----------------------------CTGTATTTCTACTCCTACACAATATA------ 17811

Anopheles ------------------------------------------------------------

Homo TTTAAGTTTTAGGGTACATGTGCACAATGTGCAGGTTAGTTACATATGTATACATGTGCC 28952

Pan TTTAAGTTTTAGGGTACATGTGCACAATGTGCAGGTTAGTTACATATGTATATATGTGCC 28388

Drosophila ------------------------------------------------------------

Canis GTAGAGGTCAGGGGCACCTG-----GGTGGCTCAGTCCGTTAAACATCTGCCTTCAGCTC 17969

Bos -------------------------GGTGGCTCAGAGTGTAAAGAATCTGCCTGCA---- 2029

Rattus CTCTCTTTAACCTTGGCTGTCCTGAAACTGGCTCTGTAGACCAGGTTTGCTTCAAACTTA 22108

Danio ------------------------------------------------------------

Mus CTCTGTTTAACCCTGGCTGTCCTGAAACTGGCTCTGTAGACCAATTTGGCCTCAAACTCA 20521

Gallus --------------------------------------------------TCCAGTTCAA 17821

Anopheles ------------------------------------------------------------

Homo ATGCTGGTGTGCTGCACCCATTAACTCGTCATTTAGCATTAGGTATATTTCCTAATGCTA 29012

Pan ATGCTGGTGTGCTGCACCCATTAACTCGTCATTTAGCATTAGGTATATTTCCTAATGCTA 28448

Drosophila ------------------------------------------------------------

Canis AGGTCATGATTCTGGGT--ACTAGGACATAGCCCCACATCAGGCTCTCTACTCAGTGGGG 18027

Bos ---------TTGCGGG-------AGACCTAG------------------GTTCAGT---- 2051

Rattus GAGATCTGCCTACCTCTGCCCCCTTTGTGCTGAGATTAAAGTGTGT---------TCCTG 22159

Danio --GATC---------------------------GATTATA-------------------- 295

Mus GAGACTGGCCTGCCCCTGCCTCCTAAGCGCTGAGATTAAAGTGTGTGCCACCACATCTTT 20581

Gallus CAGTTCCAGTCAACTGT-----------------ACCAAAATCTACC------------- 17851

Anopheles ------------------------------------------------------------

Homo TCCCTCCCCTTCCCCCCACCCCACA---ACAGTCCCCAGAGTGTGATGTTCCCCTTCCTG 29069

Pan TCCCTCCCCCTCCCCCCACCCCACA---ACAGTCCCCAGAGTGTGATGTTCCCCTTCCTG 28505

Drosophila ------------------------------------------------------------

Canis AGCCTGCTCCCTCTCCTGCTGC--------------------------TCCCCCTGCTTG 18061

Bos ---------------------------------------------------CCCTG---- 2056

Rattus ACTCCCCATATACTTTTTTTTTCTTGTTTTTAA--------------------------- 22192

Danio ---------ATAC----------------------------------------------- 299

Mus GCTCCCCATGTACTTTTTTTTTCTTTTTCTTTTCCTTTTTCTTTTTCTTTTTCTTTTTCT 20641

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGTCCATGTGTTCTCATTGTTCAGTTCCCACCTG---------------------TGAGT 29108

Pan TGTCCATGTGTTCTCATTGTTCGGTTCCCACCTG---------------------TGAGT 28544

Drosophila ------------------------------------------------------------

Canis CACTCTTGTGTGCTCTCTCTC--------------------------------------- 18082

Bos ------------------------------------------------------------

Rattus -TGAAAAAAGGTTTTATGATGTTTTGTGGAACGCTATTCTTATAATAATAATTGAGTTGA 22251

Danio -------------------------GCGG-------------CAATAAGCGTTAAGT--A 319

Mus TTTGAAAAAGGTTTAATGATGTTTTGTGGAACACTA------TAGTTATAATTGAGTTGA 20695

Gallus -----------------------------------------GCAATGAAAGTTGAGTACA 17870

Anopheles ------------------------------------------------------------

Homo GAGAACATGCGGTGACTGATGTTAAATGACTTTACGTACATACAGAATTAGTGGGACTAG 29168

Pan GAGAACATGCGGTGACTGATGTTAAATGACTTTACGTACATACAGAATTAGTGGGACTAG 28604

Drosophila ------------------------------------------------------------

Canis -------------------TGTCAAATAAAT-------------AAATTAAAAAAAATCA 18110

Bos ---------------------------------------------GGTCAGGAAGA---- 2067

Rattus GATTC--------------------------------------AGTATACTGAAAACTTA 22273

Danio AATTT--------------------------------------AGCATGC---------- 331

Mus GATTG--------------------------------------AGTGTACTGAAAACTTA 20717

Gallus GTTCTC------------------------------------AAGATTATTGAAAA---- 17890

Anopheles ------------------------------------------------------------

Homo ACTTTGTGTTTATGTGTGTGTGTTTATGTGTATGTATATAACTATTCCATTAAGCAGTTG 29228

Pan ACTTTGTGTTTATGTGTGTGTGTTTATGTGTATGTGTATAACTATTCCATTAAGCAGTTG 28664

Drosophila ------------------------------------------------------------

Canis ACT----------------------------------GCAGCATGTCTATTAAAAA---- 18132

Bos ---------------------------------------------TCCCCTGGAAA---- 2078

Rattus CAAAGATA--------------------------------------TGATGGGGCTGGAC 22295

Danio ---------------------------------------------------------GTC 334

Mus CCAAGATA--------------------------------------TGA-------AGGG 20732

Gallus --------------------------------------------------------GCAG 17894

Anopheles ------------------------------------------------------------

Homo CCCTCCTTGGTGACTGATTGCTCTATCAGCTTAGGAATCTTTTGACTGAATTTGTCCGTA 29288

Pan CCCTCCTTGGTGACTGATTGCTCTATCAGCTTAGGAATCTTTTGACTGAATTTGTCCGTA 28724

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TTTTAAAGAAACAGACCAAATGTTGAAAGTTTCATGCACTGAATGGCCTGCTGAGTTTAG 22355

Danio TCTGAAA-------------TGTTAAA-----------------------CTGTGGTTAG 358

Mus TTTTAAAAAAACAGACCAAATGTTGAAAGTTTCATGCACTGAATGGCCTGCTTAGTTTAG 20792

Gallus CTTAAGATGGTTAAAGTCAAAACTGTATTTGTACTGCCCTG------CCTTCTGGCTTAG 17948

Anopheles ------------------------------------------------------------

Homo TTTGAAAGATCTCAATCTGTGTTCTGAATCTTTACTCATTTAC--ATATACTTAAATCTT 29346

Pan TTTGAAAGATCTCAATCTGTGTTCTGAATCTTTACTCATTTAC--ATATACTTAAATCTT 28782

Drosophila ------------------------------------------------------------

Canis ----AAAGATATAAG-----GGTCTAA--CCTCATTCTTTTGC--ATATG---------- 18169

Bos ----AGGGA--------------------------------------ATG---------- 2086

Rattus AAACGTCATAGTGCTTACAGTTAGACTGTACCAGTAG----------TCTCTAATAGATA 22405

Danio --------------CTGCAGCTAGGCTA-------------------------------- 372

Mus AAACCTCATAGTGCTTGCAGTTAGACTGTACCAGTAG----------TCTCTAATAGATA 20842

Gallus AAGTCTCACTG-GACTGGGGTGAGCCCAGA------------------------------ 17977

Anopheles ------------------------------------------------------------

Homo GAAACCCAGTATAGCAAAACTAAGCCAAAACAAACAAAAAAATCCATCCCTTGATAGGAA 29406

Pan GAAACCCAGTATAGCAAAACTAAGCCAAAACAAACAAAAAAATCCATCCCTTGATAGGAA 28842

Drosophila ------------------------------------------------------------

Canis GATATCCAGT----------TTTCCCAGTACCA--------------TTTGTGGAAGAGA 18205

Bos GTGACCCA--------------CTCCAGTA------------------------------ 2102

Rattus ATATTTTAGCTTGAATATTAGCAGAATAGATAGGACAAATTATTAAT------------- 22452

Danio ------------------------------------------------------------

Mus ATATTTTAGATTGAATATTAGCAGAATAGATAGGACAAACCATTAGT------------- 20889

Gallus -------------------------------AGGATAAAAAATGAA-------------- 17992

Anopheles ------------------------------------------------------------

Homo GTCAGTATATCTGGGTTTTAGTCAGTCCTTCAACACTAGTTCCAAAATCTTGGGCAAGTC 29466

Pan GTCAGTATATCTGGGTTTTAGTCAGTCCTTCAACACTAGTTCCAAAATCTTGGGCAAGTC 28902

Drosophila ------------------------------------------------------------

Canis CTC-----------------------TCCTTGCCACCTGTGCTAAAGC----------TC 18232

Bos -----------------------------TTCCTGCCTG--------------------- 2112

Rattus AGTGGTTTTTATAGAACACTCTTAGCACTAGAACATTTTAAATTTACATGCTATTATTGA 22512

Danio --------------------------ACTAG------------TTAC------------- 381

Mus AGTGTTTCATGTATAACACTTTTAGCATTAGAGCATTTTAAGTTTGCATGCTATTATTGA 20949

Gallus -----------------AGTCTTAAAAATAAATTATGCTAGTGCTGATT----------- 18024

Anopheles ------------------------------------------------------------

Homo AGTTAATCACTCGGAGGCTGCTTAATTTTTTTTTTTTTTAATTCTTAGTATATTATCTGT 29526

Pan AGTTAATCACTCGGAGGCTGCTTAATTTTTTTTTTTTT-AATTCTTAGTATATTATCTGT 28961

Drosophila ------------------------------------------------------------

Canis ATTTGACCGTATATGTGAAGGTTTATTTCTGGCTTCTCTGAT-----GTGTTCCATTGGT 18287

Bos --------------GAGAA--------------------------------TCCAGTGGA 2126

Rattus TGGCCATCGTTGATATTGTTGTGCCATTGGAAGATGGAAAA-TCAGGAAT-TAAGTCTCT 22570

Danio ------------------------------------------TCAG----------CTCT 389

Mus TGGCCAGAGTTGAGAATGTTGTGTCATCAGAAGATGGAAAAATCAGGAAT-TAAGTCTTT 21008

Gallus ---------------------------CAGGAAGTTAAAGAACAAGATGTGTATGACTCC 18057

Anopheles ------------------------------------------------------------

Homo CTTGATTAGGTAAAGCCAAAGTTGTTATAAGACTCAAGGTACTATTGACCAAAATGCTTC 29586

Pan CTTGATTAGGTAAAGCCAAAGTT---ATAAGACTCAAGGTACTATTGACCAAAATGCTTC 29018

Drosophila ------------------------------------------------------------

Canis CTGTGTC--------------TT--------ATCTGACGTACTGTT---CTGATTTCTTT 18322

Bos CAGAG------------------------------------------------------- 2131

Rattus TGTCATATAAAGCCCAGAACCTAATGACATCACTCCTGAAATTCACTAAACCTTGAAGAA 22630

Danio T--------------------------------TCCTG---------------------- 395

Mus TGTCACATAAAGCCCAGAACCTAATGATATCACTGATGAAATTCACTAAACCTTGAAGAA 21068

Gallus TCCTTATT------------------------CCCCTGTAAT------------------ 18075

Anopheles ------------------------------------------------------------

Homo AGAAACTATAACATTACATAAAAGTACAAGGAATTATTACATTTTCTCAAATGAAGAGAT 29646

Pan AGAAACTATAACATTACATAAAAGTACAAGGAATTATTACATTTTCTCAAATGAAGAGAT 29078

Drosophila ------------------------------------------------------------

Canis AGC-----------------------------TTTGTAAGATGTTTTGAAATCAGGAAGT 18353

Bos ------------------------------------------------------------

Rattus CTAATACGAAGATTTTCCAAGGTCAGCAAAAAACAGTGAAGGTTTTCAAACTTTATAAGT 22690

Danio ------------------------------------------------------------

Mus CTAATAC----------------------------------------------TATAAGT 21082

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CATTTAAGAAAAACAAAATGCTGGAAAATAGTCCTTAAAAACTTTTCTATAATAATTACT 29706

Pan CATTTAAGAAAAACAAAATGCTGGAAAATAGTCCTTAAAACCTTTTCTATAATAATTACT 29138

Drosophila ------------------------------------------------------------

Canis GT---------------------GAGACTGGCTTTCTTTTTCTTTTTCAAGATGGTT--T 18390

Bos -----------------------GAGCCTGGC---------------CAGG--------- 2144

Rattus CAAATCATTACTCTTACATGAAAACAAAAA----AGTCTAGTACTATAGGCTACTAACAA 22746

Danio ----CCATTGCTCCC-CATGACAGT----------------TACTGCAAG---------- 424

Mus TAAGTCATTACTCTCATATGAAAACAAAA------GTCTAGTACTATAGGCTAGTAACAA 21136

Gallus ----TTAGCTGTCTTAAGTGAATATGGA--------------ACTATACCCCTTAAATAA 18117

Anopheles ------------------------------------------------------------

Homo CTTCTGATGAATTTTACATTGACACCTAATTTGAAGCTTTGAATATTATTTTTTGAACAA 29766

Pan CTTCTGATGAATTTTACGTTGACACCTAATTTGAAGCTTTGAATATTATTTTTTGAATAA 29198

Drosophila ------------------------------------------------------------

Canis TTGCTGTTTGGGTTC-CATTGAGATCCCATATCCAG----GAATTTTGTTTTTTGGAT-- 18443

Bos -TACAGT-------C-CAT-GGGATCACA-----AA----GAGTT--------------- 2170

Rattus AAGTTCTTCAGAAAGTAATAGCGTA-TGAATTAAACAGTACAT---TATTATTCATTATA 22802

Danio ------------------------------------------------------GTTATA 430

Mus AAGTTCTTCAGAAAGGAATAACCAACTGAATTAAACAATACATAATTATTATTCATTATA 21196

Gallus -----------------------------------------------------CTCTATA 18124

Anopheles ------------------------------------------------------------

Homo TGAATTGGGTTTATATATTAAAGTGTTCTAACCAAAGGTTTGTTTAATTTATTAGAGTTA 29826

Pan TGAATTGGGTTTATATATTAAAGTGTTCTAACCAAAGGTTTGTTTAATTTATTAGAGTTA 29258

Drosophila ------------------------------------------------------------

Canis ------------------------------------------TTCAATTTAAAAATGCCA 18461

Bos --------------------------------------------------GAACATG--A 2178

Rattus ATTAAGTGGAATTTATCTTAGCCTATTA-------TGGTGGGGTTGAATGCCTTTAATCT 22855

Danio A--------GATTT---------------------------------------------- 436

Mus ATTAAGTGGAATTTATTTTAGCCCAGTA-------TGGTGGTGTTGCATGCCTTTAATCT 21249

Gallus TT-------AAGTTA--------------------------------------------- 18132

Anopheles ------------------------------------------------------------

Homo TTAAGCCTACGCTCAGATCAAGGTAGCAGCTAGACTGGTGTGACAACCTGTTTTTAATCA 29886

Pan TTAAGCCTACGCTCAGATCAAGGTAGCAGCTAGACTGGTGTGACAACCTGTTTTTAATCA 29318

Drosophila ------------------------------------------------------------

Canis TTGAGGGATCCCT-------GGGTGGCGC----AGTGGTTTGGCG-CCTGCCTTTGACCC 18509

Bos CTGAG------------------------------------------------------- 2183

Rattus --GGG---------------CTCTTGGGAGGCAGAGACA-TCAGGAGAAAGTTCCAGGAC 22897

Danio ------------------------------GCAG-------------------------- 440

Mus TTAAT---------------CCCTTGGGAGGCAGAGACAGTCAGGAGGAAGTTCTAGGAC 21294

Gallus -------------------------AAGGGGTAGGTACA--------------------- 18146

Anopheles ------------------------------------------------------------

Homo GTGACTCAAAGCTGTGATCACCCTGATGTCACCGAATGGCCACAGCTTGTAAAAGGTAAT 29946

Pan GTGACTCAAAGCTGTGATCACCCTGATGTCACCGAATGGCCACAGCTTGTAAAAGGTAAT 29378

Drosophila ------------------------------------------------------------

Canis AGGGCGCGA-----------TCCTGGAGACCCAGGATCA--------------------- 18537

Bos ------------------------------------------------------------

Rattus AGTCAGAGCTACACAGAAAAACACTATCTTGAAATCCCCAAAAGAAACAACACCAACTAA 22957

Danio ----------------------------------TTCCC--------------------- 445

Mus ACCCAAAGCTACATCAAGAAACACTGTCTTGAAATCCCCAAAAGAAACAACATCAGCTAA 21354

Gallus --------------------------------AATGCCAGGCAGTAACA----------- 18163

Anopheles ------------------------------------------------------------

Homo TTTGAATTATTTTACAGCCTTTAAAAGGCTGTCATTGTAAAGTGAAATACATACTGTAAA 30006

Pan TTTGAATTATTTTACAGCCTTTAAAAGGCTGTCATTGTAAAGTGAAATACATACTGTAAA 29438

Drosophila ------------------------------------------------------------

Canis ---------------AACCCATGTCAGGCTCCCAGTGCATGGAG---------------- 18566

Bos ------------------------------------------------------------

Rattus AAATGCAA---------GTC-----------------------TAACTACAGGGACCATA 22985

Danio ------------------------------------------------------------

Mus AATCAAAACCCAAGTCTGCC-----------------------TAACTACAGGGGCCATA 21391

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AATGAAGACAATGTATAGTTGGCAGGAATACTGCTAAGAATAGTGGGCCTGAGAGTTGAC 30066

Pan AATGAAGACAATGTATAGTTGGCAGGAATACTGCTAAGAATAGTGGGCCTGAGAGTTGAC 29498

Drosophila ------------------------------------------------------------

Canis -----------------------------------------------------------C 18567

Bos ------------------------------------------------------------

Rattus TTGCCTTACTCTCTGAGTTAAGGATTCTTGAGGCTGCAAGATGGCTCAGCTCTTAAGAGC 23045

Danio -------------------------------------------GCTCTGCT-TTAAATGC 461

Mus TTGCCTTACTCTCTGACTCAAGCATTCTTGAGGCTGCAAGGTGGCTCAGCTATTAGGAGC 21451

Gallus --------------------------------------------TCTGATTCTCAAAATT 18179

Anopheles ------------------------------------------------------------

Homo CTACTTCATTTAATCTCCTTAAAATATTTTAGTGTCTTT--TTTTCTCATTAAAAATATC 30124

Pan CTACTTCATTTAATCTCCTTAAAATATTTTAGTGTCTTT--TTTTCTCATTAAAAGTATC 29556

Drosophila ------------------------------------------------------------

Canis CCGCTTC--TCCCTCTGCCT---GTGTCTCTGCCTCTCT--CTCTCTCTCTCTCTCTCTC 18620

Bos ------------------------------------------------------------

Rattus ACTGACCACTCTTACAGAAGAAAAAA--CAGCATGTTAGATAGGACAAAATTGTGTCCTT 23103

Danio ACCGATCATCATCA-----------------------------------------TCTTC 480

Mus ACTGACCACTCTTGCAGAATAAAAAAACCAGTATGTTAAATAGGACAAAGTTGTGTCCTT 21511

Gallus ACTGGCTGACCTGTTGATTGGAATGAA--------------GAAATAGGACACTGACTGT 18225

Anopheles ------------------------------------------------------------

Homo AGTAGCCACTATCAAAGACCTATCTGTATGTA---------TAAACAGGAAAGTATTTCT 30175

Pan AGTAGCCACTATCAAAGACCTATCTGTATGTA---------TAAACAGGAAAGTATTTCT 29607

Drosophila ------------------------------------------------------------

Canis TGTG---ACTATCATAAATAAATAAAAAT------------TAAAAAAAAATGTGTCTTT 18665

Bos --TG---ACTAACACAA------------------------------------TGTCTAT 2202

Rattus AGTTAATAT-----TCTTTATTAACTCTCAGCTAATATA----TGAAAACAGGAACAACT 23154

Danio AGCGGA---------CTTTATTAA-------------------TGA-------------- 498

Mus AGTTAATAT-----CCTCTTTTAAGTATCACCTAATATA----TTAAAACAGGAAAAGCT 21562

Gallus AATTCTTAT-----GTTCTGTAAAGTTACG-----TACA----TAAA------------- 18258

Anopheles ------------------------------------------------------------

Homo CAAAAAAACTTCAAGGTTTTAAACATTTTACTATAAACATTATAGAAAACATTAAAAATT 30235

Pan CAAAAAAACTTCAAGGTTTTAAACATTTTACTATAAACATTATAGAAAACATTAAAAATT 29667

Drosophila ------------------------------------------------------------

Canis TAAAAAAA----AATGCCATTGAGATTTCAGTACGGATTGAATTGAATATAT-------- 18713

Bos CATAGAGA----GCTG----TGAAATT--------------------------------- 2221

Rattus TTTTATT----ATTACTGTTTTTGAATTTTGTTTTAAAAACATGACTACAAAAAAG---- 23206

Danio --CTATT----ATGGGTGTGTTCG---TTTGTTT-------------------------- 523

Mus TTTTA------ATTAGTGTTTGTAAATTTTGTTTTAAAAACATAACTACAAAAAAT---- 21612

Gallus TCTGAGT----AATGAGAGACAAGAATTTTGCTTAGAGAATGTTGA-------------- 18300

Anopheles ------------------------------------------------------------

Homo TCTTAATATGCATTTTAAAGTATGCCTTTTATGTGGTGAACGTTTTAACTAAACATTTCT 30295

Pan TCTTAATATGCATTTTAAAGTATGCCTTTTATGTGGTGAACGTTTTAACTAAACATTTCT 29727

Drosophila ------------------------------------------------------------

Canis ------------------AGATTGCTTTGGGTATTATGGACATTTTAAC----------- 18744

Bos --------------------------------GTTAAAGGTATTTT--C----------- 2236

Rattus --AAACCTAATAGGATTATACAAAACAATAGCTTTCTACAT------------------- 23245

Danio ------------GGATGATA--------------TCT----------------------- 534

Mus --AGAC-TAATGGGGTTATACAAAACAATAGCTTTCTACAC------------------- 21650

Gallus -----------AGCCTGCTTCTGAACTGCAGCATCTTA---------------------- 18327

Anopheles ------------------------------------------------------------

Homo CTAGAAGTTTTTATAACATTAATAAAACTAGTATACTTTTCTCTCCTAGAGAGTTACAGT 30355

Pan CTAGAAGTTTTTATAACATTAATAAAACTAGTATACTTTTCTCTCCTAGAGAGTTACAGT 29787

Drosophila ------------------------------------------------------------

Canis ------ATTATTGTCTTATCCATGAACACAGGATCTTT---------------------- 18776

Bos ------ATT--TGT-------GTGTGTAAAG----TTT---------------------- 2255

Rattus ---AGGAAAAGGTATAATTAACAGATAACCTCCCTATGGAATGAATGAAAGTATTTACAT 23302

Danio ------------------------------------------------------------

Mus ---AAGAAAAGATATAGTTAACAGATAACCCCCCTATGGAATGAATGAAAGCATTCACAT 21707

Gallus ---------AAGTTCAGCT----------------------------------------- 18337

Anopheles ------------------------------------------------------------

Homo GGAGGTAAAAGGAGTGGCTTGCAGG----------ATGGAGAAGCTGCACCAGTGTTATT 30405

Pan GGAGGTAAAAGGAGTGGCTTGCAGG----------ATGGAGAAGCTGCACCAGTGTTATT 29837

Drosophila ------------------------------------------------------------

Canis ----------ACATTGGTTTCT-----------------------TTCAACAGTGTT--- 18800

Bos ----------GAATT------------------------------TTTAAAAATATT--- 2272

Rattus GCTGAATAATTAAT-----AGTTGTACAAGTCAGGCAGCTCATTGAAGAAGTGGACAGGG 23357

Danio ----------------------------------GTAGTGCATTGA-------------- 546

Mus GCTGAATAGTTACTTTATGAAATGTGTAATTCAGACAGCTCATGGAAGAAGTGGATAGGG 21767

Gallus ----------------------------------GTTGATCACTGGTAAACT-------- 18355

Anopheles ------------------------------------------------------------

Homo GGAAGTGAGCCACCATTTGAATTTGCTAGCTC--ATGCTGCAGTATTCAGATTAGTGGGT 30463

Pan GGAAGTGAGCCACCATTTGAATTTGCTAGCTC--ATGCTGCAGTATTCAGATTAGTGGGT 29895

Drosophila ------------------------------------------------------------

Canis ---------------TTGTAATTT------TC--ATCGTACAGTAGTTT------TTCCT 18831

Bos ---------------CT------------------------------------------- 2274

Rattus GACCTAAATAGGTGCTTCTGAAGAAGTAA------------------------------- 23386

Danio ---CTGTGTGTGTGTGT------------------------------------------- 560

Mus GACCTAAATAGGTGCTTCTGAACAAGTAG------------------------------- 21796

Gallus ---TTGAATATACCTTTTGGTTACAGAAG------------------------------- 18381

Anopheles ------------------------------------------------------------

Homo GTTTTGTGATCATATTTTCTGCGATTCAAATCAAGACCTAAAATTGATTCTCATTCTGAG 30523

Pan GTTTTGTGATCATATTTTCTGCGATTCAAATCAAGACCTAAAATTGATTCTCATTCTGAG 29955

Drosophila ------------------------------------------------------------

Canis TATCTGTGGTTTTGCTTTTAGTGGTTTCAATTAA-------------------------- 18865

Bos ------TGATTGTGTTTTTGGGGG------------------------------------ 2292

Rattus ---------TTACAGTAGGAAGAGAGCTCAGTAGGTAAGGTGCTTGCCTGA-AAGCAT-- 23434

Danio ------------------------------------------------------------

Mus ---------TTCCGGTAGGAAGATAGCTCAGTAGGTAAAATGCTTGCCTAAGAAGCAT-- 21845

Gallus ---------TGGTTACGAGGAATTAGCCCAGAAC-------------------------- 18406

Anopheles ------------------------------------------------------------

Homo ATTTACATTTTATTATCCAATGTTATTTGGTTATTGTTTCAGTTTTAAAATTTCT----- 30578

Pan ATTTACATTTTATTATCTAATGTTATTTGGTTATTGTTTCAGTTTTAAAATTTCTTTTCT 30015

Drosophila ------------------------------------------------------------

Canis ---------CCATAGTGAAATGTGATCTGGAAGCAGGTAATGCTTATAAATTTTA----- 18911

Bos ----------------------------GGAAA------------ATAAAA--------- 2303

Rattus AAGGACCTGATTTGATAACTTTCATACCAACATAAAAGTGCAGTGTGT------------ 23482

Danio ------------------------------------------GTGTGT------------ 566

Mus AAGGACCTGATTTGATAACTTTCATAACAACATAAAAATGCAGTGTGTGGTAGTG----- 21900

Gallus --------------------------------------TGCTGCAT-------------- 18414

Anopheles ------------------------------------------------------------

Homo GACTTGTTATTCTGACACACTTTAGGATAACCTAAGTCAATAGTTTAATACAAAAATTTC 30638

Pan GACTTGTTATTCTGACACACTTTAGGATAACCTAAGTCAATAGTTTAATACAAAAATTTC 30075

Drosophila ------------------------------------------------------------

Canis -------TATATTGTTAGAATTT--GATCAC------TAGTAGTCTAGCATTACA---TC 18953

Bos --------ACATCGT------------------------GCAGTCCAGTA---------- 2321

Rattus -----ACACATAAAATTCCAGTGCTGGGGAGGAAGATACAGGAGGATACATGGGGCTAGT 23537

Danio -----GCA------------------------AAG---CAGAAG---------------- 578

Mus ----TACACATAAAATTCCGGTGCTGGGGAGGAAGATCCAGGAGGATCCATGGGGCTAAT 21956

Gallus --------CATGCAACCTGAATGAGGAAGTACTGCCAACAGAAGTCTCCTCCGG------ 18460

Anopheles ------------------------------------------------------------

Homo CCTTTGGTTATATGTTTTGAATTAGGTTATATGTTCTGCATTTACAAGCACATACAGGAT 30698

Pan CCTTTGATTATATGTTTTGAATTAGGTTATATGTTCTGCATTTACAAGCACATACAGGAT 30135

Drosophila ------------------------------------------------------------

Canis ACAATGCCTATGTCATTCACCTCACTTGAT---TTCATCATATA-----------GGTAT 18999

Bos -----------------------GCTTG-----------------------------TAT 2329

Rattus CTAATTGGCAAGCTCTATGCTAGTGAGAGAATATAAAATTGGACTACAGTCCAGAGTATG 23597

Danio ----TTG------TTTGTGC---------------------------------------- 588

Mus CTGATTGGTAAGCTCTATGCTGGTGAAAGAATGTGGAACTGGACTACAGTCCAGAGGATG 22016

Gallus -TGGTTGCTGCTGCATAAGCTATAGGGAAAA----------------------------- 18490

Anopheles ------------------------------------------------------------

Homo TCTTACTTCCAGCAACTTGGCAGTAAAAGAATAAGTAGACTCTTTAGGAGCCAAAGTCAA 30758

Pan TCTTACTTCCAGCAACTTGGCAGTAAAAGAATAAGTAGACTCTTTAGGAGCCAAAGTCAA 30195

Drosophila ------------------------------------------------------------

Canis TTTATCATCTCACATCATCATA--AGAAGGGTGAGTATAAT------------------A 19039

Bos TTTGTTGTATTACG-CATCATA--AGA--------------------------------- 2353

Rattus ACAAGTACTGTTGTACTTTGGCCCACACATGTGGGAAAAATGGAGTACAAATGGCAAAG- 23656

Danio ------ACTGTCATAC-------------------------------------------- 598

Mus ACAAGTAAGGTGGTAT---AGACCAGACAG--GGGAAAAAAGGAGTACAAATGGCAAAG- 22070

Gallus ------AATGCTGTCCT------------------------------------------- 18501

Anopheles ------------------------------------------------------------

Homo GCTTGGGAACTGTTGCTAGGTGGTATATATTTCATAGTTTATGTTTGTTT----CCAAGA 30814

Pan GCTTGGGAACTGTTGCTAGGTGGTATATATTTCATAGTTTATGTTTGTTTGTTTCCAAGA 30255

Drosophila ------------------------------------------------------------

Canis CAATAAGATATTTTGAGAGACCATAT---TCACATAACTTAT------------------ 19078

Bos -----------------------CAT---TCTTGTGG-TTAA------------------ 2368

Rattus -------TTGTTAAATGAGTTTTTAAAAATTATTTTGAGATTATAACATTTCTCCTTTTC 23709

Danio ---------------------------------------------------CCCCT---- 603

Mus -------TGGTTAAATGAGTTTTTAAAAATTATTTTGATATTATAATATTTTTTCTTTTC 22123

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CAAGGTCTCACTCCATCGCCCAGGCTGGAGTGCAGTGGCACGATCACAGTTCACTGCAAC 30874

Pan CAAGGTCTCACTCCATCGCCCAGGCTGGAGTGCAGTGGCACGATCACAGTTCACTGCAAC 30315

Drosophila ------------------------------------------------------------

Canis -------------------------TGTAATATATTGTAATTGTTCTGTTTCATTATTAT 19113

Bos -------------------------TGTTTTCTGCAGGAATT------TGTCA-----AT 2392

Rattus CTCTATTCTATATAGAATCTCACATATAGCATTCCTTGCTCTTTTTCTGTGTGGAGGAAA 23769

Danio ------------------------------------------------------------

Mus CTCTATTCTTTGCAGAATCTCAAATATTTCAATTCTTGCTCTTTTTCTGTGTTGAGGAAA 22183

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTGACCTTCTGGGCTCAAGTGACCCTCCCACCTCAGCCTCCCAAGTTGCTGGGACTAAA 30934

Pan TTTGACCTTCTGGGCTCAAGTGACCCTCCCACCTCAGCCTCCCAAGTTGCTGGGACTAAA 30375

Drosophila ------------------------------------------------------------

Canis TT----------------------------------GTCTCTTAA--------------- 19124

Bos CT----------------------------------GTATTCTGA--------------- 2403

Rattus AACCTATTTATTTATTTATTTGTTTGTTTATTTATTTATTTATTTTTGTGTTTTGAAACA 23829

Danio ------------------------------------------------------------

Mus AACCT----------------------------ATTTATTTATTTTTGTTTTTTGAGACA 22215

Gallus ----------------------------------TTGGCTTGATTGTGTTCTCAGATTTA 18527

Anopheles ------------------------------------------------------------

Homo GGCACCCAC---------CACCACACCCGGCTAAGAGACGAGGTTTCATCATGTTGCCCA 30985

Pan GGCACCCAC---------CACCACACCCGGCTAAGAGACGAGGTTTCATCATGTTGCCCA 30426

Drosophila ------------------------------------------------------------

Canis --------------------CTATGCTTAATTTATAAATTAAATTTTATCATA------- 19157

Bos --------------------CTACATTC--TCAATAAATCAG------------------ 2423

Rattus ----------------------------GGTTTTTCTCTCTGTAGCCCTGAGTGTCCTGG 23861

Danio -----------------------------GCCTTCCCGTCCGCGGCCT------------ 622

Mus ----------------------------AGTTTTTCTCTGTGTAGCCT-GAGTGTCCTGG 22246

Gallus ----------------------------TGTTAAACTTTCTAGAGTTTGGTCAAACAAGT 18559

Anopheles ------------------------------------------------------------

Homo GGTTGACCTTGAACTCCTGAGCTCAAGTGGTCCTTATGTCTTGACCTCCCAAAGTGCTGA 31045

Pan GGTTGACCTTGAACTCCTGAGCTCAAGTGGTCCTTATGTCTTGACCTCCCAAAGTGCTGA 30486

Drosophila ------------------------------------------------------------

Canis ----------------------------AGTATGTATGTATAGGA--------------- 19174

Bos ----------------------------------------TAG----------------- 2426

Rattus AACTTGCTCTGTAGACCAGGCTGGCTTCAAACTCAGATATCCTCCTGCCTCTGCTTCCTG 23921

Danio -----------------------------------------CTCCGGCTTCTGCTCC--- 638

Mus AACTTGCTCTGTAGACAAGGCTGACTTCAAACTCAGATATTCTCCTGTTTCTGCTTTCTG 22306

Gallus TAAATG-------------------TGCAAGTGCGGAAAAGCTGATGCTTCTAATT---- 18596

Anopheles ------------------------------------------------------------

Homo GATTACAGACATGAACTACCACACCTGGCATATGTCATAGTTTTGAGAGTTTGAATTCTA 31105

Pan GATTACAGACATGAACTACCACACCTGGCATATGTCATAGTTTTGAGAGTTTGAATTCTA 30546

Drosophila ------------------------------------------------------------

Canis ----AAAAACATTATATATAGGGTTTGGTAC-TTTTATGGTTTCAGG--CTTCCATTAGG 19227

Bos ----AAAAACA----------------------------GTTCAAGG--CTT---TTCGG 2449

Rattus AGTGTGGGATTAA----------------------------AGGTGT-GCATCACCGTGA 23952

Danio -------------------------------------------GGGT-AAACCACTGT-- 652

Mus AGTGTGAGATTAA----------------------------AGGTGTTGTACCACCATGA 22338

Gallus -------------------------------------------ATGT--AATTAGTGTCG 18611

Anopheles ------------------------------------------------------------

Homo ACCTCGGGACTTT----GGTAACTTATTTATAATATTCTAGAAATATACTGTTATTAGGA 31161

Pan ACCTCGGGACTTTTTTTGGTAACTTATTTATAATATTCTAGAAATATACTGTTATTAGGA 30606

Drosophila ------------------------------------------------------------

Canis AA---GGGGCTTT---------------------------GGAATGTATC-CTGCATGGA 19256

Bos A----GAGGTTTT---------------------------CATATG---------GTGAC 2469

Rattus TCAGCATCAAATTGATGAGAAAAAAA--------------------------GTTCTTTA 23986

Danio ---------------------------------------------------------TTA 655

Mus CCAGCATCAAATTCATGAGAAAAAAA--------------------------ATTCTTTA 22372

Gallus TTA----------------------A--------------------------TCACTTTA 18623

Anopheles ------------------------------------------------------------

Homo TGAGTAGAAATTCATTCAGACAGAAACTATTATAAATTACTGCAAGAAAAATGTCTGCTA 31221

Pan TGAGTAGAAATTCATTCAGACAGAAATTATTATAAATTACTGCAAGAAAAATGTCTGCTA 30666

Drosophila ------------------------------------------------------------

Canis CAAGGAGCACT--GTTTGGATACAA---------------------------GTCTTCCA 19287

Bos CAATGA-----------------------------------------------------A 2476

Rattus CCTTT-------CTAATCATCTTAAGAAATGAAACAACAGTTAAATACCACCTCATACTT 24039

Danio CC---------------------------------------------------------- 657

Mus CCTTT-------CTAATCATCT-AAGAAATGAAACAACAGTGAGATACTACTTCCTACCT 22424

Gallus CCCTT-------CTCGTAACTCTTCATATTGTAATGAC---------------------- 18654

Anopheles ------------------------------------------------------------

Homo GTTCTGCATATATTCATTTTTCTCTTGATTAAAAAACAATTTCCAATTTGAGTAGAACAA 31281

Pan GTTCTGCATATATTCATTTTTCTCTTGATTAAAAAACAATTTCCAATTTGAGTAGAACAA 30726

Drosophila ------------------------------------------------------------

Canis CCTCC-------TCCATTAAGTTTATTAGTAAAGTATTTTATTCCCTTTGA--------- 19331

Bos TCTCC-------TT---------------TAAAGTACTT-ATTC---------------- 2497

Rattus GCTACAATATATGAATGTTCATGTTGGTTAGGTTGTAAGCAAACAGAAATCTTTCACACA 24099

Danio -------------------------------------GGCACACAGGA------------ 668

Mus GCTAGAATATATGAATGTTCATGTTGGTGAGGTTGTAAGCAAACAGAAATCTTGTACACA 22484

Gallus -----------------------------------TTAACAAACAGTACT----TAAGAC 18675

Anopheles ------------------------------------------------------------

Homo CTT------------------------TGCTATGTTTAATAGACCCAGG------ACAGA 31311

Pan CTT------------------------TGCTATGTTTAATAGACCCAGG------ACAGA 30756

Drosophila ------------------------------------------------------------

Canis ---------------------------TGCTGTTGTAAATAGG---AGT------ATTTT 19355

Bos ------------------------------------AGACCAG---AG------------ 2506

Rattus ATTGTTTAGAATGTAAATTAGATCAATT----------------------ATAAAAAATA 24137

Danio --TGCTT----------------CAGTT----------------------GCGAAAG--- 685

Mus GTTGTTTGGAATGTAAATTAGATCGATT----------------------ATGGAAAATA 22522

Gallus TTTGTCTGTATTT--------GCAGATC----------------------ACCAGGAGAA 18705

Anopheles ------------------------------------------------------------

Homo TTTATTTTAAGGTAATAATCTTTCAATCCTTCTTCTTCTATACTGGATTGGTTTAAATTA 31371

Pan TTTATTTTAAGGTAATAATCTTTCAATCCTTCTTCTTCTATACTGGATTGGTTTAAATTA 30816

Drosophila ------------------------------------------------------------

Canis TTTGTTTGAAGTGAAAAGTTCACTAATTTT--------------------ATTTAAATTT 19395

Bos ------------GAAA------------------------------------TTGAATTG 2518

Rattus ATAGGTTCATAAAATTTAAAAATAGTATTGCCATGACCTAGCAATTAT--ATTCTAGAAA 24195

Danio -------CACACAGTTT-------GTTTT------------------------------- 700

Mus ACAGGTTCCTAAAAATT-------GCAATG-----ACCTAGCAATTGT--ATTATAGAAA 22568

Gallus CCTCACTCTGAAAACATT------GAAAC------------------------------- 18728

Anopheles ------------------------------------------------------------

Homo CTTAGCTTGTCTTATCAATGGTTTTTAATAGCCTACTTTAATATATGTAAAAAGTAGTAA 31431

Pan CTTAGCTTGTCTTATCAGTGGTTTTTAATAGCCTACTTTAATATATGTAAAAAGTAGTAA 30876

Drosophila ------------------------------------------------------------

Canis TTTAATTTTTATT------------TATTTATTTATTTTTATTGGTGTTCAATTTGCCAA 19443

Bos CTTA-------------------------------------------------------- 2522

Rattus TATATAGTGTGTTGAAAGAGA------TACCTGCAGTTTAATGTTGATTGCATCATTAAT 24249

Danio ----TAGT---------------------TCTGCGGCT---------------------- 713

Mus TATATAGTGTGTTATAAGAGA------TACCTGCAGTTTAATTTTGATTGCAGCATTAAT 22622

Gallus ----TAGCCGAATGTAAG---------TACCTGAG------------------------- 18750

Anopheles ------------------------------------------------------------

Homo TTAATATGTTACAGTTTGGTGGCAAACATTTTGATGCCAAAGTTCACATATTCTCTTGCT 31491

Pan TTAATATGTTACAGTTTGGTGGCAAACATTTTGATGCCAAAGTTCACATATTCTCTTGCT 30936

Drosophila ------------------------------------------------------------

Canis CATCTAGAATAACACCCAGTG---------TTCATCCCA----TCAAGTGCCCCCCTCA- 19489

Bos TATGTGGAA----GCCGGGT-------------------------AAG------------ 2541

Rattus TAGAGGAAACAAAATGCTGAAATAAAGCAGT--TTGTCAGTGAATACATAA--------- 24298

Danio --------------------------GCCGT--CTGT----------------------- 722

Mus T-----AAACAAAATGCAGAAATAAACCAGTGTTTGTCAGTGGCTAAACAA--------- 22668

Gallus -----------------TGGATGAGTTCAGTGTATCTTGTTTAA---------------- 18777

Anopheles ------------------------------------------------------------

Homo TAG--GGAACAGAAATTGGGAAGATAGATGTAGTTATCATTTGATAATGTATTTAAACTC 31549

Pan TAG--GGAACAGAAATTGGGAAGATAGATGTAGTTATCATTTGATAATGTATTTAAACTC 30994

Drosophila ------------------------------------------------------------

Canis -----------------------------GTGCCTGTCACCCAGTCACCC--CCACCCCC 19518

Bos ------------------------------------------------------------

Rattus ------------------AAATTGAT--ATATATCTAATGGTGTAATATTTATCCATTAA 24338

Danio ----------------------------ATATGTTTA-----------------CGTCGC 737

Mus ------------------ATAAAAATTGACATATATGATGATGTAATTTTTCGCCATTAA 22710

Gallus ----------------------------AAATGTTTTG------AATATTTGGACATAGA 18803

Anopheles ------------------------------------------------------------

Homo TATCCCATTTCAGGATCTCAAAACTTTGTAACAGTTACATATTGTACTTCTAAGACTTAG 31609

Pan TATCCCATTTCAGGATCTCAAAACTTTGTAACAGTTACATATTGTACTTCTAAGACTTAG 31054

Drosophila ------------------------------------------------------------

Canis CCGCCCACCTC------------CCTTTCTACCACCCCTTGTT-TGTTTCCCAGAGTTAG 19565

Bos ----------------------------------------------------AAAGCAAG 2549

Rattus AATTTTTTTT---TCTGAAGTCTTATGTCTGTG--------------ACATGTATGGAAA 24381

Danio TGCCCTTTTT---TTTGCAGAC-------------------------ACACGTA------ 763

Mus AAT--TTTTT---TCTGAAATCTTATGTCGGTGA-----------CAACATGGATGGAAA 22754

Gallus AGTTACTTTTGTACTTAAGACAGAAGCTGAGTGG-----------AAATACGGAA----- 18847

Anopheles ------------------------------------------------------------

Homo ATTTGTTTTTCTTCTTGTGTCTTACCTTTTTGCAGTAATATTTTTATTTTCCTATCATCA 31669

Pan ATTTGTTTTTCTTCTTGTGTCTTACCTTTTTGCAGTAATATTTTTATTTTCCTATCATCA 31114

Drosophila ------------------------------------------------------------

Canis GA--GTCTCTCATGTTCTGTCTCCCTTTCTGATA-------------TTTCCCAC--TCA 19608

Bos GG---------------------------------------------TTTCC-------- 2556

Rattus TGATACTCCATATTTTCTATGAAATAAATCAGCAACAAAACAGGCAGTACATGATCTCAC 24441

Danio ----------------CTATG-------TCA----------------------------- 771

Mus TGATCCTTTATATTTTCAATGAAATAAATCAGCACAAAAACAGGTAGTGCATCATCTTCC 22814

Gallus -------------TCACATTACAAAATTTCA-------AACTAATATTGTACTATGGAAT 18887

Anopheles ------------------------------------------------------------

Homo TGTCCTCATTTTTTCCCTCTCTTCTCTTTCCCTGTTAATTTTGAAAGTTTTGCTGCCTAC 31729

Pan TGTCCTCATTTTTTCCCTCTCTTCTCTTTCCCTGTTAATTTTGAAAGTTTTGCTGCCTAC 31174

Drosophila ------------------------------------------------------------

Canis TTTTTTCTCCTTTCCCCTTTATTCCCTTTCACT----ATTTT-----TTATATTCCCCAA 19659

Bos ------------------------------------------------------------

Rattus TGTACGTAGAATGTAAAAACATTGATTTTCT----AAAAGTGTTTG--TTACTCAGAGTA 24495

Danio --------------AAAAACAGTGA----------------GCTGA--CTACCCAG-GCA 798

Mus TGTACATAGACTGTAAAAACATTCTA---------AAAATTGTTTG--TTACTTAGAGTA 22863

Gallus AATGATTAGTCTTTGTAAATACTGTGTT-------GTTTTTGTTGGGTTTTTTTGGAGGT 18940

Anopheles ------------------------------------------------------------

Homo GTGTTTGAAAACTTCTAATCTGCCTCTCTTCCCTCAGTGCCAGCAGGTTTATTTTTTGTT 31789

Pan GTGTTTGAAAACTTCTAATCTGCCTCTCTTCCCTCAGTGCCAGCAGGTTTATTTTTTGTT 31234

Drosophila ------------------------------------------------------------

Canis ATGAATGAGACCATATAATGTTTGTCCTTCTC--------CGATTGACTTATTT------ 19705

Bos -------AGA-------------------------------------------------- 2559

Rattus GAATA----------------GATGGACATATAATAAAACATGGAAAATGAATATAGTTC 24539

Danio ACATT----------------TTTAGACAT------------------CAAATACTGTCT 824

Mus GAATAAA-------------TGATAGACATAAAAAATGCAAAATGAATAGAATGTAGTTC 22910

Gallus GAATGG---------------GTTGAAGGGAAAGCTCAAGAGTTTATTTTAACATGGACC 18985

Anopheles ------------------------------------------------------------

Homo TTGCAAGCCAGCTCTGCCTCCTTACAGTATGACATCTGATGCTGGAGGGTCGCACTTTCA 31849

Pan TTGCAAGCCAGCTCTGCCTCCTTACAGTATGACATCTGATGCTGGAGGGTCGCACTTTCA 31294

Drosophila ------------------------------------------------------------

Canis --------------------CACTCAGCATAATACCC----------------------- 19722

Bos ------------------------------AATACCT----------------------- 2566

Rattus AGGATCCCTATTGTATAACATGG---TGACTTTTTATTGTATTTTTTCTTGAATATCACT 24596

Danio AGGG-------------------------------------------------------- 828

Mus AGGACCAAAATTGTAGAGCATGG---TGACTTCTTTCTGTATATTTTCTTGAATATCACT 22967

Gallus AGTAG--------------ATGG---TAGCAT---------------------------- 19000

Anopheles ------------------------------------------------------------

Homo AAAATGAGTCAGCTGGTACATGGGGTTATCATCAATTTTTAGCTCTTCTGTCTGGGAGAT 31909

Pan AAAATGAGTCAGCTGGTACATGGGGTTATCATCAATTTTTAGCTCTTCTGTCTGGGAGAT 31354

Drosophila ------------------------------------------------------------

Canis -------------------------------------TCCAGTTCC------------AT 19733

Bos -------------------------------------TCT-------------------- 2569

Rattus AAAAGTC----AAT--TT-TTAAGTTTTCATGCAAAAGTGCTGT---------------- 24633

Danio ---AGTC----AGC--TTGCTAGGTTTTTAGAC------GCTGT---------------- 857

Mus AAAAGTC----AAC--TA-TTAAGTATATGTGCAAAAGTGCT------------------ 23002

Gallus AAGTGTC----AAAAATCTTCAGGCCTATACTCAGATGTGGCA----------------- 19039

Anopheles ------------------------------------------------------------

Homo ACAAGTTTGGAAGCAATCTTGGGGTACTTACCCACAAGGCTGGTGGAGACCAGGTGTGTC 31969

Pan ACAAGTTTGGAAGCAATCTTGGGGTACTTACCCACAAGGCTGGTGGAGACCAGGTGTGTC 31414

Drosophila ------------------------------------------------------------

Canis CCACGTC--GAAGCAAATGGTGGGTATTTGTC---------------------------- 19763

Bos ----GTT--GA---------------TCTATT---------------------------- 2580

Rattus ----------------------------------GTATGTTAGAATTTATAAACTCATTT 24659

Danio ----------------------------------CCATGGTGATATTTCTG--CCC---- 877

Mus ------------------------------------ATGTTAGAATTTATAAACTCATTT 23026

Gallus ----------------------------------GTAGGGTGTAATTTCTA----CTTGC 19061

Anopheles ------------------------------------------------------------

Homo ACATAGGTGATTTGCTTGCTCCCTGGGGGAGAGGGTGGAGTGAAATTTTTGCATTTGTGT 32029

Pan ACATAGGTGATTTGCTTGCTCCCTGGGGGAGAGGGTGGAGTGAAATTTTTGCATTTGTGT 31474

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GATGCATCA-------------------TGTTACATATGATTATATATATGTAGTTCT-- 24698

Danio -------------------------------------------------TGTGGTTC--- 885

Mus GATGTATCAC------------------TTTTGCATATGATAATAT--ATGTAGTTCT-- 23064

Gallus TACTCACTAA------------------TATCATGTGTGGGATTGA--AAGCAATTCT-- 19099

Anopheles ------------------------------------------------------------

Homo CACAGCCAAGTCACTGCCACCTCCAGCATGCCCCAGTTTTTAGTTGTTATGTAATTTTGT 32089

Pan CACAGCCAAGTCACTGCCACCTCCAGCATGCCCCAGTTTTTAGTTCTTATGTAATTTTGT 31534

Drosophila ------------------------------------------------------------

Canis -----------------------------------ATTTCTAATGGCTGAGTAAT----- 19783

Bos -----------------------------------GTTTGTAATGGT---GTGGT----- 2597

Rattus -------------TATTTGTCAACAAAAATAAAAACTTTGGAAAAACATCTG---TGTCT 24742

Danio ----------------------------------ACTTTAGG------TTTG---TGCTT 902

Mus -------------TATTTGTCAATGAAAATAAAAACTTTGGAAAAACAGCCG---TGTCT 23108

Gallus -------------GTT-------------------CTAAGGCACAAGGTATC---TGCTA 19124

Anopheles ------------------------------------------------------------

Homo GCAAAATTGAAAATTTAAATACATTGCAAAGAAGATCTAAAATAAATATTTGAGCTGCTG 32149

Pan GCAAAATTGAAAATTTAAATACATTGCAAAGAAGATCTAAAATAAATATTTGAGCTGCTG 31594

Drosophila ------------------------------------------------------------

Canis -----------------------------------------ATTAATA-----------G 19791

Bos -----------------------------------------GTAGATG------------ 2604

Rattus TCATATATCAAAATTATT--ATTGCATGAATGAAAGTTTTTAATAGATCAATAACATTTT 24800

Danio ------ACCAATGTTTTT--CTTAC----------------------------------- 919

Mus TCATATATTAAAATTATT--ATTGCATGAGTGAGTGTTTTTAACAGACGAATAACATTTT 23166

Gallus TTATCTATTGGGGCAAATCAATTGCTAGCATAAGGGAAAAAAAAAAAAAAAAACTAGTCT 19184

Anopheles ------------------------------------------------------------

Homo GAGTCTTTTTTTTTTTTTTTTTT-CCTTTTCCATTCTTGTCCTTGGAATCTGAATGAATT 32208

Pan GAGTCTTTTTTTTTTTTTTTTTTTCCTTTTCCATTCTTGTCCTTGGAATCTGAATGAATT 31654

Drosophila ------------------------------------------------------------

Canis GAGTATTTTTAAATTTTCCTTTTGT--------TCATTGTTCATAGAAAC---ACAACTT 19840

Bos --------TTAAG-------------------------------------------ACGT 2613

Rattus A--------------------ATAATCCTTTGTATGGTGCTAAATATGCTTAAGATAAAG 24840

Danio ------------------------------------------------------------

Mus A--------------------ATAATCCTACATATGGTGTTTATTATGCTTAAGATAAAG 23206

Gallus G--------------------ATT----------TGATTTGGCAAATTCGTATGCTAAG- 19213

Anopheles ------------------------------------------------------------

Homo GCAGTGAGGGTAATTTTGAGAGTCTGATAAAGAAGTGAGGGGTTGTTTTTTGTTTTTGT- 32267

Pan GCAGTGAGGGGAATTTTGAGAGTCTGATAAAGAAGAGAGGGGGTGTTTTT-GTTTTTTT- 31712

Drosophila ------------------------------------------------------------

Canis G---------------------------------------------TTTTTGCATTGGC- 19854

Bos G---------------------------------------------TTTTC--------- 2619

Rattus GAGTAATTGTTGGAAATA--GAGACCATAAAGTTCTTTTATGTTAAGAAATACAAATAAT 24898

Danio ---TAATTGC--------------------AGTT--------------------AATAAT 936

Mus GAGTTATGGTTGGAAATAAAGAGATTGTAAAGTTCTCTTA--TTAAGAAATACAAATAAT 23264

Gallus ----TACTCTTAAAAACAGCAAAATAACTTATTTTCACTA-----------AACAGTGTT 19258

Anopheles ------------------------------------------------------------

Homo ---TTTTGTTTTTAGCTAAGAAATTTAGAAAACAGGTTTGTGTGTGTGCGTGTGTGTGTG 32324

Pan ---TTTT--TTTTAGCTAAGAAATTTAGAAAACAGGTTTGTGTGTGTGTGCGTGTGTGTG 31767

Drosophila ------------------------------------------------------------

Canis ---TTACTTTTGTACCCTGCAACTTTGTTAAAT---TTTATTAGTTTTAATATATATATT 19908

Bos ---------------------------TTGAAT---TT---------------------- 2627

Rattus T---------------------------------GTGGAAACTTTTA-TACTGGCATATG 24924

Danio ----------------------------------GTGGTAGTTTCTT-TA---------- 951

Mus T---------------------------------TTGGAGACTCTTAATACTGGGATATA 23291

Gallus C---------------------------------ATCTAGCATCTTGCTAGCAGTTTAGA 19285

Anopheles ------------------------------------------------------------

Homo TGTGTGTGTGTGTGTG------------ACTGATTTTAAGATTCTTGTTAGAGTTGCTTA 32372

Pan TGTGTGTGTGTGTGTGTGTGTGAGTGTGACTGATTTTAAGATTCTTGTTAGAGTTGCTTA 31827

Drosophila ------------------------------------------------------------

Canis T----------------------------TTTATTTGTGGACCCTT--TGGGGTTTTCTA 19938

Bos ------------------------------------------------------------

Rattus ATATGGACACT-----TGATGTCCTTTAGCCCATTAGTTTAAT----------------- 24962

Danio -----------------AATGTCCCTT---TCACTAGTATAAT----------------- 974

Mus ACATGCACATTGACATTGATGTCCTTTAGCCCATGAGTTTAATAGAAGAAGAAAGAAAAC 23351

Gallus ACCT---TGTTTTGGTCAGTCTTCATTAGCCCGGAAGCCAAGA----------------- 19325

Anopheles ------------------------------------------------------------

Homo AAGT------------TGGAAGCCTAAAGTCAGTGAGAAGTTCACAA------------- 32407

Pan AAGT------------TGGAAGCCTAAAGTCAGTGAGAAGTTCACAA------------- 31862

Drosophila ------------------------------------------------------------

Canis CATA------------TGAGATCCTGTCATCCGCAAACAGGT------------------ 19968

Bos --------------------------------GCAGA----------------------- 2632

Rattus CAGATAGTATTCAGATGGATTATATGAAAATATCATACCAGAAGTTTGT----------- 25011

Danio T--------CCCAG-----TGCTGCAAAAGT---------GAAATTA------------- 999

Mus CAGAAGATATCTAGGTGGATTATATGAAAATTTCATATTATGAATTTGTGCATATAGAAG 23411

Gallus -------------------TTAACTAGAAGC----------AAGATTG------------ 19344

Anopheles ------------------------------------------------------------

Homo -ATCAGGACTTTGTAATGCCAATTTGAAAATTT---------AGCTTTTGACCTCAAAA- 32456

Pan -ATCAGGACTTTGTAATGCCAATTTGAAAATTT---------AGCTTTTGACCTCAAAA- 31911

Drosophila ------------------------------------------------------------

Canis ----------------------------AATTT---------TGTTTCT----------- 19980

Bos ------------------------------------------------------------

Rattus -------AATTTTGATATTTGGCTAGGCGTGTTGATTTG-------------------CT 25045

Danio -----------TTGATGTTT-------TCTGTTCATCTG-------------------C- 1021

Mus TATTAAGAATTTTGATATTTGGCTGGGTATGTTTGCTTG-------------------CT 23452

Gallus ---------------TATTTGGGT-GAAATGTTCATTTA-------------------AA 19369

Anopheles ------------------------------------------------------------

Homo -AACATTTTTTATCTAGTTTGGGAATTTCTAAGTGTTAGAAATCAATATTATATTGACTC 32515

Pan -AATATTTTTTATCTAGTTTGGGAATTTATAAGTGTTAGAAATTAATATTATATTGACTC 31970

Drosophila ------------------------------------------------------------

Canis -------TCCTTTCCAGTCTGGATGCCTGTATTTATTT-------------------CTC 20014

Bos ----------------ATCTAGAT------------------------------------ 2640

Rattus CTGCTCCTGTAATCCCAGGACTTGGGAACTTATTCAGGGACAGCGTCACCCATATA---- 25101

Danio ----------------AGGATT-------------------------------------- 1027

Mus CCACTTCTGTACTCCCGGTACTTGGGAGCTTATTCAGGGACAGCTTCGCCTATACA---- 23508

Gallus TTCCA-----AATTAAAAAAAAAAAAAAAAGGTTGTGGGAATGAGAGGACCATTT----- 19419

Anopheles ------------------------------------------------------------

Homo ATTCATTGTTGCTGATGCTGTTTATAAAAGTGAATAGATAGGGAAATACTGATTCATATC 32575

Pan ATTCATTGTTGCTGATGCTGTTTATAAAAGTGAATAGATAGGGAAATACTGATTCATATC 32030

Drosophila ------------------------------------------------------------

Canis TTGCCTGATTGCT-----------------------------------CTGACT------ 20033

Bos ------------------------------------------------------------

Rattus -------------GTAAGGCCAGTCTAAGTTACATGAGACCCTGAATTTAAA--AACAAA 25146

Danio ----------------------------GCTACCTGACAACCT----------------- 1042

Mus -------------GTAAGGCAAGTCAAAGTTACATGAGATCATGGCTTTAAACAAACAAA 23555

Gallus --------------TTAAAAAGATAAATGTTACTTGAGGCTTCATTCTTCTGTGCATTAG 19465

Anopheles ------------------------------------------------------------

Homo TCGTGAAATGAAAATGAAAGGCTTTTTAGTGACTTAGAATTTTAAATATTTCTACATGAG 32635

Pan TTGTGAAATGAAAATGAAAGGCTTTTTAGTGACTTAGAATTTTAAATATTTCTACATAAG 32090

Drosophila ------------------------------------------------------------

Canis -----------------------------------AGGATTTCCAGTACTGTTCTAAAA- 20057

Bos ---------------------------------------TTCCAAGCACT------AGA- 2654

Rattus CAAACAAACAAAAAAACCC----------TAAAAGCAGGGCCTAAAGAGTTGGTTCAATT 25196

Danio -------------------------------------------------TTGGGTCTCTT 1053

Mus CAAACAAACAAACAAACACAAAAAGCAGCTAAAAGCAGGGCCTAAAGAGTTGGCTCAGTG 23615

Gallus CAAACAAA-------------------------------------------GATTCTTTT 19482

Anopheles ------------------------------------------------------------

Homo AGAGCAGTAGTATATTT----------------AGAAATAACAAAGTAACTGGCAACTGT 32679

Pan AGAGCAGTAGTATATTT----------------AGAAATAACAAAGTAACTGGCAACTGT 32134

Drosophila ------------------------------------------------------------

Canis ---------------------------------AGAAATGGTAAG--AGCAGGCATCCTT 20082

Bos ---------------------------------AGAAAC--------------------- 2660

Rattus TCC----------TGCTTTCCAACTACGTAGAATAAATTCTCAGAACCT---ATGTA-AA 25242

Danio T-----------------------------GAGT------TCAGAGCC------GTAGAA 1072

Mus TCC----------TGCTTTCCAACTATGTGGACTAGAATTTCAGAACCT---ATGTA-AA 23661

Gallus CTA----------GCTATTCAAACCATCCTGTGCTAAAATTCAAA--------TAGGGAA 19524

Anopheles ------------------------------------------------------------

Homo TTAAAACTGAAGTTAATTCACAGCTATCCAGTGCAAAACTTCACCTCAGGTGATACACTT 32739

Pan TTAAAACTGAAGTTAATTCACAGCTATCCAGTGCAAAACTTCACCTCAGGTGATACACTT 32194

Drosophila ------------------------------------------------------------

Canis GCA----------TAGTTCCTGATTTTAGAGGGAAAGCTTTCAGCTT------TATACCA 20126

Bos --------------------------TACAGA---------------------------- 2666

Rattus AAGTGTGACA---------------TGGCCTTTTTACCCCTGCCTTGGTGGATGGGAAGA 25287

Danio GAGTGTGATA---------------TTG-------------------------------- 1085

Mus AAGTGAGGCA---------------AGGCCTTTC-ATCCCAGCCTTGGTGGAGGGGCAGA 23705

Gallus ACCACAAACA---------------TTGCTCTTCTGGCT---------TAGAACAGAACT 19560

Anopheles ------------------------------------------------------------

Homo TTGACAGGTAATACATACAGTAAGTGTATTTTTAGGGAAACAGTTTCATTGTT--GAACC 32797

Pan TTGACAGGTAATACATACAGTAAGTGTATTTTTAGGGAAACAGTTTCATTGTT--GAACC 32252

Drosophila ------------------------------------------------------------

Canis TT---AGGTA----------TAATCTTAGCTTTTCATATATGGCTT--TCATT--ATGTT 20169

Bos -------------------------------------ATATGAC---------------- 2673

Rattus AAGAGAATGATGGTTGAAATTCATTCATTCAGTATAGATAATTCA------GCGAGTGTC 25341

Danio ---------------GAAACTT----------TAAAG----------------------C 1098

Mus AATGGAATGGTGGTTGAAATGTGTTCATTCAGTCTAGATAATTCA------GCAAGTGTC 23759

Gallus TCTGAAATAATAGAGGGAGTGTAGCCCATTTGTTAGCATATTGTC------CTATGCTTC 19614

Anopheles ------------------------------------------------------------

Homo AAGATAATCATCATTAGAATGTTGTATCTGATTTAAGTGTCTTTAAACTTACCAAGGTAT 32857

Pan AAGATAATCATCATTAGAATGTTGTATCTGATTTAAGTGTCTTTAAACTTACCAAGGTAT 32312

Drosophila ------------------------------------------------------------

Canis GAGGTAATTTTCTTTG---TGTTGTTTCT----TGAGTGTTTTTA---TTATGAAAAGAT 20219

Bos -----------------------------------GGTGGCTATA---CCAGGGA----- 2690

Rattus A---GGTTTAGTGAGAACTACTGTCTTAAACATTTGGCTGAGGAGCATTAGAAAATGATG 25398

Danio A---AGTCTAATGTAAG----TGTCTT--------------------------------- 1118

Mus A---GGTTTAGGGAGAGACCACGTCTTAAAAAATTGTGTGAGGAGCATTAGAAAATTATG 23816

Gallus AAAAGATTTGGGTTAATTTTGCTTCTGCCACAAACGT----------------------- 19651

Anopheles ------------------------------------------------------------

Homo -TAGATTTTAGTTTGAATTGTCTGGAGTAGCGGTAGCGGTTGGCACATTTGTTCTTAAAG 32916

Pan -TAGATTTTAGTTTGAATTGTCTGGAGTAGCGGTAGCGGTTGGCACATTTGTTCTTAAAG 32371

Drosophila ------------------------------------------------------------

Canis GTTCATTTTTGTCAGATGTTTTCTCTGCATCAGTTGAGGTGATCATGTTATTTTT----- 20274

Bos ------------------------------------------------------------

Rattus -------------ATTGTTATTGATTTCTGGTCTCAAGATACACATGCATAGGCATGCAT 25445

Danio ---------------TGTTTTTA---CCTGACTT------------------------AT 1136

Mus -------------ACCGCCTTTGCTTTCTGGTCTCCAAATGCACATGCATGGGCATGCAT 23863

Gallus -----------------TTTCTGTGGCCTGAAATCAA---------------------CT 19673

Anopheles ------------------------------------------------------------

Homo GGCCAGAAAATAAATATTTTAGGCTTTATGGGCCATGTGGTTTCTGCCACAAG--TCCTC 32974

Pan GGCCAGAAAATAAATATTTTAGGCTTTATGGGCCATGTGGTTTCTGCCACAAG--TCCTC 32429

Drosophila ------------------------------------------------------------

Canis ---------------GTCCTTTGTTTT---GGTTGAGTGTTT------------------ 20298

Bos ------------------CTCTGTTGT---GATTAGGTGA-------------------- 2709

Rattus GCTTGCACGTTTGTGTGCACAACACATGTATGCAACCTCCCCTAAAAAACAAAACAAAAC 25505

Danio ACTT---------------------------------TTCCCTAAAGGGC---------- 1153

Mus GCCTCCATGTTTGTGTGCACAACACATGTATACACCACCCCCCAAAAAAGCCAG------ 23917

Gallus GTCTCT----------------------TCCCCAGCCTCCCCTAAAGTTGGTTT------ 19705

Anopheles ------------------------------------------------------------

Homo AGCTCTGTTCTTTTAGTGTGAAAGCAGCCATAGATGATACCTAAATGAATGAGTA----- 33029

Pan AGCTCTGTTCTTTTAGTGTGAAAGCAGCCATAGATGATACCTAAATGAATGAGTA----- 32484

Drosophila ------------------------------------------------------------

Canis -GATTGATTTTTGTATTGTGAA-GCATTCTAACATTCT------AGGAATAAATC----- 20345

Bos -----GGTTCTTA------------ATTCTTAAA----------AGGAA-GAAT------ 2735

Rattus AAATTGATTCATTCAAAATAGAGTTGTTATTTGTATGCTATTG-------GTTTCTCGAA 25558

Danio ----TAGTTCACCCAAAATTGAA---------------------------GTTT------ 1176

Mus AAATCAATTCATCCAAAATAGAACTGTTATTTGTATGCTATCA-------ATCCCTTGAA 23970

Gallus --AGCATTCTACACATCATGGGCTGG------------------------GTGTCTTG-- 19737

Anopheles ------------------------------------------------------------

Homo ----TGGCTGCATCCCAATAAAACTTCATTTACAAAACTACATGGCTGGCCTAAGCTTTA 33085

Pan ----TGGCTGCATCCCAATAAAACTTCATTTACAAAACTACATGGCTGGCCTAAACTTTA 32540

Drosophila ------------------------------------------------------------

Canis ----CCACTTGGTAATGATAAAACTCTCCTGAT---------------GTGTTAATTGAA 20386

Bos ------------------TAAAATTC---------------------------------- 2743

Rattus ATCTTTTAGACTTTT--GCATCTTATTTAGTAGGAATTTTTTCCCATGACTGTTAAC--- 25613

Danio ------------------------------------------------ACTGTTAA---- 1184

Mus ATCTGATAGACATTT--GCATCTTATTTAGTAGGACTTT---------ATTTTAAACCAA 24019

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTCTGTCTGCCTAGGGAGTAGTTTACTGAGCCACTAATCTAAAGTTTAATACTGTGAGTG 33145

Pan GTCTGTCTGCCTAGGGAGTAGTTTACTGAGCCACTAATCTAAAGTTTAATACTGTGAGTG 32600

Drosophila ------------------------------------------------------------

Canis TTCTACTTGACTA----GTATTTTATTGAG-----------GATTTTTACA--------- 20422

Bos ------------------------------------------------------------

Rattus GTTCTACAAAGCATTCTTAGTTTCTCTTTGTTTCACATATTGAAAGTGTTTGCAAGTTTT 25673

Danio ----------------TTAACTTGCCCTC----TAGATATTCAGAATGTGGGTGACTTT- 1223

Mus ATTCTAGAAAGCATCCTTAGTTTCTCTTTGTGTCACATATTGGAACTGTTTGCAAGTTAT 24079

Gallus -----------------TAGGTTATGG-------ACGTAGTGTGAATTGCTGTAGCTTC- 19772

Anopheles ------------------------------------------------------------

Homo AATACCAGTGAGTACCTTTGTTAATGTGGATAACCAATACTTGG-CTATAGGAAGTTTTT 33204

Pan AATACCAGTGAGTACCTTTGTTAATGTGGATAACCAATACTTGG-CTATAGGAAGTTTTT 32659

Drosophila ------------------------------------------------------------

Canis -----------------TCACTAATCAGGG------ATATTGGT-CTGTA-----TTTTT 20453

Bos -------------------ACCAA--AGGG------ATGTAGG----------------- 2759

Rattus GTTGAATTTATCCTCAGAATACATACATTTCAGCCACTTTAAAAAGCATTTTTAGTAC-A 25732

Danio ------------------------------------------------------------

Mus GTTGCATTTATCTTCAGAATA----CATTTCAGCTTCTTTAAAAAGCATTTGTAGTACCA 24135

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAGTTGTGTGTTTTATTACACG-------------------------------------- 33226

Pan TAGTTGTGTGTTTTATTACACG-------------------------------------- 32681

Drosophila ------------------------------------------------------------

Canis CTTTTCTTTGTCTC---------------------------------------------- 20467

Bos -----CTTTAT------------------------------------------------- 2765

Rattus TTGCCATCTTTTGATGAGGGACATCATTGTTTCTCAGTACT--TTTGTTCCTACCTCTTT 25790

Danio -------CTTTTG---------------------TAGAACT--TTAGTT--------TTT 1245

Mus TTGCCATCTTTTGATAAGGGACATCATTGTTTCTCAGTACT--TTTGTTCCTACCTCTAT 24193

Gallus ----CCGACCTAGAGGGGG---------------CAAAGCT--GAGGTGGGCTACTTACA 19811

Anopheles ------------------------------------------------------------

Homo ----TATTTGACTTTGTGAATAATTATGGCTTATAATGGCTTGTCTGTTGGTATCTATGT 33282

Pan ----TATTTGACTTTGTGAATAATTATGGCTTATAATGGCTTGTCTGTTGGTATCTATGT 32737

Drosophila ------------------------------------------------------------

Canis -----ATTTTGGTATCCGGGTAATGCTGGCTTCATGGGATGAGTTTG------------- 20509

Bos -----ACTTTAG------------------------------------------------ 2772

Rattus TTTTTCTCT-TAACTCAGTGGGCTTTTCTGATTAAAAAAA-GTTAAACCATCTTTTCTAT 25848

Danio TTTTTTTTT-TAGCTC---------------TTAAGA-----TTA--------TTTTTA- 1275

Mus TTACTACCAACAATTCAATGGGCTTTTCTGATTAAAAAAAAGTTAAGCCATCTTTTCTAT 24253

Gallus TTGCACTGTATAACCTAGTGG---------ATGAAAAAGAAACAAAGAATGCTTTCCCTT 19862

Anopheles ------------------------------------------------------------

Homo ATAGCGTTTACAGTTTCCT------------TTAAAAAA-CATGCATTGAGTTTTTTAAT 33329

Pan ATAGCGTTGACAGTTTCCT------------TTAAAAAAACATGCATAGAGTTTTTTAAT 32785

Drosophila ------------------------------------------------------------

Canis GAAGTGTTTTCAGTTTT-T------------TGGAGAAATTAGAGATGGA--TTCTTACT 20554

Bos ------------------------------------------------------------

Rattus ACTG---TTTTCAGAGGTTTCCTGTT--------------TCTTAAATTATGATTAGAAA 25891

Danio GCTG---AAACTGGGG------TGTT--------------TG-------GTGATTCGAA- 1304

Mus ACTCAACTTTTCAAAGGTTTCCTATT--------------TCTTAAACTATGGTTAGAAA 24299

Gallus TCCA---TTTTTAGAA---------------------------------ATGCACTGGAG 19886

Anopheles ------------------------------------------------------------

Homo AGTCCAACCCTTAAAATAAATGTGTTGTATGGCCACCTGATCTGACCACTTTCTTTCATG 33389

Pan AGTCCAACCCTTAAAATAAATGTGTTGTATGGCCACCTGATCTGACCACTTTCTTTCATG 32845

Drosophila ------------------------------------------------------------

Canis AATCC--CTTTTTAAATCATTG-------------------------------------G 20575

Bos ------------------------------------------------------------

Rattus TTGATATTGCCCTATGTGAACTGGCTCTTTCATTTATGTGA------------------- 25932

Danio -----------------GAATTGGCTCTTT-------ATCA------------------- 1321

Mus TTGATACAGCCCT----GAACTGGCTCTTTCATTTATGTGA------------------- 24336

Gallus -----------------GAAATTCTTTTCTTGTACAAAGAA------------------- 19910

Anopheles ------------------------------------------------------------

Homo TTGACATCTTTAATTTTAAAACTGTTTTATTTAGTGCTTAAATCTTGTTTACAAAATTGT 33449

Pan TTGACATCTTTAATTTTAAAACTGTTTTATTTAGTGCTTAAATCTTGTTTACAAATTTGT 32905

Drosophila ------------------------------------------------------------

Canis TGGAATTCTCCA---CTGAAACTGTCTGGTCCTGTGTTT--------------------- 20611

Bos ------------------------------------------------------------

Rattus ----------------------TATCTTGTACTAGCTTTATGTTCTTCACCTGCAACTTT 25970

Danio ----------------------TACATTG----------ATGT----------------- 1332

Mus ----------------------CATCCTGTACTAGCATTATGTTCTTAACCTGCAACTTT 24374

Gallus ----------------------GAGTATT-----------TATCCTAGGATGGCAAGTTT 19937

Anopheles ------------------------------------------------------------

Homo CTTCCTAAGTAATATGTCTACCTTTTTTTTTGGAATATGGAATATTTTGCTAACTGTTTC 33509

Pan CTTCCTAAGTAATATGTCTACCTTTTTTTTTGGAATATGGAATATTTTGCTAACTGTTTC 32965

Drosophila ------------------------------------------------------------

Canis ----------------------TTCTTTGTTGGTAGGT------TTTGGTTTACTGATTC 20643

Bos ------------------------------------------------------------

Rattus TGAGGTTTTAAACCTGG----CACTGACTCTTCTGTC----------------TTGAGTT 26010

Danio ------------------------------------------------------------

Mus TGAGGTTTTAGTTCTGGAACTTACTGACTGTTCCCTC----------------TTGAGTT 24418

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCAATTGCATTTTACAGATCAGGAGAACCTCAGTCTGACGACATTGAAGCTAGCCGAATG 33569

Pan TCAATTGCATTTTACAGATCAGGAGAACCTCAGTCTGACGACATTGAAGCTAGCCGAATG 33025

Drosophila ------------------------------------------------------------

Canis ----------------------GATATCTTTACT-------------------------- 20655

Bos -------------------------ACCTTTGC--------------------------- 2780

Rattus AACCTGCATTTTTTTTTTTTT-----CTTGTTTGAGAATTCTTACATAATGCCTGTCAGA 26065

Danio ------CATCTTTTGCT------------------AAATTATTGCATAGCGC-----AGA 1363

Mus AATCTACGTGTTTTTCTTTTTT---ACTTGTTTCAGAATTCTTAGATAATGCCTGTCATA 24475

Gallus -----GCTTGTCCTCCTTCATGCAAACCTGTACCAGAAGTGCTGCCTAGCTGCTTGCATA 19992

Anopheles ------------------------------------------------------------

Homo TAAGTGTAACTTGGTTGAGACTGTGGTTCTTATTTTGAGTTGCCCTAGACTGCTTTAAAT 33629

Pan TAAGTGTAACTTGGTTGAGACTGTGGTTCTTATTTTGAGTTGCCCTAGACTGCTTTAAAT 33085

Drosophila ------------------------------------------------------------

Canis ------TAGGTTGCTTCAGATT-----------TTTTATTTACTTATGATTCTGTTCTGT 20698

Bos -------------CTCCAGGTT-----------TT--ATTTCCCAA-------------- 2800

Rattus GGTGT-----CTTTTCTGAGTGACTGTGTCAAA-------------CTATGAT------- 26100

Danio --------------------TAACTG---------------------------------- 1369

Mus GGTAT-----CTTTTCTGAGTATCTCTATCAAA-------------ATATGATTGTGTCC 24517

Gallus GGAGTATAGGTTTTGTGGAGTAACTG---------------------------------- 20018

Anopheles ------------------------------------------------------------

Homo TACGTCACATTATTTGGAAATAATTTCTGGTTAAAAGAAAGGAATCATTTAGCAGTAAAT 33689

Pan TACGTCACATTATTTGGAAATAATTTCTGGTTAAAAGAAAGGAATCATTTAGCAGTCAAT 33145

Drosophila ------------------------------------------------------------

Canis TAGATTATATGTTTTACAAGTATATTCATGT--------------CTTCTAGA------- 20737

Bos ---------------ATAAGCAAACTCA-------------------------------- 2813

Rattus ------CTCGGTTCTTACTAGTTTTCTTTCTAAGATTTAATATCACTT------------ 26142

Danio --------------------------------------AACATTATT------------- 1378

Mus CATCTTCTCAATTCTTACTATTTTCCTTTCTGAGATTTAGTATCACTTCATT-------T 24570

Gallus --------------------------------------ACAACTACTA------------ 20028

Anopheles ------------------------------------------------------------

Homo GGGAGATAGGAACATACCTACTTTTTTTCCTATCAGATAACTCTAAACCTCGGTAACAGT 33749

Pan GGGAGATAGGAACATACCTACTTTTTTTCCTATCAGGTAACTCTAAACCTCGGTAACAGT 33205

Drosophila ------------------------------------------------------------

Canis -----------------TTATTCAGTTTGTTGGCATATATCGTCAAC-------AACAGT 20773

Bos ----------------------CAAATTGTCAATGTATAACATTAA-------------- 2837

Rattus --TCTAAGATTT------------------------------------------------ 26152

Danio ------AAATTA------------------------------------------------ 1384

Mus CTTTTAAGGTCTCAGTAGAATGGGAACCTAATGTTCTGTTTATATTTAACAGTCTAACAA 24630

Gallus ----TATGGACA------------------------------------------------ 20036

Anopheles ------------------------------------------------------------

Homo TTACTAGGTTTCTACTACTAGATAGATAAATGCACACGCCTAAATTCTTAGTCTT----- 33804

Pan TTACTAGATTTCTACTACTAGATAGATAAATGCACACGCCTAAATTCTTAGTCTT----- 33260

Drosophila ------------------------------------------------------------

Canis CTCTTACGATCCT--------------------------------TTTTATTCTT----- 20796

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus AAAGAAACTTAGGGGAGTAAAGGGTTTATTTCAGCTTACATGTTATAGGCCATCGTTCAA 24690

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -----------------------TTTGCTTCCCTGGTAGCAGTTGTAGGGAAATAGGGAG 33841

Pan -----------------------TTTGCTTCCCTGGTAGCAGTTGTAGGGAAATAGGGAG 33297

Drosophila ------------------------------------------------------------

Canis -----------------------GTGGCATCAATGTTGATATTCCC-------------C 20820

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus AGTAGTCAGGGCAGGAACTTTATACTGTTGCTGACTCAATTTTCAGACCTAAGCATTGCT 24750

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTTGAGGAAAGAGTTGAGTTTAACAGTCTCAACGCCTACCATATTTAAGGCATCAAGTAC 33901

Pan GTTGAGGAAAGAGCTGAGTTTAACAATCTCAACACCTACCATATTTAAGGCATCAGGTAC 33357

Drosophila ------------------------------------------------------------

Canis ATTATTGAAAGTG--GAGTATGGAAATGTC-----CTACTAT---------------TAT 20858

Bos ------------------------------------------------------------

Rattus AATATCACTTGATT-----TCTTTTAAGGTCAGTTTGCC--------------------- 26186

Danio TACACCACCT------------------------CTGCA--------------------- 1399

Mus AACACCACTTACTT-----ACAGTCCAAAACCACCTGCCTAGGGAATGCTATTATCCACA 24805

Gallus GATGTCACTCAG-------------------AGGTTGCA--------------------- 20056

Anopheles ------------------------------------------------------------

Homo TATGTTATAGATACAGAGATGCGTAATAATTAGTTTTCACCCTACAGAAATTTATATTAT 33961

Pan TATGTTATAGATACAGAGATGCGTAATAATTAGTTTTCACCCTACAGAAATTTATATTAT 33417

Drosophila ------------------------------------------------------------

Canis TGTGTTACT---------ATTTGTCTTAGTTCTTTTTC---------------------- 20887

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus GTACACTGGTCCCTCTTACATCAATCAAGACCTTCCCCTTTCCCCCAGTCACACCCATGG 24865

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ACTCAAGAGTGAAAGATGCAGAAGCAAATAATTTCAGTCACTG----------------- 34004

Pan ACTCAAGAGTGAAAGATGCAGAAGCAAATAATTTCAGTCACTG----------------- 33460

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus GCCAGTTTAATCTAGGTAGTCCCTCAATTGAGAGTCCCTTAGGTCACACTACACATTAGA 24925

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo --------------------------------------------------AGGTAGAATG 34014

Pan --------------------------------------------------AGGTAGAATG 33470

Drosophila ------------------------------------------------------------

Canis -----------------------------------------------------------G 20888

Bos ------------------------------------------------------------

Rattus ----------CATGATT--------CTTGAATG--------------------------- 26201

Danio ----------CA-AACT--------CCTGAACA--------------------------- 1413

Mus CTATCAAATTCACAACTAAAGCTACCTTGAATACGTAGCAAAATATATAAGGAATAGTTA 24985

Gallus ----------------------------GGGCA--------------------------- 20061

Anopheles ------------------------------------------------------------

Homo GTATCCAAAATACAATAGTAACATGAAGGAGTACTGGAGTACCCAGGTATGCAATAGGAA 34074

Pan GTATCCAAAATACAATAGTAACATGAAGGAGTACTGGAGTACCCAGGTATGCAATAGGAA 33530

Drosophila ------------------------------------------------------------

Canis GTGTTTAAAATA------------------------------------------------ 20900

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus GTTAATGAGTTAATGCTTGCTTACTAAGTGTTAGTGAAAAATCATTAAATGTATGAAAAA 25045

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCTAGTGTAGATGGCAGGGAAGTAAGAGTGGCCAGGAAATGCTAAGTTCAGTCTTGAAAT 34134

Pan TCTAGTGTAGATGGCAGGGAAGTAAGAGTGGCCAGGAAATGCTAAGTTCAGTCTTGAAAT 33590

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------TTTTTTCAGATTTTATT------- 26218

Danio ------------------------------------TATTT------------------- 1418

Mus TATTTAGTGTCTCAGAAATATATTGTGGTAGCAGTTTATTTCTAAATAACTAT------- 25098

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTGACTGGGAATCAGGCAGCTAGAAGCATGAGCGGCTTATTCCAGGCAGAAGTATGAGCC 34194

Pan GTGACTGGGAATCAGGCAGCTAGAAGCATGAGCGGCTTATTCCAGGCAGAAGTATGAGCC 33650

Drosophila ------------------------------------------------------------

Canis ----------------------------------------TCCGGG-------------- 20906

Bos ------------------------------------------------------------

Rattus -----------------------TATTTATTT---------------------------- 26227

Danio ------------------------------------------------------------

Mus -----------------------TACATATTCTCAGCCTGTGATTATGAGGGATAATACA 25135

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAAGTTAGAAGCAGCATAGGGAGTAGGGGACAATAGGCAGTTGAGGACTTTTAGATCATA 34254

Pan AAAGTTAGAAGCAGCATAGGGAGTAGGGGACAATAGACAGTTGAGGACTTTTAGATCATA 33710

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TAACATCTTAAGAATATGCCATTTGACAAATCACTTTGCCTTGTTGATCCTTGAATGTTT 25195

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AACTAGCTGAGAGGTAGGAAAATGAAGAAGATAAGATGTGATAGAAGGTATTAGGGAGTC 34314

Pan AACTAGCTGAGAGGTAGGAAAATGAAGAAGATAAGATGTGATAGAAGGTATTAGGGAGTC 33770

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------ATTTTTTTGTGAGAACTGAGCCTT-----TTTATCAGGGTTACCTCTGGTTTT- 26275

Danio -----------------GGCGCTAGGC--------------------------------- 1428

Mus TTTCAGAATTTTTTATGAGAGCTGAACATT-----TTTATCAGGGTGACTTCTGGTTAT- 25249

Gallus -----------------AAGGCTCTGC-------------CATAATGTCTTCTGGTGAT- 20090

Anopheles ------------------------------------------------------------

Homo AGCAAAGAATTTGCTCAGTAGGTAGATAGTAAGTTTGTCAAACGTGTATTTTTAATAACC 34374

Pan AGCAAAGAATTTGCTCAGTAGGTAGATAGTAAGTTTGTCAAACGTGTATTTTTAATAACC 33830

Drosophila ------------------------------------------------------------

Canis -----------TGCTCTTCTGTTAGGTGT------------ACATATATTTATAATTGT- 20942

Bos -----------------------------------------ACATATATTTATAATA--- 2853

Rattus --------------------------AAGGTCAG-------------------------- 26283

Danio ------------------------------------------------------------

Mus --------------------------AAGATCGG-------------------------- 25257

Gallus --------------------------GAAGCAGC-------------------------- 20098

Anopheles ------------------------------------------------------------

Homo TTGCAAGAGAGAAAGGATTGAAGAGAAACGTGTGGTGGTAAGGTAGTTCAGTCAGTGAGA 34434

Pan TTGCAAGAGAGAAAGGATTGAAGAGAAACGTGTGATGGTAAGGTAGTTCAGTCAGTGAGA 33890

Drosophila ------------------------------------------------------------

Canis --------------------------AATGTAT--------------------------- 20949

Bos ------------------------------------------------------------

Rattus ----------------------------------------ATGCTTTTA-GTTTC----- 26297

Danio ------------------------------------------------------------

Mus ----------------------------------------ATGCTTTTAAGTTTC----- 25272

Gallus ----------------------------------------CTATTTTAGTGTTCC----- 20113

Anopheles ------------------------------------------------------------

Homo GCCTTGACAATGACAGTGGTATAATAGGAATTCAAAATAAATTTTTCTGGATTTAAGACA 34494

Pan GCCTTGACAATGACAGTGGTATAATAGGAATTCAAAATAAATTTTTCTGGATTTAAGACA 33950

Drosophila ------------------------------------------------------------

Canis -----------------------------------------TTCTTGTGAATT------- 20961

Bos ------------------------------------------------------------

Rattus -------------TGTGTGAAACTAAACT--AATTGTTGTTGGTTC----------TGTT 26332

Danio --------------ATGTG--------------------------C----------TGTT 1438

Mus -------------TGTGTGAAACTGAACTCTAATTATAGGTGGTTC----------TATT 25309

Gallus -------------TGGAGCAAATTGGGTTATGTTTCTCCGTTTTCC----------TGGC 20150

Anopheles ------------------------------------------------------------

Homo AATATTTAGGACATGAAGTAAGTAAGACTTTAGTGATTTATTGTGAAGACTAAAGATGTT 34554

Pan AATATTTAGGACATGAAGTAAGTAAGACTTTAGTGATTTATTGTGAAGACTAAAGATGTT 34010

Drosophila ------------------------------------------------------------

Canis -----------------------AACCCTTTAATTATTTGATGTGT----------TGTT 20988

Bos ------------------------------TAATCACCCAAT------------------ 2865

Rattus TTCAAAAATTTCGTTTCTGGGTTTTGTGAGCATACTTTTGGTCAGATTGAACCTTTGAAA 26392

Danio TT--AAGATTC--------------------------------------------TGACG 1452

Mus TTCAAAAATTT---TTCTGGGTTTTTTGAGCATACTCTTGGTCAGATTGAACCTTTGAAG 25366

Gallus CTAAACAATTG------------------------------------------TGTGGCT 20168

Anopheles ------------------------------------------------------------

Homo TCAGATAATAGAGGTAGTAATTATCA-----------------AAGCAAAGTTTTTCGAG 34597

Pan TCAGATAATAGAGGTAGTAATTATCA-----------------AAGCAAAGTTTTTCGAG 34053

Drosophila ------------------------------------------------------------

Canis TCTTACTATA---GTTTTTAACTTGA-----------------AAGT----TTTTTTGTG 21024

Bos TCCTATTGT--------------------------------------------------- 2874

Rattus GTTCTTT--------------AATCTAAGGTTAACCTTCTAATATGAGGAAGAAATTTAC 26438

Danio GT-------------------------ATGGTAACCTT---------------------- 1465

Mus GTTCTTT--------------AACCTAAGATTAGCCTTCTAATATGGAGAAGAAATCT-- 25410

Gallus GT-------------------AGCCTGGCTATAGTCTTC--------------------- 20188

Anopheles ------------------------------------------------------------

Homo GTATTAAGGGTTGGAATGAAAAATACAGGTGTATCTCTCATACAGGTAATATAAAAAAAG 34657

Pan GTATTAAGGGTTGGAATGAAAAATACAGGTGTATCTCTCATACAGGTAATATAAAAAAAG 34113

Drosophila ------------------------------------------------------------

Canis GTGT------------------ATGTGTATATGTCTATCATATACATATTT--------- 21057

Bos ------------------------------------------------------------

Rattus CTAATTTGACCTGTTTTTCTTTAAAGTCAAATAACTAGAGAAACACCAACTGAAAAATCT 26498

Danio ----------------------------GGATAA------AAACATCA------------ 1479

Mus -------GAGAAGTTTTTCATCAAAGTCAAATAACTAGAGGAATACCAACTAAAAAAAGT 25463

Gallus ----------------------------------CCTGGGCGTTATCAGTTGATC----- 20209

Anopheles ------------------------------------------------------------

Homo AAAAATGCAGATATAGTG-ATTGACCTTGAATAAGAGGAAAGATGCCCATCTAATGAAAT 34716

Pan AAAAATGCAGATATGGTG-ATTGACCTTGAATAAGAGGAAAGATGCCCATCTAATGAAAT 34172

Drosophila ------------------------------------------------------------

Canis -AATATATATGTATGA---------------------GACTAATCCCTCTCTTTTTTGGT 21095

Bos ----------------------------------------TAATCT-------------- 2880

Rattus AAGCAATAACAAAAGAGAAATTGGAGATTGTTGAGTCTGTAATTTGGT-TCTTTGAAGAT 26557

Danio --------------------------------------------CGGT-T---------- 1484

Mus AAGCAATAACAAAAGAGAAATTAGAGATTATTGAGTCTGTAATTTGGTATTTTGGAAGAT 25523

Gallus ------------------------------------------TGCTGTTTTTTACCCACT 20227

Anopheles ------------------------------------------------------------

Homo TAGAACAAGGAA-----------------GTAAAGATGGATGTGTGATATTAATTGTAAT 34759

Pan TAGAACAAGGAA-----------------GTAAAGATGGATGTGTGATATTAATTGTAAT 34215

Drosophila ------------------------------------------------------------

Canis TA----------------------------------TTTGCATATGATCTCTTTTTCAAT 21121

Bos ------------------------------------------TGTGACTTATTTC----- 2893

Rattus ACAAGAAAAAGTTATAGGGTCACACTTTCCCTACTATATATATATCATGGATAATTAATG 26617

Danio ------------------------------------------------------------

Mus ACAAGGATTAGTTATTGGGTCATGCTTTCACTA--------------TATATAGTTAGTG 25569

Gallus GCAAAGACAGGCAA---------------------------------------------G 20242

Anopheles ------------------------------------------------------------

Homo TGTGGGTGAGGGTGGAAAAATCAAGATTTTTTT------------------------ACT 34795

Pan TGTGGGTGAGGATGGAAAAATCAAGATTTTTTT------------------------ACT 34251

Drosophila ------------------------------------------------------------

Canis CCTTTC-------------------ACTTTCAC------------------------ACT 21138

Bos ----------------------------------------------------------CT 2895

Rattus TGGAGTGGTGGA-------------GTCAGTGATTGCTGTTGGAGCACAGAAATGATATG 26664

Danio -----TGACGAA-------------ATC-GTGATCACTGCTC-----TAAGGGTGGTGCC 1520

Mus TGGAATAGTGGA-------------GTCAGTGATTGCTATTGGACCACAGAAATGATATG 25616

Gallus TAAGGTAATGAG-------------GACCCTGACAAGTGTGAA-----ATGAAGAATGTA 20284

Anopheles ------------------------------------------------------------

Homo GAAAATATTGGAACCTTATTTAAATGCCGGTATATATTGTGAATCTGCAAGAAACGACTA 34855

Pan GAAAATATTGGAACCTTATTTAAATGCCGGTATATATTGTGAATCTGCAAGAAATGACTA 34311

Drosophila ------------------------------------------------------------

Canis GAGTATATC-----------------CCTATATCTAATGTGAGTCCCTTATAGGTAGC-A 21180

Bos GAATA------------------------ATGTTTTATGTAAGT-----------GGC-A 2919

Rattus GAAACTTTGGGAATGGACTGTGATAATTAAGGACCATAGTGTTCTCAGCAGAAAGATAAT 26724

Danio CAAAC---------GAACCGT-------------------------ACCAAAAGGGGAA- 1545

Mus GAAACTTTGGGAATGAACTGTGATA--------------------TAACTAAGGACCA-- 25654

Gallus TAAAGACGGGGGATAAATCAG-------------------------AAAGAAGAGCCAA- 20318

Anopheles ------------------------------------------------------------

Homo TAAAATGTATTTCTCAAATTTATGTGACCCAACCATGTGACTTGTCTTTTAAGCTTTAAA 34915

Pan TAAAATGTATTTCTCAAATTTATGTGACCCAACCATGTGACTTGTCTTTTAAGCTTTAAA 34371

Drosophila ------------------------------------------------------------

Canis TATAGC-TGTTTCTTTTTTTTTTA-AATCCATTCAGCCACTCTGTCTTTTGA---TTGAG 21235

Bos TGT------TTTCTT--------------------------CTGC------A---TTGAG 2938

Rattus TACCGGCAAGTCCACTAGACTGCATAGACTCAGTATTAGTGGAATGCAGAGGTTTAGGTG 26784

Danio -----------------------ACGAACTC-----TAGTGCGATTCA------------ 1565

Mus ------------------------TTGGTTGGTTATAAGTTGAATATC------------ 25678

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAA------------------------------TTGTAGTAAAATACACATAAT------ 34939

Pan AAA------------------------------TTGTAGTAAAATACACATAAT------ 34395

Drosophila ------------------------------------------------------------

Canis GA------------------------------------GTTTAATCCACTT--------- 21250

Bos G-------------------------------------GTATAAA--------------- 2946

Rattus ATGAGAGAGAGAGATATGAAACATGAAACTAAAAATAGAAAGGGACAGTTGATTATAGAC 26844

Danio ----------------------ATCGAACTAAATA-------AGGCAGGTG--------- 1587

Mus ----------------------TCCTGATTACTTTTCTCGTCAGATAGTT---------- 25706

Gallus -----------------------TACAACTATATTTTTCTTCTAGCAATT---------- 20345

Anopheles ------------------------------------------------------------

Homo ----GTAAAATTTTCCATTTCACCATTTTTAAGTATTTGGCTCAATGGTATTAAGTATAT 34995

Pan ----GTAAAATTTTCCATTTCACCATTTTTAAGTATTTGGCTCAGTGGTATTAAGTATAT 34451

Drosophila ------------------------------------------------------------

Canis ------------------------ATATTTAAAGTTATTACT-AATGGGA---------- 21275

Bos ------------------------GTATCTAA---TATTCCT-AGT-------------- 2964

Rattus ATGGAAATTGGTTGTAAGTTGAATATCTCTGATTACCTTTCTCCTCTGGTAGTCTGTATA 26904

Danio -------------------TGAA------------------------------------A 1592

Mus -------------------TGCAT-----------------------------------A 25712

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ----------------------------------------------------------TA 34997

Pan ----------------------------------------------------------TA 34453

Drosophila ------------------------------------------------------------

Canis -----------------------------------------------------------A 21276

Bos ------------------------------------------------------------

Rattus GCACTGTCAAGTTCTACAGATCCTAGTCAGTAGGGATCAAGCTTAAAGGTGAGTTTTTGC 26964

Danio GCAC-----------------CCTA------AGAAAT----------------------- 1606

Mus GCATTGTCAAGTTGTACAGATCCTAGTTAGTAGAGATCAAGCTTCAAGGTGAGTTTTTGC 25772

Gallus ------------------------------TGACAAT----------------------- 20352

Anopheles ------------------------------------------------------------

Homo ATATTGTTGCACAGTCACGATCAGAACTCTCTGTTTTGCAGAACTGAAACTCTGTACCCA 35057

Pan ATATTGTTGCACAGTCACGATCAGAACTCTCTGTCTTGCAGAACTGAAACTCTGTACCCA 34513

Drosophila ------------------------------------------------------------

Canis AAATTATTGCC--------------ATTTTTTGTTTT--------------TTGTATGGT 21308

Bos -AATTCT----------------------------------------------------- 2970

Rattus TTGACTTTTCCATTTCTTTACTAAAGT-CATTGCATCTTCAGCA-------------ATA 27010

Danio -----------ATTCTTTT--TAAA----------------------------------- 1618

Mus TTAATTTTTCCATTTCTTTACTGAAGTGTGTTATATCTTCAGTA-------------GTA 25819

Gallus -----------GTTTTCCTACTAAAA---ACTGAACCTGCAAAA-------------TTA 20385

Anopheles ------------------------------------------------------------

Homo TTAAACAATAATTCCTCATTTCCTTATCTTCACAGCCTCTGACAACCATTATTCTACTTT 35117

Pan TTAAACAATAATTCCTCATTTCCTTATCTTCACAGCCTCTGACAACCATTATTCTACTTT 34573

Drosophila ------------------------------------------------------------

Canis TTTAA-ATTAATTTTTCCTT--CTTGTCTGTGAGGTCTTC----------------CTTT 21349

Bos ----A-ATTA----------------------------------------------CAGT 2979

Rattus GTGTCTTA---TCACGTTCTGGAGGGTAACAAAAAACTAAGGAAATATATAGCCAACAG- 27066

Danio -TGTCT-----------------GGGTAAAAAA--------------------------- 1633

Mus GTGTCTTACTGTCAAGTTCTGGAGAGTAACCAAAAACTATGGAAATAAATAGCCAGCATT 25879

Gallus ACGTCT-------------------GCAGC------------------------------ 20396

Anopheles ------------------------------------------------------------

Homo GTGTCTAATTTTGACTGCTCTAAGTACCCCCTATAAGTGCAATCATACAGTTTTTGCC-- 35175

Pan GTGTCTAATTTTGACTGCTCTAAGTACCTCCTATAAGTGCAATCATACAGTTTTTGCC-- 34631

Drosophila ------------------------------------------------------------

Canis GTGTTTCGTT------------GGTATTTTTTTGTAGTGACATATTTTGATTCCTGTCT- 21396

Bos GTGCTT-----------------------------AGTGCCA------------------ 2992

Rattus ----------GATCACTGGAATGTCACTGGTCAACAACTCTAAAGAGGTTGAACTTTAAC 27116

Danio ------------------------------------------------------------

Mus GGAAGAGAGTGATCACTGGGATGTCACTGGTCAACAATTC--AAGAGGTTGAAGTTTAAT 25937

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ----------------------------------CTTTTATGATTGGCTT--------AT 35193

Pan ----------------------------------CTTTTATGATTGGCTT--------AT 34649

Drosophila ------------------------------------------------------------

Canis ----------------------------------CTCTTTTGTGTATCTTCTATAAGCAT 21422

Bos ------------------------------------------------------------

Rattus TTTTTTTTTTTA--ACAAAATTCTTTTTTCCTTTAAATAATTGTTGAGAA-TTTCATCCA 27173

Danio ---------------CAAAAAACTTTTTTCATCT-------------------------- 1652

Mus TTTTTTTTTTTTTTACAAAATTCTTTTTTCCTTTAAAAAAAT-TTGAAAA-TTTCATCTA 25995

Gallus --TTTTCTGTAAAAGTTGAAGTGTTTTTTTGTTTG---------------------TTTG 20433

Anopheles ------------------------------------------------------------

Homo TTTACTTCGCAGTGTCATCAAGTTTCATCCATCTTTAGCATGTTTCAAAATTTGCATCCT 35253

Pan TTTACTTCGCAGTGTCATCAAGTTTCATCCATCTTTAGCATGTTTCAAAATTTGCATCCT 34709

Drosophila ------------------------------------------------------------

Canis TTTCTTTCTGGTTACCATGGAGATT-----ACATAAAACATCTTATAG---TTGTAATCT 21474

Bos ----------------------GTT-----AGATGA------------------------ 3001

Rattus GTCACTAATTGAATATAATCACTTCCTCAACCTC----CTTACAGCCTTCTCAACCCTTT 27229

Danio --------TTGAACACAAT----------------------ACA---TT----------- 1668

Mus GTCTCTAAATGAATATAATCACTTCCTCAACTCCTCCTCTTACAGCCCTCTCAACCCTTC 26055

Gallus TTTTGTGCAGAACGATGATCAGAC------------------------------------ 20457

Anopheles ------------------------------------------------------------

Homo TTTTCAGGCTGAATAATGTTTTA-TTGTATGTATATACCACATTTTGCTTATCCATTTAC 35312

Pan TTTTCAGGCTGAATAATGTTTTA-TTGTATGTATATATCACATTTTGCTTATCCATTTAC 34768

Drosophila ------------------------------------------------------------

Canis GTTTCAAACTGATAGCAATTTCAATTGCATACAAAAA---CAGCTCCTTTACATCTCTCC 21531

Bos ---------TGATGAAAAT-------------AGAAC---TACCTCTTCTGAATATTTCT 3036

Rattus CA-----------------TTATTTTAAGATTATACTTTTTTCAAATTTTTTCATCTTCA 27272

Danio -------------------TTATTTAGAGA------------------------------ 1679

Mus CA-----------------TTATTTTAAGATTATACTTTTT-CAAACTTTTTTTCCTTTA 26097

Gallus -------------------TTGCTCTGACTACAT-------------------------- 20472

Anopheles ------------------------------------------------------------

Homo CTGTTGATGAGCGCTCAGGTTGCTTCCATGTTGTAGCTATTACAGATAATGTTGCTATGA 35372

Pan CTGTTGATGAGCGCTCAGGTTGCTTCCATGTTGTAGCTATTACAGATAATGTTGCTATGA 34828

Drosophila ------------------------------------------------------------

Canis CC--------------------CCTTTTTGTTATTATTGACACAAATTATGT-------- 21563

Bos CC--------------------TTTCTCT--------TGA-------------------- 3048

Rattus T----------------TCTCCATTGAATTAATATTTGTATTGTCAAGCTAGCCTTGGAA 27316

Danio ------------------------------AACATTT----------------------- 1686

Mus T----------------TCTCCATTGAGTCTAGTTTTGCATTGTCAGGCTAGTCTTGGAA 26141

Gallus ------------------------------AGGTTTTA---------------------- 20480

Anopheles ------------------------------------------------------------

Homo ACAGGAGTGTACAAATATCTTTTTGAGACCCTGCTTTGAATTGTTTTCCCAGAAGTGGAA 35432

Pan ACAGGAGTGTACAAATATCTTTTTGAGACCCTGCTTTGAATTGTTTTCCCAGAAGTGGAA 34888

Drosophila ------------------------------------------------------------

Canis ------------------CTTTTTA------TGTTTTATATCATCT-------------- 21585

Bos ------------------------------------------------------------

Rattus TTTGGGCCTGATGTAGTGTGTTATCACCCTACCAGGGGTTCATAAGATACTTGTAATGAC 27376

Danio -------------------------------------------AAAGTATTT-------- 1695

Mus TTGGGACCTGCTGTAGTGTGTAGTCAGATTACCAGGGGTTCATAAGACACTTGTGGT--- 26198

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTGTTGGATCATATGGTA----ATTTTATTTTTAAAATTTTGAGAAACTGCCATACTCTT 35488

Pan TTGTTGGATCATATGGTA----ATTTTATTTTTAAAATTTTGAGAAACTGCCATACTCTT 34944

Drosophila ------------------------------------------------------------

Canis ----------------------ACCATATATTTACAATTCTAAAAAA-TGTTTTCATCTT 21622

Bos ------------------------------------ACTCTGGGGAA-TGTT-------- 3063

Rattus AGCTCTATTTCTCTGCCAACTCCTCCTCCCCCAGCCCTGCTGGGATTTTGACTGGCTGAA 27436

Danio --------------------------------------------------------TGGA 1699

Mus AGGATGACATCTCTACC--------CCCACCCCCCCATGCTGGGGTTTTGGCTGGCTGTA 26250

Gallus --------------------------------------------------------TGTG 20484

Anopheles ------------------------------------------------------------

Homo CCAGAGCAAC-TGTACCTATTTGCGTTTCTACCACTAGTGCA----CAAGGGGTCCAGTT 35543

Pan CCAGAGCAAC-TGTACCTATTTGCATTTCTACCACTAGTGCA----CAAGGGGTCCAGTT 34999

Drosophila ------------------------------------------------------------

Canis TCAGATCTGCCTGAATTGATTTAC----TCACCACTATTACAGTATTAGAAGATTCTGTA 21678

Bos ------------------ACTTAC----CTACC--------------------------- 3074

Rattus GCTTGAGTATATTATCGTAAGGGTTTATCAT----AAGTTCATATATGCACCTAGTCTGT 27492

Danio GC---AGTAAAC-AT-GTGAGGGTAAATCAT--------TCAAATAT--ACC-------- 1736

Mus GCTTGGGTGTATTATCGTAATGACTTGTCAT----AAGTTCATATATGCATCTAGTCTCT 26306

Gallus TCTAAAATATACACTAGCCA-GTCAAACTAT----AGAGATCCGTGTATACCT------- 20532

Anopheles ------------------------------------------------------------

Homo TCT---CTACATCCTTGCCATCACATATTGTGTGAGAGTGTGTGTGTGTGTGTACTTCAA 35600

Pan TCT---CTACATCCTTGCCATCACATATTGTGTGAGAGTGTGTGTGTGTGTGTACTTCAA 35056

Drosophila ------------------------------------------------------------

Canis TTTG-CCTATATATTTAACTTTACCAAATATCTTTATATTTTTGCATGATTTTATATTGT 21737

Bos ------CTATAT------------------------------------------------ 3080

Rattus TGT--------------------------------------------------------C 27496

Danio ------------------------------------------------------------

Mus TG---------------------------------------------------------C 26309

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAGTAGTCATTGTAGTGGATATAAGGTAGTATGTTACTGTAGGTTAGTGACCACGAAACT 35660

Pan TAGTAGTCATTGTAGTGGATATAAGGTA---TCTTACTGTAGGTTAGTGACCACGAAACT 35113

Drosophila ------------------------------------------------------------

Canis TTACAGTCCTT--------------------TTTTATTGTT----------------ATT 21761

Bos ------------------------------------------------------------

Rattus TCTTGGAAAAGACTGTTTCCTTGAAGTTGTCTACCATCTGTGAATGACCAACTTTCCAGC 27556

Danio -------ATAGACT---------------TCTGCTGTCT--------------------- 1753

Mus TCTTGGAAAAGACTGTTTCCTTGAAGTTATTTACCACCTGTGAGTGACCATCTTTCCAGC 26369

Gallus --------ACCACT-------------CATATACAGCCTCAA------------------ 20553

Anopheles ------------------------------------------------------------

Homo TTTTATGAAACATTTTTTAAT--------AATATTTTGTGGAATACAAGGTTTGTTTAGA 35712

Pan CTTTATGAAACATTTTTTAAT--------AATATTTTGTGGAATACAAGGTTTGTTTAGA 35165

Drosophila ------------------------------------------------------------

Canis GTTGTTGAAAGACTTTTTG------------TATTTTTTGTAAGGCAGG-----TCTAGT 21804

Bos ------GAGGCACCTTTTG------------TGT-------------------------- 3096

Rattus CCTTTGGG-TGAGATGAATGTCT---------------------GATTTGGGACTGATTT 27594

Danio ------------------------------------------------------------

Mus TCTTTGGGGTGAGATAAATGTCT---------------------GATTTGG--------- 26399

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GGTTTTGAGAAGACTGAAAACTTAGGAAGCTACTGAGGGGAATGGGTGAAGAAGTGGATC 35772

Pan GGTTTTGAGAAGACTGAAAACTTAGGAAGCTACTGAGGGGAATGGGTGAAGAAGTGGATC 35225

Drosophila ------------------------------------------------------------

Canis AGTGATGA----ACTGTCAGCTT------------------------------------- 21823

Bos ------GA----AATG-------------------------------------------- 3102

Rattus GGGATTGAGCACCCCACAATTTTTCTTTTCTTGCCATGCTTACCAGTTTTGGGGTAGGA- 27653

Danio ---------------------------------------TCATTAGTTTC-----AAAA- 1768

Mus --GATTGAGCACTTAACACTTTCT-TTTTCTTGCCATGCTTACCAGTTTTGGAATAGGA- 26455

Gallus ---------------------------TACATAGTATACTTGCAAGTTTT----TAGGA- 20581

Anopheles ------------------------------------------------------------

Homo AGAAGTTGAGAGTCTTGACTGGCTGGCTACCTGAAATCAGAAACCGTATCAGAGTAGGAG 35832

Pan AGAAGTTGAGAGTCTTGACTGGCTGGCTACCTGAAATCAGAAACCGTATCAGAGTAGGAG 35285

Drosophila ------------------------------------------------------------

Canis ----------------------TTGTTTATCC----------------------CTGGAG 21839

Bos ------------------------------------------------------------

Rattus ----TCATCT--GTTATTTGCCATATGTTATGAAGCAAAACTTCTTTAGTGAAAGCTAAG 27707

Danio ----TCAT-------------------------------ATTTCTTTA------------ 1781

Mus ----TCATCTCTGTTACTTGCCATATGTTACGGAGCAAAGCTTCTCTAGTGAAAGCTAAA 26511

Gallus ----CTAT---------------------------------------------------- 20585

Anopheles ------------------------------------------------------------

Homo AATCTCATTCCACTGAGTGACTAGTTAAGATTAAAGACTTTATCACATTTGAAATTTAAA 35892

Pan AATCTCATTCCACTGAGTGACTAGTTAAGATTAAAGACTTTATCACATTTGAAATTTAAA 35345

Drosophila ------------------------------------------------------------

Canis GTCTTTATTCT-------------------------------CCATTCCTGAGGGTCA-- 21866

Bos ------------------------------------------------------------

Rattus A-AATGTGCTTTTCCCTGGGTATAGCAAT---------GAGTAATTTTAGTATTATG--- 27754

Danio -----------------------------------------TAATTT----ATAATG--- 1793

Mus ATAATGGGCTTTTCTCGGGATATAGCAATAATCATTAGGAGTCATTTTAATATTATG--- 26568

Gallus -------------------------------------------ATCATGATGTGATG--- 20599

Anopheles ------------------------------------------------------------

Homo G--------ACTTTTCTCCAATAGCCAGAAGATTATGCATGGTATTTTAGGGTTGGATAT 35944

Pan G--------ACTTTTCTCCAATAGCCAGAAGATTATGCATGGTATTTTAGGGTTGGATAT 35397

Drosophila ------------------------------------------------------------

Canis ---------GTTTTTCT-----------------ATATATGGTATTTTTGGTTTGTA--- 21897

Bos ----------------------------------GTATAT----TCTTTGATTTA----- 3119

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAGCAGAGCTGATGGAACAGAATCATTAGTGGCATGTGCATAAGATGTTAACATTGGAGT 36004

Pan TAGCAGAGCTGATGGAACAGAATCATTAGTGGCAAGTGCATAAGATGTTAACATTGGAGT 35457

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATTTGAATTTATATGCTGTGGATGATGGCCATGATTGGAAAGGTTGGGATGCCAGACCAA 36064

Pan ATTTGAATTTATATGCTGTTGATGATGGCCATGATTGGAAAGGTTGGGATGCCAGACCAA 35517

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ----------GATGTTTAGCAGAGTAATGGTATAGACTCTAACCTAGGGCCTATGACCTT 27804

Danio ----------CAT-------------------TGGA-----------------------T 1801

Mus ----------TGCATTTAGCAGAGTAATGGTATGGGTTCTACCCTAGGGCCTATTACCTT 26618

Gallus ----------TATATGT---------------------------------------CACC 20610

Anopheles ------------------------------------------------------------

Homo AGTGTTGAGTTGTTTTAAGAAAAGCCTGAGGTCTAGATAACAGCAAGATGGCAGACTAGC 36124

Pan AGTGTTGAGTTGTTTTAAGAAAAGCCTGAGGTCTAGATAACAGCAAGATGGCAGACTAGC 35577

Drosophila ------------------------------------------------------------

Canis --------GTTATTTTTT-------------------------------------TCAGC 21912

Bos -----------ATCTTTA-------------------------------------TTA-- 3129

Rattus ATCTATCTTAGGTTTTTTTGCTCCTTTG-----------TACCTGGTATGGATTCCACCT 27853

Danio ATCT----------TTTCTGCT---------------------------GGA-------- 1816

Mus ATCTATTCACAAGTTCTTGGCTCCTTTAATAGTATGGCCTCCACTTTATAGAGTAGACCT 26678

Gallus AATTACAGAGAATTTCTGCAATCCC----------------------------------- 20635

Anopheles ------------------------------------------------------------

Homo ACTTTGCAGCACTCATCTCATTGTAGAA-----------CCATCAATTTGAACAACTGTC 36173

Pan ACTTTGCAGCACTCATCTCATTGTAGAA-----------CCATCAATTTGAACAACTGTC 35626

Drosophila ------------------------------------------------------------

Canis ACCTTGCATAGATTGTCCCACT--------------------TCTTTCTGGTC------- 21945

Bos ------CATAGC------------------------------------------------ 3135

Rattus TTGATGCAATCATGTAGTGGCTGGTTA---------------TCCTAAA--------ACA 27890

Danio --GATACT---------------GTTG---------------TCCTAAA--------AAA 1836

Mus TTAATGCAATCATATAGTGGCTAGTTAC--------------TCCTAAA--------ACA 26716

Gallus --ACTGCA-------------TAGTTAC--------------TCTTTGC--------ATA 20658

Anopheles ------------------------------------------------------------

Homo TACACACAAAAATATAAGAGCTAAGAAACCAGACGAGAGATTACCTGAATGTGGCACACA 36233

Pan TACACACAAAAATATAAGAGCTAAGAAACCAGACGAGAGATTACCTGAATGTGGCACACA 35686

Drosophila ------------------------------------------------------------

Canis ----------------------------------------TTTCTTGAA---GACTTCTG 21962

Bos -----------------------------------------------AA---GGTATATA 3145

Rattus TCTATGCCATTATTAGTAGTCCTATCTTGTCAGGCCTCTTTTAGCTTGAAGGATTCATGA 27950

Danio ------CCGTTA------------------------------------------------ 1842

Mus CCTATGCAATTATTAGTAATCCTATCTTGTCAGGCCACTTTTAGCCTTCAGGGTTCATAA 26776

Gallus AG-GTGGAATGGC------------------------------------ATGCTGAATAA 20681

Anopheles ------------------------------------------------------------

Homo GATAAGAAAAGACACATTGAAAAGGGTAAGAAGGACAGTTTTACATTACTTGTGTCACAC 36293

Pan GATAAGAAAAGACACATTGAAAAGGGTAAGAAGGACAGTTTTACATTACTTGTGTCACAC 35746

Drosophila ------------------------------------------------------------

Canis CCTTGTAGAAGACTAAT------------------CATTTTTCTTTTGCT---------- 21994

Bos C----TAGAA---------------------------TTTTTATTTTG------------ 3162

Rattus C--------TACGTAAGATTGAGGCCTTTCTTCTCAAGAGTTTGTATAGCACCTGCCAAC 28002

Danio --------------AAAA---AAACCTCTC----------------------------AC 1857

Mus C--------TGGATGAGATTGAGGCCTTT------------------------------- 26797

Gallus C--------AGTTTGACCTGCAGGCCTGCAG----------------------------- 20704

Anopheles ------------------------------------------------------------

Homo CTCCCTCAGTCCCTGAGATCCCAGCATGGAGA---------------------------- 36325

Pan CTCCCTCAGTCCCTGAGATCCCAGCATGGAGA---------------------------- 35778

Drosophila ------------------------------------------------------------

Canis --------GCTTTCAAGATTCTGTCTTTGA------------------------------ 22016

Bos ---------TTTTCAAGACCTTGGCTCCAA------------------------------ 3183

Rattus ATAGTAGATTGTAACCAGTTGGGATAGTTTGCCACTGAGTACCAGCATGATGTCTCCTTG 28062

Danio ATA----------------------------------------------------CCTT- 1864

Mus AT-----------------------------------------------------TCTC- 26803

Gallus -------------------------------------------------------TGTTG 20709

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------GAGAGACTGTTC 36337

Pan ------------------------------------------------GAGAGACTGTTC 35790

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------CTTTTG 22022

Bos ------------------------------------------------------ATTCTC 3189

Rattus CTCTGGTTC-----AAGGACATGGTTGGTGTCTGTAGCAATCTGATCTTATGATCAAATT 28117

Danio --------------AGGAACGT----------TATAGCA--------------------- 1879

Mus --------------AAGAGAGTT-------TATATAGCAC-------------------- 26822

Gallus CT------------AAAATAGTAA-------CCATGTTAT-------------------- 20730

Anopheles ------------------------------------------------------------

Homo ACCTGGGGGAAGGAGGGGAAGTGTACACCAGACTTAGACCCTAACATTGAGCTCGCCCCA 36397

Pan ACCTGGGGGAAGGAGGGGAAGTGTACACCAGACTTAGACCCTAACATTGAGCTCGCCCCA 35850

Drosophila ------------------------------------------------------------

Canis AT-----------------AGTGCAT------TTTAGTATCTGCCTCTGGGTTCATTATA 22059

Bos AC-----------------AGGA------------------------------------A 3196

Rattus TTGGTTGTGTGCTGACTAGTTTCATGGCAACTTGATACAAACTAGAGTCATCTGAGAAGA 28177

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTAAAACTCAAT----------------------------GCTAGGCAGGCCCCCATGGC 36429

Pan GTAAAACTCAAT----------------------------GCTAGGCGGGCCCCCATGGC 35882

Drosophila ------------------------------------------------------------

Canis GTTGA------------------------------------------GAGTCCTT----- 22072

Bos GGAGA------------------------------------------GATTCCT------ 3208

Rattus GGGAGCCTCAGTTGAGAAAATGCCATCCTAATATTG--GGCTGTGGGTAATCCTGGAGGG 28235

Danio ---------------GAAGGT------------TTG--GGC------------------- 1891

Mus ---------------------------------TTGCCAGC------------------- 26830

Gallus ---------------------------------TTATATGCCT----------------- 20740

Anopheles ------------------------------------------------------------

Homo CCCAAACTTCAGGCCAATACCCACAAACCAAGCTTGGAGGCCCACCCCAGCACCAAGCTG 36489

Pan CCCAAACTTCAGGCCAATACCCACAAACCAAGCTTGCAGGCCCACCCCAGCACCAAGCTG 35942

Drosophila ------------------------------------------------------------

Canis --------------CAAAACTCTTAAAA-----TTAGATGTCCATTT------------- 22100

Bos ------------------AGTCTTAA---------------------------------- 3216

Rattus CATTTCATT-------------AGTTAGTAGCTGATTTGAGAGGGC-------------- 28268

Danio ---------------------------------GATTT---------------------- 1896

Mus ---------------------------ACAGTGGATTA---------------------- 26841

Gallus ---------------------------ATAATTTATTGGGAAGTG--------------- 20758

Anopheles ------------------------------------------------------------

Homo GATCCCACAGCCCTAGGCTCTAAGCCTGTCTAGTGCTAGGGTGGTCCCTGCAGCCCTGCC 36549

Pan GATCCCACAGCCCTAGGCTCCAAGCCTGTCTAGTGCTAGGGTGGTCCCTGCAGCCCTGCC 36002

Drosophila ------------------------------------------------------------

Canis ------------------------CCTTCCTCATATTTGGGAAGT--------------- 22121

Bos ------------------------CTGTTCTCA-----AGGAGTT--------------- 3232

Rattus ------CCAGACCATTGTGGTTGGTGTTACCCTGGGCTGATGGTCCTGAGGTCTGTAGAA 28322

Danio ------TCAAACC-TTG------------------------------------------- 1906

Mus -------TAGCCAGTTGTGATAA------------------------------------- 26857

Gallus -------CAGGGATTTATGGA--------------------------------------- 20772

Anopheles ------------------------------------------------------------

Homo CTCTAGATCGGCCCCTGTGGCCTCACATCACTGCAGAACAAGGGTCCAAACCCAGTACTT 36609

Pan CTCTAGATCGGCCCCTGTGGCCTCACATCACTGCAGAACAAGGGTCCAAACCCAGTACTT 36062

Drosophila ------------------------------------------------------------

Canis -----GTTTGACCATTGTTTTTTCA----------------------------GGTAAGC 22148

Bos -----GCTC-----TTGCTAT---------------------------------GTA--C 3247

Rattus AAAGCAAGTTTATCAAGCTATAAGGAACAAACCAGTAATCAGCACTCTTCCATTATGCTG 28382

Danio -------------------------------------------ACTTTTCCA-------- 1915

Mus -------------------------------------------AGTTTTCCAGT------ 26868

Gallus -------------------------------------------AGTGTTTTATT------ 20783

Anopheles ------------------------------------------------------------

Homo GGCCAGCCCCTTGTGATCCA-----AATTCTAGGCCAACATCCACCTACCCAGCCTTCA- 36663

Pan GGCCAGCCCCTTGTGATCCA-----AATTCTAGGCCAACACCCACCTACCCAGCCTTCA- 36116

Drosophila ------------------------------------------------------------

Canis TGTCTGCC-----------------------------ACATCCTCTCTTCTAGGGTTC-- 22177

Bos CGTCTGC----------------------------------------TTCT--------- 3258

Rattus CAACAGCTCCTCCAAGTTCCTATTCTGCTTGAGTCTCTGTCCTAAGTACTTTGAATGATG 28442

Danio -------------------------------------------AAGCACACTATACGTTG 1932

Mus -------------------------------------------GAGTAC-CAGCATAATG 26884

Gallus ---------------------------------------------------TGCACAATG 20792

Anopheles ------------------------------------------------------------

Homo -----------------CACTGGTCCTTGCAGATCCAAGGTTCAGGCTCACTCTAGTAGA 36706

Pan -----------------CACTGGTCCTTGCAGATCCAAGGTTCAGGCTCACTCTAGTAGA 36159

Drosophila ------------------------------------------------------------

Canis -----------------CTCTGGTTC------ATCTATTGGTCAACTTGGTGGTATCCTA 22214

Bos -----------------CTTTG------------CTACTGTCCAG----------TCCTG 3279

Rattus AGTAC-TGTTTTGGAAGTGTAAGGGGGA------------------------ATTAACTC 28477

Danio AAAAC-TGTT------------------------------------------ATCATCTC 1949

Mus TCTCCATGCTCTG-----------------------------------------TGATTC 26903

Gallus ACAAGTTGTTTTG--------------------------------------------CTC 20808

Anopheles ------------------------------------------------------------

Homo CCAGGATGCCAGGCCAGCAGCACCTGTGTACCAAGGCTCCAGGACCTACCCTGCTGACCC 36766

Pan CCAGGATGCCAGGCCAGCAGCACCTGTGTACCAAGGCTCCAGGACCTACCCTGCTGACCC 36219

Drosophila ------------------------------------------------------------

Canis AAAGTGTGTTAGGCTTTCTTCACTTT-------ATATTTTAAAATTT--CCCTCTGACTC 22265

Bos AGAG-------------------------------------------------------- 3283

Rattus TTTTCTCC----------------------TCAAATAGCTTTTGGTCATGTTTATTCATG 28515

Danio -----------------------------------------------ATGCCTATTCGGC 1962

Mus -------------------------------------------AAGGATGTG-GTTGGTG 26919

Gallus T-----------------------------------------------GGTTGGCTGATA 20821

Anopheles ------------------------------------------------------------

Homo AGACTCCAGGCCAGCCCCGGTAGACTCAGGCTGCATAATCTCTGGACAGGCTGACTGGTG 36826

Pan AGACTCCAGGCCAGCCCCTGTGGACTCAGGCTGCATAATCTCTGGACAGGCCGACTGGTA 36279

Drosophila ------------------------------------------------------------

Canis A---------------------------------ATACTTTCAAGTGGGGCCTGCCTTTG 22292

Bos ----------------------------------ACAC---------AGGC--------- 3291

Rattus A---------CCAAAATGTAACAGTCTGGGAGAGTAGCCAGGAGTATTAGCAGTAGCCTC 28566

Danio G---------C---------ACAGTCTGGGG----------------------------- 1975

Mus T---------CTA-----TAGCAATCTG-------------------------------- 26933

Gallus T---------AATTGCTTTATTTGTTTG-------------------------------- 20840

Anopheles ------------------------------------------------------------

Homo AAGGGCTTTACCCAATAAAGTCACTCTGCAAAGACTGGAACAAGTCTCAGCTTCTTCAAA 36886

Pan AAGGGCTTTACCCAATAAAGTCACTCTGCAAAGACTGGAACAAGTCTCAGCTTCTTCAAA 36339

Drosophila ------------------------------------------------------------

Canis A----CTTTATTTTCT----TTCTTCTGC-----TTGGTTTAAGTCT------------- 22326

Bos ----------TTTTTC----CTCTCCTG-------------------------------- 3305

Rattus CCATAACGGTGGATGGGGGTTCTATGTGATCTGAATACCCAGTCCTGGGGTACTAGGGTC 28626

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGTGCAGGTGCCAACACATGACTACAGGGATCAAGAACAGTCAGGGAAACGTGACACCAG 36946

Pan TGTGCAGGTGCCAACACATGACTACAGGGATCAAGAACAGTCAGGGAAACGTGACACCAG 36399

Drosophila ------------------------------------------------------------

Canis TCTGTGGATCCTCTCTCATGA--------------------------------------- 22347

Bos ---GTGAG---------------------------------------------------- 3310

Rattus TTTATTTGGTAGCATGGGGTATCTGGTTGGGGTATTGTTTATAGAATAATTCTATTATCT 28686

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCAAAGGAACACAATAAGGCACCTGAACCAACCATAAAGAAATGGAGATATATGAACTGC 37006

Pan TCAAAGGAACACAATAAGACACCTGAACCAACCATAAAGAAATGGAGATATATGAACTGC 36459

Drosophila ------------------------------------------------------------

Canis ------------------ATTTTCAATTCACTTAT-------------TGTATTATTTAC 22376

Bos ------------------------------------------------------------

Rattus TTCTTCTGGTACATATATTATGGAGATTCTATACTGTTAGGCTTCCATCTGACTCTTTCA 28746

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTGACAAAGAATTCAAAGTAATTGTTTAAGGAAGCTCAATGAATTTCAAGAAAATGCAGA 37066

Pan CTGACAAAGAATTCAAAGTAATTGTTTAAGGAAGCTCAATGAATTTCAAGAAAATGCAGA 36519

Drosophila ------------------------------------------------------------

Canis CT----------CTAGAATTTTTGTTTGG------------------------------- 22395

Bos ------------------------------------------------------------

Rattus AAAGGCCTTTAATGTCATTCTTCATCTAATTCCCATTGTCTTAATCTTTTCCTTCCAGTT 28806

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAAACAATTCAACAAAATCAGGAAAACAGCAATCAAAATGAGAAATTTTGAGATTGAAAT 37126

Pan TAAACAATTCAACAAAATCAGGAAAACAACAATCAAAATGAGAAATTTTGAGATTGAAAT 36579

Drosophila ------------------------------------------------------------

Canis -----------------------------------------------------------T 22396

Bos ------------------------------------------------------------

Rattus CAGTTTTACTCTTCTTATTCTATTGTTCTCCACTCATGCTATGTATTTTGCCTTTGTTGC 28866

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TATTTTTTAACAAATTCTGAAGCTGAAAATGCAATAAATGGAATGAAAAATGCAAAAGAG 37186

Pan TATTTTTTAACAAATTCTGAAGCTGAAAATGCAGTAAGTGGAATGAAAAATGCAAAAGAG 36639

Drosophila ------------------------------------------------------------

Canis TCTTTTTTA--------------------------------------------------- 22405

Bos ------------------------------------------------------------

Rattus CATTATGTCCCATCCTCTTAATGACTTATTATTTCTGACTGTTGTGGGTATTCCATATGG 28926

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CATTAAAAGCA-----------GAATTGAGCAAGCAGACAAAAGAATCTGAACTCAAAAG 37235

Pan CATTAAAAGCA-----------GAATTGAGCAAGCAGACAAAAGAATCTGAACTCAAAAG 36688

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AATACAAATGTCTCAAGACTCAAAGTTCACTTTCAGAAATGAGGGTAGTTATATAATGTT 28986

Danio --CACAAATGTC------------------------------------------------ 1985

Mus -------ATCTTA----------------------------------------------- 26939

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ACAGGTTATTTGGCTAGACTAAGGAAAAAAGAGATGACTCAAGATAAAAAAAATAAAGAG 37295

Pan ACAGGTTACTTGGCTAGACTAAGGAAAAAAGAGATGACTCAAGATAAAAAAAATAAAGAG 36748

Drosophila ------------------------------------------------------------

Canis ------TATTTT------------------------------------------------ 22411

Bos ------------------------------------------------------------

Rattus ATCTTTCTGTGTTTGGATGTCTGTTCAGGATAACTGTCTGACTCCATCCATTTATTTGCC 29046

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTGTGTTTTTTGATGATAAAAGCAACAAGTCTTTAGCTAGACTAAGAAAAAAAG------ 37349

Pan TTGTGTTTTTTGATGATAAAAGCAACAAGTCTTTAGCTAGACTAAGAAAAA--------- 36799

Drosophila ------------------------------------------------------------

Canis -----CTTTTTGTTGATA-----------CTCTTATCTTGCTT----------------- 22438

Bos ------------------------------------------------------------

Rattus TACCAATTTCATAATATTTTTCTTAAAAATGCTGAATAATGTCCTACTGTGTAAGTGTAC 29106

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ----------------------------------------------------------AG 37351

Pan ----------------------------------------------------------AG 36801

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CCTATTTTCATTATTCATTAGTTGGTGGACATTTAGGCTGTTTCTATTTCCTAACTGTTG 29166

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATGACTCAAGTTAAATCAGAAATGAAAGAGGAACCATTGCAGCTGATACCAGAGAAGTAC 37411

Pan ATGACTCAAGTTAAATCAGAAATGAAAGAGGAACCATTGCAGCTGATACCAGAGAAGTAC 36861

Drosophila ------------------------------------------------------------

Canis -------------------------ATGAGTGGTGATTTCATCTAGTCTCCTATG----- 22468

Bos -------------------------ATGGG------------------------------ 3315

Rattus TGAATAGAGCAACAGTGAACATGAATGAGTAAGTATCTGATAAGAAATTCTAAATTTCTA 29226

Danio ------------------------------------CTGACAAAAAAT----AATTT--- 2002

Mus ------------------------------------CCATCAAGAAGT------TTT--- 26954

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAGAAATAAGAGGATCATAAGAGACTGAACAATTATATGCCAACAAATTGATTACCATAG 37471

Pan AAGAAATAAGAGGATCATAAGAGACTGAACAATTATATGCCAACAAATTGATTACCATAG 36921

Drosophila ------------------------------------------------------------

Canis --------------------------------TTCTCTTGTAGCAAATTGGTTTTCCTTA 22496

Bos ---------------------------------------GTAAAAAG------------A 3324

Rattus AAAGTGGTCCAGCCAGTTTGTGGTAGAACTAAGGTTTTTGAGAAACCTCACATTGATTTC 29286

Danio -----------------------------------------------TCATATTAA---- 2011

Mus ------------------------------------------------CACTTCGATTTC 26966

Gallus ------------------------------------------------TGTTTTGCCTTG 20852

Anopheles ------------------------------------------------------------

Homo AAGAAATGGATA-------------------AATTCCTAGACACATGCAACTTGTCCAAG 37512

Pan AAGAAATGGATA-------------------AATTCCTAGACACATGCAACTTGTCCAAG 36962

Drosophila ------------------------------------------------------------

Canis GGCAATTATAT----------------------------------TGCATTTTTGTCAGG 22522

Bos GACAAAT---------------------------------------GCCCTTTTG----- 3340

Rattus TACAGTGGTTGCATCAATTTCCACTCCAGTCAGCAGTGAATAGCCATAAGCTCTTTCCCT 29346

Danio -ACATTGG------------------CAGTCAG--------------------------- 2025

Mus ATTACTTGAAGT----------------GTCTG--------------------------- 26983

Gallus CACAGC------------------------------------------------------ 20858

Anopheles ------------------------------------------------------------

Homo CTTAATCATGAAATGAAAAATGTGAACAGTCCAGTGACAAGGATTGTATCAGTCATAAAA 37572

Pan CTTAATCATGAAATGAAAAATGTGAACAGTCCAGTGACAAGGATTGTATCAGTCATAAAA 37022

Drosophila ------------------------------------------------------------

Canis TTAATTCATAGA------------------------------------------------ 22534

Bos ------------------------------------------------------------

Rattus ACATTTACTCCAACATCTATTTGTTTCTTTGAAATAGACATTCTCACTGAGGTAAAATGA 29406

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATATCTCCCACCAAAGGAAGCCCAAGACTTG---------------------------GT 37605

Pan ATATCTCCCACCAAAGGAAGCCCAAGACTTG---------------------------GT 37055

Drosophila ------------------------------------------------------------

Canis ---TCTC----------------------------------------------------T 22539

Bos ------------------------------------------------------------

Rattus AATTTCAGTGTTTTAATTTGCATTTCTTGATAGCTAAAGATGTTTGATTGTTCAGAAAAT 29466

Danio ----TCAGTGT--------------------------------------------AAAAT 2037

Mus --TTTTTATGTCA----------------------------------------GCACCAT 27001

Gallus ----TCCATGCCA------------------------------------------AGAGC 20872

Anopheles ------------------------------------------------------------

Homo GACTTTACTGCTGAATTCTAGCAGACATTTAAAGAAGAAC---------TAGTACAGATT 37656

Pan GACTTTACTGCTGAATTCTAGCAGACATTTAAAGAAGAA----------TAGTACAGATT 37105

Drosophila ------------------------------------------------------------

Canis GTTGTTTTTGTTTTGTT-----------------------------------------TT 22558

Bos GCTGTCACTGGT------------------------------------------------ 3352

Rattus ATCACTTTTTGAGACCTCTACTCAGATTTATTCCCGATTTTTATATTCAGTTGTTTTCTG 29526

Danio GTCAGTCTT------CCTTATTAAGAT--------------------CA---------TG 2062

Mus GCTGTTTTT-------ATTACTAAAGCTT------------------------------- 27023

Gallus ATAGTCATG------CATTTCACATGTGT------------------------------- 20895

Anopheles ------------------------------------------------------------

Homo GTTCTCATAA------TTTTATGAGAAAT----------------------------TTA 37682

Pan GTTCTCATAA------TTTTATGAGAAAT----------------------------TTA 37131

Drosophila ------------------------------------------------------------

Canis GTTTTTGTT-------TTTTTTGAGAGA-------------------------------- 22579

Bos ------------------------------------------------------------

Rattus GACATTTAGTTTTTTGAGTTCTTTTTATTTTGTAGAAAACAATGTATTCTGTTG-----C 29581

Danio GACGT--------------------------GAAGGAAAT-------------------- 2076

Mus ------------------------------TGTAGTATAA-------------------- 27033

Gallus --------------------------------TAATGAAA-------------------- 20903

Anopheles ------------------------------------------------------------

Homo AGAAGAGGGAGTAATTTCAAACTCATTTTGGGAGATGAGCATTACCTAGATACCAAAGCC 37742

Pan AGAAGAGGGAGTAATTTCAAACTCATTTTGGGAGATGAGCATTACCTAGATACCAAAGCC 37191

Drosophila ------------------------------------------------------------

Canis GGGAGAGTGAGAG---------------TGTGTGAC-AGCAGGGCTTAAT---------- 22613

Bos ---AGAATGAG------------------GTGAGGA-AGCA------------------- 3371

Rattus TTCGCATGAATTCTTTGCTGTATAGAATGTTTTTAGTTTTATTGTCTGGGTCTTATATCT 29641

Danio ----CATAATTTTTTTA--ATATAGGCTG------------------------------- 2099

Mus ----CTTAAAATC------ATAGATGATG------------------------------- 27052

Gallus -----AGAAAATCCAAGTCTTTCAGACTGAT----------------------------- 20929

Anopheles ------------------------------------------------------------

Homo AGACAAGAACTCTCCAGGAAAAGAAAATTACAGACCCGTATTCTTAATTTAGATGCAGAA 37802

Pan AGACAAGAACTCTCCAGGAAAAGAAAATTACAGACCCGTATTCTTAATTTAGATGCAGAA 37251

Drosophila ------------------------------------------------------------

Canis -GCTTGTAGTTTCCCAAATGAAGAGGTTTGTTGGTTTCTTTTCC---------------- 22656

Bos ----------TTCCTG------GAGGTT-------------------------------- 3383

Rattus GGGTCTTTACTTCTATTGAATTATTGACATGTCTATCTTTATGGCAGTACCATGCTGCTT 29701

Danio --------------------------------------------CAGCATCA-------- 2107

Mus ----------------------------------------------ATACTG-------- 27058

Gallus ----------------------------------------------GCATCA-------- 20935

Anopheles ------------------------------------------------------------

Homo AT-------------TCTGAAGAAAATAATAACTAAATTCAACAGTGTATTAGAAGGATC 37849

Pan AT-------------TCTGAAGAAAATAATAACTAAATTCAACAGTGTATTAGAAGGATC 37298

Drosophila ------------------------------------------------------------

Canis ---------------------------AAGAGCTTACAT--ATAGTCTTTTAG------- 22680

Bos --------------------------------------------GTCTCTGA-------- 3391

Rattus TTATTACTAAAGCTTTGTAGTATAATTTAAAATAGATGATGATATTTC------------ 29749

Danio ----------------------------AAGATA-------------------------- 2113

Mus -------------------------------ATAG------------------------- 27062

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATTTACTGTGATCATATGGGATTTACCTCAAGGGTACAAGGATTATCCAACAGACCTGAA 37909

Pan ATTTACTGTGATCATATGGGATTTACCTCAAGGGTACAAGGATTATCCAACAGACCTGAA 37358

Drosophila ------------------------------------------------------------

Canis -------------------------CCTCTTAGGTC------------------------ 22691

Bos ------------------------------------------------------------

Rattus --------------------------------------------------TAGCATTTCT 29759

Danio ------------------------------------------------------ATTACA 2119

Mus -----------------------------------------------------CACTTCT 27069

Gallus ------------------------------------------------------AATTCT 20941

Anopheles ------------------------------------------------------------

Homo TCCATAAAATGTGATATACAACATTAGGAGAACAAAGGCCAAAACCATGTTATCATTTCA 37969

Pan TCCATAAAATGTGATATACAACATTAGGAGAACAAAGGCCAAAACCATGTTATCATTTCA 37418

Drosophila ------------------------------------------------------------

Canis -------------------------------------------------------TTTCT 22696

Bos ------------------------------------------------------------

Rattus TTTACTGTTCAGGATTGTTTTTCT---GTCATGTGAATTATCAAGTAAATTTTAATATTT 29816

Danio TGTACCATTC----TTGT------------------------GAGCAA------------ 2139

Mus TTTACTATTCAGGATTGTTTTTCT---GTCATGTGTATTATGAAATAAATTTTAGTGTTT 27126

Gallus TCCATGAATAAGAGTCTTACTT-------------------------------------- 20963

Anopheles ------------------------------------------------------------

Homo ATAGATAATTGAGATAATTGAGAAAAAGCATTTGACAGAATTCAGT--ATTCTCTTGTGC 38027

Pan ATAGATAATTGAGATAATTGAGAAAAAGCATTTGACAGAATTCAGT--ATTCTCTTGTGC 37476

Drosophila ------------------------------------------------------------

Canis GTAG-TACTTCAGGTTCTCTGGTG-------CTGCAAGAAGCCAGTGAACTGTCTTGTTT 22748

Bos -----------AGGTTATCA---------------------------------------- 3400

Rattus CTTAATTTCTATGAAAAATCAAGCTATGG------------------------------- 29845

Danio ------------------------------------------------------------

Mus CTT----TTTATGAAAAATCAAGCTATGA------------------------------- 27151

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TACAAAATTTTAAAAAATTAAGTATAGAAGGAATGTACCTCTATAAAATAAAGGCCATAT 38087

Pan TA-AAAACTCTCACAAATTAAGTATAGAAGGAATGTACCTCTATAAAATAAAGGCCATAT 37535

Drosophila ------------------------------------------------------------

Canis TCTAAAGCCTCTAGGCATCTAGTGTA---------------------------------- 22774

Bos --------CTCTAAGAATCAAGTATA---------------------------------- 3418

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGACAAACACACTGCTAACGTTATACTGAATGTTGAAAAGTTAAAAGCTTTTCTTTTGAG 38147

Pan TGACAAACACACTGCTAACGTTATACTGAATGTTGAAAAGTTAAAAGCTTTTCTTTTGAG 37595

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -------------------TTTTCATAGGAATTGTGTTGAGTTTATAAATTGTTTTAGGT 29886

Danio ------------------------------------------------------------

Mus -------------------TTTTGATGGGGATTATATTGAGTCTGTAAATTGTTTTAGGT 27192

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATCAGGAAGAAAACGAGAATGCCCACTTTTGCCATTTCTATTCAGCACAGTACCGGAAGT 38207

Pan ATCAGGAAGAAAACGAGAATGCCCACTTTTGCCATTTCTATTCAGCACAGTACTGGAAGT 37655

Drosophila ------------------------------------------------------------

Canis -----------------------------TGCTGGTTCCAGCCA------TGCTCCAAGT 22799

Bos -----------------------------AG-------------------------AAGT 3424

Rattus A-------GAATGACT--TTTTATAACATT--AATCATACCAGTCTGAGCATGGG----T 29931

Danio ---------------------TACAACA-------CATGCC------------------- 2152

Mus A-------GAATGACTATTTTTACAACATTCTGAGCATGGGTGGTT-------------- 27231

Gallus ------------------------------------ATGCCAAGCT-------------- 20973

Anopheles ------------------------------------------------------------

Homo CCTTGCAAGAGCAATTAGGCAAGAGAAAGAAAAGGCATCCCAGTAGGAAAGGAAGACATT 38267

Pan CCTTGCAAGAGCAATTAGGCAAGAGAAAGAAAAGGCATCCCAGTAGGAAAGGAAGACATT 37715

Drosophila ------------------------------------------------------------

Canis C---------------AGGTGAGATAGAAACTAGTTGCTTCAGTAG-------------- 22830

Bos C----------------------------------------------------------- 3425

Rattus GGTTTTTCCATCT----------------------------------------------- 29944

Danio ---TCTTCCAT------------------------------------------------- 2160

Mus --TTTTTTCACCT----------------------------------------------- 27242

Gallus ---TTTCAAGTTC----------------------------------------------- 20983

Anopheles ------------------------------------------------------------

Homo GTTGTCCCTGTTTGAAGATGACATGATCTTGTATATAGAAAAACCTAAAGACTCCACCAG 38327

Pan GTTGTCCCTGTTTGAAGATGACATGATCTTGTATATAGAAAACCCTAAAGACTCCACCAG 37775

Drosophila ------------------------------------------------------------

Canis -----CTCCATTTA---------------------------------------CCCCCAA 22846

Bos ------------------------------------------------------------

Rattus ----------------------TTTGGTTTCTTTTTCAACATATTTTCTTTA-------- 29974

Danio ---------------------------------TGTAAACAAAT---------------- 2171

Mus ----------------------TCTGGTTGCTTTTTCAACATATTTTCTTTA-------- 27272

Gallus ----------------------TTCCTCTGCCCGATGAACATCTT--------------- 21006

Anopheles ------------------------------------------------------------

Homo AGAATTGTTAGAACTGATAAATTCAGTAAAGTTGTAAGATATAAAATCAAGATACAAAAA 38387

Pan AGAATTGTTAGAACTGATAAATTCAGTAAAGTTGTAAGATATAAAATCAAGATACAAAAA 37835

Drosophila ------------------------------------------------------------

Canis AAAA-------------------CAGGAATGTTG---GACATAA---------------- 22868

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCCGTAGAATTTCTGTACATTAATGACAAATTATCTAAAAGAAAAATCAAGAAGACAATT 38447

Pan TCAGTAGAATTTCTGTACATTAATGACAAATTATCTAAAAGAAAAATCAAGAAGACAATT 37895

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ----ATTTCTT-AGTTTTAATTATACAAATGTTTTACTTCCATAGTTATATT-------- 30021

Danio ------------AGTGTCAGTT-----------------------------T-------- 2182

Mus ----ATTTTTTAAAATTTAATTATACAACTCTTGTACTTCCTTAGTTTGATT-------- 27320

Gallus ------------GGTGTTAGCTCAGAGTCTATTTTTTTGTTTTATGTTTTTT-------- 21046

Anopheles ------------------------------------------------------------

Homo CCATGTATAATAGGTACCAAAAACAAAACATGCAGTGGCTCCCAGTATCAGTGGTTCTGC 38507

Pan CCATTTATAATAGGTACCAAAAACAAAACATGCAGTGGCTCCCAGTATCAGTGGTTCTGC 37955

Drosophila ------------------------------------------------------------

Canis ----TTACAATGGGTG------AAGCTGCAGGTTGGGCTTTTCATCATGA---------- 22908

Bos -----TATAATGAGT----------------------------ATCAC------------ 3440

Rattus -TATTCAAATTAT----------------------------------------------- 30033

Danio -GACCCAAAC-------------------------------------------------- 2191

Mus -TATTCAAATAAT----------------------------------------------- 27332

Gallus -CTCCTTAACATC----------------------------------------------- 21058

Anopheles ------------------------------------------------------------

Homo ATTTGCAAATTGAACCAACATTTGGATGAAAATATTTGAGAAAAAAATACAACAATAAAA 38567

Pan ATTTGCAAATTGAACCAACATTTGGATGAAAATATTTGAGAAAAAAATACAACAATAAAA 38015

Drosophila ------------------------------------------------------------

Canis --TTACAAACTGTGCCAG----------------TTTGGGGAGA---------------- 22934

Bos -----------------------------------TTG---------------------- 3443

Rattus ----------------TTTTGAAGTTATTGTGACTGGGAATACATCCCTGATTTCTTTTT 30077

Danio ---------------------ATGTCATTATG----------CA---------------- 2204

Mus ----------------TTTTGAGGTTATTGTGACTGGGATGGTTTCCCTAATTTCTTTGT 27376

Gallus ----------------CATTCAAGTTCTTGCATTCTCAACGTCAGCACCTTCTGCTGTCT 21102

Anopheles ------------------------------------------------------------

Homo ATACTGTTTTCTTATACAATAAGGAAACTACAG-TATAGCAACTATTTACATAGCATTTA 38626

Pan ATACTGTTTTCTTATACAATAAGGAAACTACAG-TATAGCAACTGTTTACATAGCATTTA 38074

Drosophila ------------------------------------------------------------

Canis ----------------TATTAAAGGAATTGAAA-TAACACAGCTTTCTGTACATGTGTCT 22977

Bos ----------------TATCAA--GAAATGAA---------------------------- 3457

Rattus CTTTGTGTTTATTATT----------------TGTGTACAGAAAGACTACTGAGTTGTGT 30121

Danio -------------------------------------ACAAAGAGCTTA----------- 2216

Mus CTTTTTGTTTATTATT----------------TGTACAAAGAAAGACTACTGAGTTTTGT 27420

Gallus GCTCCTGCT----------------------------ACGGAGCTGCAATCATATTTGAC 21134

Anopheles ------------------------------------------------------------

Homo CGTTGTATTAGGTACTAAGTAATGATTTAAAGTATACACGAGGATGTGTGTAGGTTGTAT 38686

Pan CGTTGTATTAGGTACTAAGTAATGATTTAAAGTATACACGAGGATGTGTGTAGGTTGTAT 38134

Drosophila ------------------------------------------------------------

Canis GGCTGTTTTTGGCTTTGAGCT---------------TATGTGGGTTGCTGTAACTTTCGA 23022

Bos ---TGTTTT--------------------------------------------------- 3463

Rattus GTGTCTTTCTTT-----------------------------TGTATCTTGTTACTTCACT 30152

Danio ------------------------------------------------------------

Mus G--TCTTCATTT-----------------------------TGTAT--TGTTACTTTGCT 27447

Gallus ATTGATTACT-------------------------------------------------- 21144

Anopheles ------------------------------------------------------------

Homo GCAAATACTATACCATTTTATATAATGGACTTGAGCATCCATGGATTTTGGTATCTACAG 38746

Pan GCAAATACTATACCATTTTATATAATGGACTTGAGCATCCATGGATTTTGGTATCTACAG 38194

Drosophila ------------------------------------------------------------

Canis ACTGGTTTCTAGAGGTCTCATA-AAGGGTTTTCAAACCATGTGTAAGTTAGTGTTTTTGT 23081

Bos --------------------------------------------------ATGTTCTT-- 3471

Rattus GAGTGTGTTTATCAACTGTAGAAGTTTTCTGGTGGAGTCTTAATAATCTGTTACCTACAG 30212

Danio ---------------------------------AGAATGTTAACA--CTGCCA------- 2234

Mus GAGTGT--TTATCAACTGTAGGAGTTTTCTGGTAGATTCTTA-CAGTTTGCTACTTACAG 27504

Gallus -------------------------------GAAGCATTCTAAAAACCTATT-------- 21165

Anopheles ------------------------------------------------------------

Homo GAGATCCTGGAACCAATATCCTGCAGATACCGAGGGATGATTGTACTTAGAAA-TAACTT 38805

Pan GAGATCCTGGAACCAATATCCTGCAGATACCGAGGGATGATTGTACTTAGAAA-TAACTT 38253

Drosophila ------------------------------------------------------------

Canis GAG-----GGAAT-----------AAGTTCTGGGGCCTTATTTTCCTCTGTTGCTGATGT 23125

Bos -------------------------------------TTATTTTCCTTTGTT-------T 3487

Rattus TTATTTTTTTTTATAGAACCATTTTATTGTAAATGAAAATAACTTGATTTCTTTTCCTAC 30272

Danio ---------------GGACCAC--------------AAGTAA------------------ 2247

Mus GATTTTTTTTTAATAGAACCATTTTATTGTAAATAAAGATAATTTGACTTCTTTCCTGAC 27564

Gallus -------------TAAAACTAAATTTT-------GGAAGTTGTTCATTTACTTT---AAC 21202

Anopheles ------------------------------------------------------------

Homo TAACCAAAGAGTTGAAAACTATGTAACATTGATTAAAGAAATTGAAGATGATACAAATAA 38865

Pan TAACCAAAGAGTTGAAAACTATGTAACATTGATTAAAGAAATTGAAGATGATACAAATAA 38313

Drosophila ------------------------------------------------------------

Canis CATTCCTTGGTTCG----CTTTTTATCTTTGTTCAGATAAATTTAGTAT----------- 23170

Bos TATTC----------------TTCACTTTGGTTTGTGTGAGGTTA--------------- 3516

Rattus ---TGATGTTTTCCTTAGTTTCTTTTCTTATATTAT--TTCTCTAGTCAACACTTTAATC 30327

Danio -----------TGCTCAGATTCTTGC-----------------------ACAGACTGATC 2273

Mus ---TGGTGATTTCTTTAGTTCCTTCACTTACAGTAT--TTCTCTCATCAGCACTTCAAGC 27619

Gallus ---TTGACAACTCTTAAGTTCATATATTT--------------------TCACTCTGCCT 21239

Anopheles ------------------------------------------------------------

Homo -TGGAAAGTTATCTTGTGTTTATGGATTGGAAGAATTAATATTGTAAAATGTTTTTATTA 38924

Pan ATGGAAAGTTATCTTGTGTTTATGGATTGGAAGAATTAATATTGTAAAATGTTTTTATTA 38373

Drosophila ------------------------------------------------------------

Canis ----------ATCTCCAGTTCAGTTGGTAGGAGAA--AATGCTAGAAGAGTCATTTATCC 23218

Bos -----------------------TTGATA----------------------CATTT--CC 3529

Rattus ATTATATTGACCTGGAATAGCAAGAGTGAACTCGCTTGCTTGCTTCCTTTCTTGCTTCCT 30387

Danio ATCTTA---------AATAA-----------TCAATTGCCAGC----------------- 2296

Mus ATTATATTAACCTGAAATAA------------CAAGCACAGGC----------------- 27650

Gallus GTCATAT---------ATTG---------------------------------------- 21250

Anopheles ------------------------------------------------------------

Homo TCCAAAGCAATCTGCAGTTTTAATGCAATCCTGATCAAAATTCCAATGTT---------- 38974

Pan TCCAAAGCAATCTGCAGTTTTAATGCAATCCTGATCAAAATTCCAATGTT---------- 38423

Drosophila ------------------------------------------------------------

Canis CCTATATAGAGCT--AACTTTAATGTA--------------------------------- 23243

Bos TCTGT------------------------------------------------------- 3534

Rattus TCCTTTCCTTCCTTTTTTCCTTTACTCCCTTCCTCTCCTCCCTCTCTCCCTCCCTCTGTC 30447

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CCTCTCTAACACGTTTACCAGGAGTTTCTTCTTTTATTATGTTGAGCT----ATATCCT- 30502

Danio ---------CAC-------AGG------------TATTAATTTAAGCT----GCATCCGA 2324

Mus -----------------CCAGAA--------TGTGCTTGTTTTGTTCC----TAATTTT- 27680

Gallus ----------------------------------TCATATGTCATGCC----CAAGCCTT 21272

Anopheles ------------------------------------------------------------

Homo --------------------AAATTTCACAGAACTAGAAAACAGTGCTAAAATTTATATG 39014

Pan --------------------AAATTTCACAGAACTAGAAAACAGTGCTAAAATTTATATG 38463

Drosophila ------------------------------------------------------------

Canis ----------------------------------TAGTAACTAATCC-----TTAGTATA 23264

Bos ----------------------------------------------------TTAGCATA 3542

Rattus CTGTATCCTAAGGTTCTTTAGGACTTTTGTCATGAAGGATTGATGGATATTTGTTAGAAG 30562

Danio CAGCATTCTAAGGT------GG----------------------------------GAAA 2344

Mus -AGTA----AGGATGCTCT-------------------------------------GAGG 27698

Gallus GGGTATTCTGACAT------------------------------------------GATA 21290

Anopheles ------------------------------------------------------------

Homo GAACCACATAAGATCCTAAATAGCC--------------------------------AAA 39042

Pan GAACCACATAAGATCCTAAATAGCC--------------------------------AAA 38491

Drosophila ------------------------------------------------------------

Canis AGTTCA---AAGATCTCTTTTA-----------------------------------AGG 23286

Bos CCTTT------GGTCATTCCTA-----------------------------------GTG 3561

Rattus ACTTCTTTGTTTCTGATGGGTA----TTGATGTGTTTTCTGATCTGTTTTTTTTGTTGTT 30618

Danio A-------------------TA----TCAGGGCACGTCCAAATCTA-------------- 2367

Mus GTTTTTTTTTTT--------TT----TTCATTTGTTATTTAACATG-------------- 27732

Gallus GTTTTC--------------TA----TGAATTCAGCTTTCTTTCTG-------------- 21318

Anopheles ------------------------------------------------------------

Homo GCTGTCATGAGTGAAAAGAACAAAGCTGGAGACATCACACTATCTGATTTCAAAATAT-- 39100

Pan GCTGTCATGAGTGAAAAGAACAAAGCTGGAGACATCACACTATCTGATTTCAAAATAT-- 38549

Drosophila ------------------------------------------------------------

Canis GTTTTCTC-----------ATAACACTGGAAGAACT---CTACTTGTTTTTCAA------ 23326

Bos GC-------------------AGTGTTGGAAGTTAT---TTACTTGT------------- 3586

Rattus GTTGTTGTTTGTTTGTTTGTTTTTTTTTTCTCTCTGCGTTTTGGATTTTTATCTATGATT 30678

Danio ---------------------------------------------------------AAT 2370

Mus ------------------------------------------------------------

Gallus ----------------------------------------------------------GT 21320

Anopheles ------------------------------------------------------------

Homo -------------------------------------------AGTTCAAAGCTACAGTA 39117

Pan -------------------------------------------AGTTCAAAGCTACAGTA 38566

Drosophila ------------------------------------------------------------

Canis -------------------------------------------------------CAGTA 23331

Bos --------------------------------------------------------AGCA 3590

Rattus TTTGTTGAAGATGT---------------------------TTTCTGTGCCTTTGACTAG 30711

Danio TTTG----------------------------------------------CTTCGCCTAC 2384

Mus TTTGCCAGGAA---------------------------------------TTTCTTCTGT 27753

Gallus CATGTGAATGGTCT---------------------------GCTTTAAACTTTAAAATGT 21353

Anopheles ------------------------------------------------------------

Homo ATTATAACAGCATGATAGTCACATAGAAGTAGACAGGCCAGGCACAGTTGCTCACACGTG 39177

Pan ATTATAACAGCATGATAGTCACATAGAAGTAGACAGGCCAGGCACAGTTGCTCACACGTG 38626

Drosophila ------------------------------------------------------------

Canis TCTATAAAAG--------------------------------------------CTCTTA 23347

Bos ATTA--------------------------------------------------CTGTTC 3600

Rattus TGTTTCTTTTTTTTTTTTTTTTTTTCCCCGGAGCTGGGGACCGAACCCAGGGCCTTGCGC 30771

Danio TGTCTC------------------------------------------AGG--------- 2393

Mus TTTTCCTTTATT------------------------------------ATG--------- 27768

Gallus CTGTTTGGTTTTG-----------------------------------AAGCC------- 21371

Anopheles ------------------------------------------------------------

Homo TATTCCCACACTCTGGGAGACTGAGGCAGAAGGATTACTTGAAACCAGGAGTTCGAGAGC 39237

Pan TATTCCCACACTCTGGGAGACTAAGGCAGAAGGATTACTTGAAACCAGGAGTTTGAGAGC 38686

Drosophila ------------------------------------------------------------

Canis TGTTTCCA----------------------AAGTTTACTCAGC----------------- 23368

Bos TGCT----------------------------ATTTACT--------------------- 3611

Rattus TTGCTAGGCAA-------GTGCTCTACCGCTGAGCTAAATCCCCAACCCCTCTTGACTAG 30824

Danio -----AGGTA------------CCTACTTCTGA-------------------TTGA---- 2413

Mus --TTGAGATA---------------TCCTCTGTG----------------TCCTAAG--- 27792

Gallus --ATCAAATA----------------TCACTGCCC--------------CCCTTAAAG-- 21397

Anopheles ------------------------------------------------------------

Homo AGCCTGGGCAACATAGTGAGACCCTGTCTCTAAAA---------------TTAAAAAAAA 39282

Pan AGCCTGGGCAACATAGTGAGACCCTGTCTCTAAAA---------------TTTAAAAAAA 38731

Drosophila ------------------------------------------------------------

Canis --------------------------TCTCTAAAC---------------CCCTAAAATA 23387

Bos -----------------------------------------------------TGAAGT- 3617

Rattus TGTTTCTTACTATATAACTCTTATTTTCAGATTTGTATTTTTTTTGTAGTGTCCTCTATA 30884

Danio ----------------------ATTTTGAGG--------------GCAGTGT-------- 2429

Mus ----------------------GTTCTCAGG--------------ATTGTGT-------- 27808

Gallus ---------------------TGTTGTCAGTT--------------AGATGT-------- 21414

Anopheles ------------------------------------------------------------

Homo AAAAAAT----------------TTTTAAAGCCAGG--------CGCGGTGCTGTGT--- 39315

Pan AAAAA------------------TTTTAAAGCCAGG--------CGCGGTGCTGTGT--- 38762

Drosophila ------------------------------------------------------------

Canis GATGATT----------------TTTTAAGA--------------GTGAT-CCAGAT--- 23413

Bos -------------------------TCAAAG--------------GTGAC-CCATA---- 3633

Rattus AGTTCCATAGATTTTTAGATGTTTCCTAAGTATTCTTAATATTTTCCTTGATTGACTGAT 30944

Danio ------------------ATGCGTCCT--------------------------------- 2438

Mus -------------------TACTTGAT--------------------------------- 27816

Gallus -----------------GATGCATAGT--------------------------------- 21424

Anopheles ------------------------------------------------------------

Homo ------------------ATCTGTAGTCCTAGCTACCCGAGAGGCTGAAGAAGGA----- 39352

Pan ------------------ATCTGTAGTCCTAGCTACCCGAGAGGCTGAAGGAGGA----- 38799

Drosophila ------------------------------------------------------------

Canis ------------------ATTTGTAATGCAAAATAATCAGTTAACCATA----------- 23444

Bos ------------------------------------------------------------

Rattus CATTTCCTCTACCTTATCCTCCTGGCCTGATAGTCTCTGTCTTCTACAATACTTTCAGTT 31004

Danio ---------------------------------TCACTGCCTTCGATA------------ 2453

Mus ---------------------------------------TCACCTACAT----------- 27826

Gallus ----------------------------------------------CA------------ 21426

Anopheles ------------------------------------------------------------

Homo --------------------------------GGATTGCTTGAGCTCAGGAGCTTAAGGT 39380

Pan --------------------------------GGATTGCTTGAGCTCAGGAGCTTAAGGT 38827

Drosophila ------------------------------------------------------------

Canis ---------------------------------CCTTCTTTTATCACAGAAT-------- 23463

Bos ------------------------------------------------------------

Rattus GAACTTTTTTGTTTGATTTCCTGAATTCTTCATTTCCACTAGCAATTCATTTTGACTTTT 31064

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GG---------------------------------------------------------- 39382

Pan GG---------------------------------------------------------- 38829

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CTTCAGGATTTCTATATTTTTTGTTGAGTTAGATTTTTACATATTGTGTTATTTTATTAC 31124

Danio ----------------------------------TCTCACA------------------- 2460

Mus --------------------------------GTTTCTGCA------------------- 27835

Gallus ----------------------------------TCTCACA------------------- 21433

Anopheles ------------------------------------------------------------

Homo --------------------CAGTGAACTGTGATTGCATCAC------------------ 39404

Pan --------------------CAGTGAACTGTGATTGCATCAC------------------ 38851

Drosophila ------------------------------------------------------------

Canis ---------------------------------TTATAACAT------------------ 23472

Bos ------------------------------------------------------------

Rattus TTGTTTCAGCTTCGTGTTTTTGCAGTTCTTATCCAGCCATTTGTTCATACTGTGTTTTGA 31184

Danio ----------------------------------------------ATCCTGTGCTTT-- 2472

Mus ------------------------GTTCTCATTCAGCCATTTGTTTATATTGT-CTTTGA 27870

Gallus --------------------------------------------TTGGAGTAGGTTTTGT 21449

Anopheles ------------------------------------------------------------

Homo -------------------------TGCACTCCAGCCTGGATGACAGCGTGAGACCCTGT 39439

Pan -------------------------TGCACTCCAGCCTGGATGACAGCGTGAGACCCTGT 38886

Drosophila ------------------------------------------------------------

Canis -------------------------TGC--------CTGG---TCAGTGGTAGACACT-- 23494

Bos ------------------------------------------------------------

Rattus GTTCCTTCAACAAGGATTTACTGTTCGAAGA----------------------------- 31215

Danio ------------------------------A----------------------------- 2473

Mus GTTCCTTTAACAGGGATTTGCTGTTTGAAGA----------------------------- 27901

Gallus GGCTGGTT---------------------------------------------------- 21457

Anopheles ------------------------------------------------------------

Homo CTTTTAAAAACAAAA-----GAAACAAAAAAACAGACACATCGACCCACAAAACAGAATG 39494

Pan CTTTTAAAAACAAAACAAAAGAAACAAAAAAACAGACACATCGACCCACAAAACAGAATG 38946

Drosophila ------------------------------------------------------------

Canis ----CAAGTATAAATT------AACCAAGGAATA-------------------------- 23518

Bos ------------------------------------------------------------

Rattus -----------------------------CATTTTCCTGTGCATCATTTATGAAAGTGTT 31246

Danio -----------------------------CATTT-------------------------- 2478

Mus -----------------------------TATTTTCTTGTGCATCATTTATGA---TGCT 27929

Gallus -----------------------------CATTTCC------------------------ 21464

Anopheles ------------------------------------------------------------

Homo GAGAGCACAGAAATAAATTCGTGTACTATCAGTTGATTTTGGACAGGGTGCAAAG----A 39550

Pan GAGAGCACAGAAATAAATTCGTGTACTATCAGTTGATTTTGGACAGGGTGCAAAG----A 39002

Drosophila ------------------------------------------------------------

Canis -----------------------------CATTTTGTCTTGAATATAGTGAAT------- 23542

Bos ------------------------------------------------------------

Rattus TTTCTCAGAGATGAATAAACTGTGGGTGTTAGTTTTTAGAGGAGACA-TTGTCTTAGTTA 31305

Danio ---CTGAGAGCTAAAAAA------------------TAAAGATGGCA-T---CTTAA--- 2510

Mus TTTCTCAGAGATGAATAAACTGTGGGTGTTAGTTTCTAGAGGAGATAATTGTCTCTGT-- 27987

Gallus ---CTGAAAGAATGGCAA-------------------AAGGAAAATTATGCTGC------ 21496

Anopheles ------------------------------------------------------------

Homo ACACAGCGGGGAAAGGGAAGTCTGTTCAATAGGTGGTGTTGGGAA--AATGGAATATCTA 39608

Pan ACACAGCGGGGAAAGGGAAGTCTGTTCAATAGGTGGTGTTGGGAA--AATGGAATATCTA 39060

Drosophila ------------------------------------------------------------

Canis ---CAGAAAGAGATGAAAAGACTATTTCATGATTATCACAGAGAATTGATAGATGCACTA 23599

Bos ------AAAGAGTTGAAA---------------TAGCATGGA------------------ 3654

Rattus TTCATGTTTGTGTCTTTTCAGTGGGACCAAAGCATCTGGAATTAGTTTTTTTGGTAGTTG 31365

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CAT-----------------GCATGAGAATGAAATCAGACCTGTATCTCACATCATATAC 39651

Pan CAT-----------------GCATGAGAATGAAATCAGACCTGTATCTCACATCATATAC 39103

Drosophila ------------------------------------------------------------

Canis CAC-----------------TAATGGCAACAACTCT---TTTGTGTTTCTATCCTT---- 23635

Bos --------------------TAAAAACAACAA---------------------------- 3666

Rattus TTCTTGATATGAACAGCTAGTCACCCTTTTGTTGAGTGGAACAGAAC------------- 31412

Danio --------------AGCT--CCACTTTTCTGT--------------C------------- 2527

Mus ------------GTAGCCC-TGACTCTCCTTG-----------AACT------------- 28010

Gallus --------------AGCCTCCCAGAATATGCCAGAAAAATGATTAAT------------- 21529

Anopheles ------------------------------------------------------------

Homo CAAATTCAAGTTAAAATGGATTAAGGTCTTAAATATAAGACCTGAAACTGTAGAACTACC 39711

Pan CAAATTCAAGTTAAAATGGATTAAGGTCTTAAATATAAGACCTGAAACTGTAGAACTACC 39163

Drosophila ------------------------------------------------------------

Canis --------------------TTAGGATCTTAATTGGAGGAAGCAGAT------------- 23662

Bos ----------------------AGGGT--------------------------------- 3671

Rattus ---AGTGGTTCTGTTCCTTGTTTGGTATTACCCTAATCTGTCAGGTTGTGGATCCACTGA 31469

Danio ---AGT-----------TTGT---GTAT--------------AAGTTAGGGCTGCGC--A 2554

Mus ---AGC----------TCTGTAGACCAGGA------------AGGCTTTGAGCTCAC-AG 28044

Gallus ---AGC---------CATTGCA-AATATGA--------------ACTGTGACTGTAT--- 21559

Anopheles ------------------------------------------------------------

Homo AGAATAAAGTATAGGAGAAATGTAC-ATGACATTGGTTT---GGACAGTGATTTTTTTGG 39767

Pan AGAATAAAGTATAGGAGAAATATAC-ATGACATTGGTTT---GGACAGTGATTTTTTTGG 39219

Drosophila ------------------------------------------------------------

Canis -GGATATAATTTGTGTTTAGTTCATTATAACCTCACTGT---AAAATGTGACACTTTTAG 23718

Bos ----------------------------AACCTCACT---------TGTGA--------- 3685

Rattus ATAGTGCTTGCTGTTAAATCTTTGGGCAGCTGTTATAGTTTTTA--------AACATGGT 31521

Danio ATA------------------------------TATCGTTTT----------AGCACAAT 2574

Mus AGATCACCTGTTCAGTAATGTGTTA--------TTTAGTTCC------------CATGGT 28084

Gallus -----------------------------------TAGTGTTT-----------CATCAT 21573

Anopheles ------------------------------------------------------------

Homo ATATGACCCCCTCGAAGCACAGGCAACAAAAATAAAAATTGATGAATGAGATCACATCAA 39827

Pan ATATGACCCCCCCGAAGCACAGGCAACAAAAATAAAAATTGATGAATGAGATCACATCAA 39279

Drosophila ------------------------------------------------------------

Canis AGAAAA------------------AAAACAGGTTAAAGTTGA-------------ATAAT 23747

Bos ----------------------------------------------------------GT 3687

Rattus GTCTATAAACTGTTTCGGCTCATTGATACTTCTGGTCAGACCA----------------- 31564

Danio GTGTG---------------CATTCACAAGTCACATCA---CA----------------- 2599

Mus TTCTGTAATATCTTTTG--CTGTTAATATCTAATTTTATTCCA----------------- 28125

Gallus GCCAGTGCTACCCTAGAGCCTTTTAGACATGGAATGCCTTAAA----------------- 21616

Anopheles ------------------------------------------------------------

Homo ACTAAAAAGCTTCTGCA---TGGCAAAAAGAAAAAATCTACAGAATGAAAAAACTCACAG 39884

Pan ACTAAAAAGCTTCTGCA---TGGCAAAAAGAAAAAATCTACAGAATGAAAAAACTCACAG 39336

Drosophila ------------------------------------------------------------

Canis TTTAACAGTTTTTTTTT---TTTTAATTTTAACAGTTTTACAA----------------- 23787

Bos ATTAGCA-------------------------CAGC------------------------ 3698

Rattus ---------------TGATATGCAGTGCCTTATGGAGTGGTCAGTGTGGCAGAGGACATG 31609

Danio ---------------AGATACGCAATG--------------------------------- 2611

Mus ---------------TTGTATTCTATACAAAGAAGTATGGTAT----------------- 28153

Gallus ---------------TTATTTTCCTCGTAGCTGAGAGCAG-------------------- 21641

Anopheles ------------------------------------------------------------

Homo AATGGAAGATAGTATTTCCAAACCATATATCTGGTAAGGG-------------------- 39924

Pan AATGGAAGATAGTATTTCCAAACCATATATCTGGTAAGGG-------------------- 39376

Drosophila ------------------------------------------------------------

Canis ---------------TTTTAATTCATGT-------------------------------- 23800

Bos ------------------------------------------------------------

Rattus CAGAAGAGAAATTGGGCTTGACCTGCCTACAGTTTCTGAGTTTCTGAGGCTTTTTGTGTG 31669

Danio -----------TTAAGTCTGAATT----ATAGTT---------------------GAGCA 2635

Mus TACAGTATTCATATATTATGACTT--TTTCAGTGTCTTGATAGGT-AGTTGATTTTTGTA 28210

Gallus ---------AGCTGGATTTGCGTAGGCTGAAGCTTTCTAA--------------TCCATA 21678

Anopheles ------------------------------------------------------------

Homo -----------GTTAATATGCAAAATATATAAGGAACTCAGACATCTCAATAGTAAGAAA 39973

Pan -----------GTTAATATGCAAAATATATAAGGAACTCAGACATCTCAGTAGTAAGAAA 39425

Drosophila ------------------------------------------------------------

Canis ------------TTAATGTGTAA------CAGGTACTTTGGGCA----GATTATAA---- 23834

Bos ----------------------------------ACT----------------------- 3701

Rattus GGACCTACCGGCTCTTACTAAGATGTGTGTTCCAGGCAGAAAGCTGGTGAGGTTGTTCAT 31729

Danio GGAACTAC-----------------------------AGAA-----------TTGT---- 2651

Mus GAAAATTCCA-----------------TAGACTGAGAAGAA------------TGT---- 28237

Gallus GAAGCT-------------------------------AGAC------------TGTTCT- 21694

Anopheles ------------------------------------------------------------

Homo GCACCTCACTTAAGAAATGGGCAAAGG--ACTTGAATAGACAT---------TTCTCAAA 40022

Pan GCACCTCACTTAAGAAATGGGCAAAGG--ACTTGAATAGACAT---------TTCTCAAA 39474

Drosophila ------------------------------------------------------------

Canis --ACCTCAATAAAATAATGCTTAGAGATTATTATGGTAAACAT---------TTAT---- 23879

Bos --ATCTC----------------------------------------------------- 3706

Rattus TTAACCTCTTT------TTATGTATGTGTGTGTTAAGTATTTTAGAAAGTCTATAGTAGG 31783

Danio ------------------------------------------------------------

Mus -------------------ATTAGTATATGGGTGGAATGTTGTACAAA------------ 28266

Gallus --------------------TAAAATTACAGGTAAAGTGTTTGTTCAGATC--------- 21725

Anopheles ------------------------------------------------------------

Homo ATAAGACATACAAATGGCCATTAGAATGGCTATTAAAGTATGATGAGGATTTGCAG---- 40078

Pan ATAAGACATACAAATGGCCATTAGAATGGCTGTTAAAGTTAGATGAGGATTTGCAG---- 39530

Drosophila ------------------------------------------------------------

Canis ------------------TATTAGTAAAAATACTGACTTATAATTAG------------- 23908

Bos ------------------TGTTAGTGATAGTATTGA-TCACAGATAG------------- 3734

Rattus CGGTCATCATTTTCAGAGCTCTTTAGTGTTCTTATCCCTCCCCTTTATTCTTTCTACTAT 31843

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CCCATTTACCCATCTCTATGCCCAGTATAACCTTTTTGTTCCATTATTCCTTCTTAACTT 31903

Danio ------------------------------------------------------------

Mus --------------------------------TATCTATTACATT--------------- 28279

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------ACAAGAGATATATTGCGCATGGC------------- 40101

Pan ------------------------ACAAGGTATATCTTGCGCATGGC------------- 39553

Drosophila ------------------------------------------------------------

Canis --------------------------------TTTTTTTCCCTTG--------------- 23921

Bos --------------------------------TT-------------------------- 3736

Rattus TTTAATACCATTTCATTTAGTTTACTCTTCCTTGAAAGTTATCCACCTCTCCTATAGCCC 31963

Danio --------------ATTTAGT----------------------CAC-------------- 2661

Mus --------CATTTGACTTAACT--------------------CCAGAGTTTCTGT----- 28306

Gallus ---------------TTCAGTC---------------------CACGTTGTC-------- 21741

Anopheles ------------------------------------------------------------

Homo -----AGGAATGTAAATTAGTACAGC--------------ATTTATGGAAAATAG----- 40137

Pan -----AGGAATGTAAATTAGTACAGC--------------ATTTATGGAAAATAG----- 39589

Drosophila ------------------------------------------------------------

Canis -----AAAAATGTATCTTACT---------------------TTATAGTTAATGG----- 23950

Bos ------------------------------------------------------------

Rattus CAAGTAATTTCCTAACATCTATGAGTTTTTGAAATGAAACACACATATCATGTAGTCTTT 32023

Danio --------------------------------------------------TGTA------ 2665

Mus --------------------------------------------------TTTAATTTTT 28316

Gallus --------------------------------------------------TGCAGTCAGT 21751

Anopheles ------------------------------------------------------------

Homo --------------------------------------------------CATGACGTTT 40147

Pan --------------------------------------------------CATGAAGTTT 39599

Drosophila ------------------------------------------------------------

Canis --------------------------------------------------CTTATTGGTT 23960

Bos ------------------------------------------------------------

Rattus TGGGTACCCAAAAGTAGTATAGGTGAGTCAAATGGTAGATCTTTTTTTTAGCTTTTTGAG 32083

Danio ----------------------------------------------------TTTATAAG 2673

Mus ----------------GTCCAGATGATCTGTCTGCTGGAGAG-------AGTTGGGTAGC 28353

Gallus -------------------------------------------------ATCTGCGTGAC 21762

Anopheles ------------------------------------------------------------

Homo G------------------CTCAGAAATTAAAAAATAGAACTACCATATGATTCAGCAGT 40189

Pan G------------------CTCAGAAATTAAAAAATAGAACTACCATATGATTCAGCAGT 39641

Drosophila ------------------------------------------------------------

Canis ------------------------------AAATATGGTAATA----ATGACTTTCCAAT 23986

Bos -----------------------------------------------ATGACT------- 3742

Rattus GA-AGTTACACACTGATTCCCATAGTGAATACCCCGGTTTACATTCCCAACATGAATAAG 32142

Danio GA-ATTTATA-------------------------------------------------- 2682

Mus GA-AGTCACCCACTATCAGTCACTGTTGAGAC---------------------------- 28384

Gallus CATAGTCGCTGTTTTAGGACAG-------------------------------------- 21784

Anopheles ------------------------------------------------------------

Homo CACACTTGGATATATATGTATTTTTATATATATATATATATATATATATATATATATATA 40249

Pan CACACTTGGATATATATGTATTTTTATATATATATA------------------------ 39677

Drosophila ------------------------------------------------------------

Canis CAGAGTCAATCTTGCA-------------------------------------------- 24002

Bos -------------GTG-------------------------------------------- 3745

Rattus TATTTCCCTCTTCCCATACCATATCCAATTCAACACTTGTTATCCTTTTTGACATTTGTC 32202

Danio -------------------------------------------------TGATATATG-- 2691

Mus -------------------------------------------------TGACACGTGGT 28395

Gallus -------------------------------------------------TGTCAAATGGA 21795

Anopheles ------------------------------------------------------------

Homo TATATATAAATAAAAGAATAAAATCAGTGCGCTGAAGAGATCTGTACTCCCATGTTCCTT 40309

Pan ------------AAAGAATAAAATCAGTGTGCTGAAGAGATCTGTACTCCCATGTTCCTT 39725

Drosophila ------------------------------------------------------------

Canis -------------------------------------------ATAATCTAATATTTCCT 24019

Bos -------------------------------------------GTGTCTTAATGTTTC-- 3760

Rattus ATTCTGACTAGGTTGGTGGAATCTCAAGGAAGTGTTCGTATGCATTTCCTTGATTTTTAA 32262

Danio ------------------------CAAAAA------------------------------ 2697

Mus TTTAGATCTAA--TAGCATTCCTCCTATGAAAT-----TGTGCGCCTCTGTGTTGCTTAT 28448

Gallus GTGAACTCAGTAAAAGAATTCTACCATGGAAACA------------------------AA 21831

Anopheles ------------------------------------------------------------

Homo TCGGTATCATTTGCAATACCCATGATACAGCATCAGCCTAAGTGTTCATGGATAAAGAAA 40369

Pan TCGGTATCATTTGCGATACCCATGATACAGCATCAGCCTAAGTGTTCATGGATAAAGAAA 39785

Drosophila ------------------------------------------------------------

Canis GCAAT-TCCTCTGTAA----------ACAACA--GACCTAACCTTAAACCTACCATAACC 24066

Bos ---------TCTGAGA----------ATA------------------------------- 3770

Rattus GTGTGCTGAAA------------------------------------------------- 32273

Danio -----CTAACA------------------------------------------------- 2703

Mus GTGT-CTAAAAT------------------------------------------------ 28459

Gallus ACTTACTAAAAAC----------------------------------------------- 21844

Anopheles ------------------------------------------------------------

Homo ATGTGGTATGTATACACAGTGGAATATACTTCAGCCATAAAAAGGAGGAAATGCTGTCAT 40429

Pan ATGTGGTATGTATACACAGTGGAATATACTTCAGCCATAAAAAGGAGGAAATGCTGTCAT 39845

Drosophila ------------------------------------------------------------

Canis ATGTCACAGACAT---------------CTTATGTCAT------------------CCAT 24093

Bos --GTTGAAGGTAT---------------CTTGTGC------------------------- 3788

Rattus ----AAAATTGATTTAATTCTTTGCCTTGGTTTTTTAAT--------------------- 32308

Danio ----AAAATT--------------------CTTTCTTAG--------------------- 2718

Mus -TGTAACATCCACCTGGTA---------GATTTTTCCTC--------------------- 28488

Gallus -TCCAGAAACTTTTTAA--------------CTTGAAAA--------------------- 21868

Anopheles ------------------------------------------------------------

Homo TTGTGACAGCAGGGATGAACCTGGAGGGCATTGTTGAAAGTAAGCCAGCCACAGAAAGGC 40489

Pan TTGTGACAGCAGGGGTGAACCTGGAGGGCATTGTTGAAAGTAAGCCAGCCACAGAAAGGC 39905

Drosophila ------------------------------------------------------------

Canis TTATATAAGTTGT-ACGATCTAGGATACCATTGTTCA----------------------- 24129

Bos -------------------------------TGCTC------------------------ 3793

Rattus --------TATTTTTTTTTCATGTTTAGTTTTTTGAATTCTTTATATATTCTAGATGAAC 32360

Danio --------TATTTTTGTCTTGTTTCTAGTTC---------------------AAATGAA- 2748

Mus --------TAATTTTCTTTATTTTGTATCTTT---------------------GGAGAA- 28518

Gallus --------TGGGATTGTGTGATGTTTCCTTTA---------------------------- 21892

Anopheles ------------------------------------------------------------

Homo AAATACTACATCTCTCTTAAATGTGGAATCTTAAC-------------TCAGGGATGTAA 40536

Pan AAATACTACATCTCTCTTAAATGTGGAATCTTAAC-------------TCAGGGATGTAA 39952

Drosophila ------------------------------------------------------------

Canis -----------CTCTTCCAAA-----ATTTTTA----------------------TGTTT 24151

Bos -----------------------------TTTA----------------------TG--- 3799

Rattus GCCCGTGGTCAGATATATAGTAGGGTAAAGAGGTGTGCTGCCTCTTACCTTGAATAGTAG 32420

Danio -----------------------AATAAA-----------------ACTTT--------- 2759

Mus ---------------------GGGATTAA--------------------TTAA------- 28530

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AATGGTGGTTACCAGGGGCTGGGGGTGAGTGGACTGGGTTGCAGAGGTGTTGGTC----- 40591

Pan AATGGTGGTTACCAGGGGCTGGGGGTGGGTGGACTGGGTTGCAGAGGTGTTGGTC----- 40007

Drosophila ------------------------------------------------------------

Canis AATG----TAACTTTGGG---GGAGGGAGTGGAGTGT-TTACAGAGGTAACATCCC---- 24199

Bos ------------------------------------------------------------

Rattus TATCCTCTACTATAGAGAATTTTTAGTTAAAGTTTTATGTGGTCCTATTTATCAGTTGTT 32480

Danio ------------------ATTTCTACTTGA-----------------TCTAAAAATTGTT 2784

Mus --------------GACCATTTACAATCAGAGTT-------------CTTGAAAGATGTG 28563

Gallus ------------------ACTTGAAAATGAGA----------------TTGTGTGATGTT 21918

Anopheles ------------------------------------------------------------

Homo -------------AGAGGACACAAAATTTCAATTAAGAGGAATT---TGTTCAAGGTATC 40635

Pan -------------AGAGGACACAAAATTTCAATTAAGAGGAATT---TGTTCAAGGTATC 40051

Drosophila ------------------------------------------------------------

Canis -------------AGAAGGAACAAAA---------------------------AGATGTC 24219

Bos ------------------------------------------------------------

Rattus TGTCTTAATGC--------------------CTGTATTACTGGACTCCTGTTCAGGAAGT 32520

Danio TG-------------------------------ATATT--TGAACT-------AGAAA-- 2802

Mus TGT-------------------------------TTTTTCTG---TTTATCATGGAAAAT 28589

Gallus TGGC---------------------------CTTTTTGTTTGGAAATGTACAAGGAAA-- 21949

Anopheles ------------------------------------------------------------

Homo TATTGTACAACATGGAAACTAGTTAATAACAGTGTATTTTTGGAAATCACTGAGAGTAGA 40695

Pan TATTGTACAACATGGAAACTAGTTAATAACAATGTATTTTTGGAAATCACTGAGAGTAGA 40111

Drosophila ------------------------------------------------------------

Canis CTT--------------------------------ACTTTGAGAAACCACTAAG------ 24241

Bos ----------------------------------------GAGAAA-------------- 3805

Rattus CCTTTCTCGTGCTT-----------ATGAACTCAAGCATATTTCCTGCTTTTTTTCTGTG 32569

Danio --------------------------------CGAG------------------------ 2806

Mus TTCTATTTGTCTT-------------------TGAAT----------------------- 28607

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTTAAATGTTCTGCCATAAAATATAAGTATGTGAGGTATTGCATGTATTAATTAGCTTG 40755

Pan TTTTAAATGTTCTGCCATAAAATATAAGTATGTGAGGTATTGCATGTATTAATTAGCTTG 40171

Drosophila ------------------------------------------------------------

Canis ---TAAATG----------------------GTGA------------------TGGCTT- 24257

Bos ------------------------------------------------------------

Rattus ATTGGGTATCAGCTCATATTTCAAGGCTCTTGACCCATTTGATTCATTTGTAGTTGAGTT 32629

Danio ------------------------------------------------------------

Mus ----------------------------------------------------------TT 28609

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATCTAGCCATTCCACAG------------------------------------------T 40773

Pan ATCTAGCCATTCCACAG------------------------------------------T 40189

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TTGTACAGGGTAAGAGATGATTATCAACTTTCATTCTTCTACGTACAGCTTTCCACTTTT 32689

Danio ----ACAAAGTAAGAAA-----------------------------AGCATTTTATTTTT 2833

Mus TTGTGTAAAGTTTTACA-----------------------------AGTGTAATGCTTTG 28640

Gallus --GTATGTGATGATGAGG----------------------------AGTTGGGTCCCTTC 21979

Anopheles ------------------------------------------------------------

Homo GTATACATATTTTGGAACATCATGTGAATACAATA-------AATATGTATCCTTTTTTT 40826

Pan GTATACATATTTTGGAACATCATGTGAATACAATA-------AATATGTATCCTTTTTTT 40242

Drosophila ------------------------------------------------------------

Canis -TATACACATTATGT---------------------------AATAAGTCTTTTACTTCT 24289

Bos -----------------------------------------------------------T 3806

Rattus GACCAACGTCATTTGAAGTCAGT--CTTTTTGCAGTGTTTAGGTGGTTGTAGATGTCTCT 32747

Danio T----------TTTCAAG---------------ATTGCTTAA-----------------T 2851

Mus TG---------TTACCAGTT-GT--GATCTTTCAGGATCCAGGC---------TAGCTGT 28679

Gallus T----------CTGTAGGTTAGATACATGTTGCAGTGGTCAG---------------TCT 22014

Anopheles ------------------------------------------------------------

Homo TGTT-------TTTTGTGTTTTTTTTTTTTTTTTTTTTTTTTGAG---------ACAGAG 40870

Pan TGTT-------TTTTGT---------TTCCTTTTTTTTTTTTGAG---------ACAGAG 40277

Drosophila ------------------------------------------------------------

Canis GGCT-------TCTTAA---------TTCCTCACATCTTCATTTA---------ACTTGA 24324

Bos GACT-------TTTTAA------------------------------------------- 3816

Rattus TTTTATACTACTACATTCTATTCTATTAGTCAATGTATATTTTATGCTAAATAACATCAT 32807

Danio TTCTGTACC-------TGAATACTGTTAG-----------------------------AC 2875

Mus TTTCAGCCTG--AGAGTCATAACTGCCACAGGGGTTGCGTATCAGAT-----------AT 28726

Gallus TCTAATATCA-----ATATTTTTTGTAAAGTAGTTTGT-------------------TGT 22050

Anopheles ------------------------------------------------------------

Homo TCTTGCTTT---GTCACCCAGGCTGGAGTGTAGTAGCATGATCTTGGC----CACTGCAT 40923

Pan TCTTGCTTT---GTCACCCAGGCTGGAGTGTAGTAGCATGATCTTGGC----CACTGCAT 40330

Drosophila ------------------------------------------------------------

Canis TCTTCAATTAAAGTCACTCACATTGACGTTT-----TTTGATCTTTGC----CTTTTTAT 24375

Bos ------GTTAAGGTC----------------------TTAAT-------------TTTAT 3835

Rattus TCCGTATAGTACATGTTGTGGTAANCTGGGANGATGATATCTATAGCAGTATTTTAAAAA 32867

Danio TCCCCA-------------------------------------------------GAAAA 2886

Mus CCCGCATATCAGATATTTACATTATGATTGATTATAGTAGCAATAGT----TACGAAGTA 28782

Gallus TGATCAAATTTGCTACTGGAACA-----------------CAGTAGTGGCTCAGAAGGAG 22093

Anopheles ------------------------------------------------------------

Homo CCTCTGCTTCCTGGGTTCAAATGATTCTCCTGCCTCAGCCTCCCAAATACGTAT-CATTT 40982

Pan CCTCTGCTTCCTGGGTTCAAATGATTCTCCTGCCTCAGCCTCCCAAATACGTAT-CATTT 40389

Drosophila ------------------------------------------------------------

Canis CTCCTTTATTCTTTACTTGA-------TCTACCATTAGTTT------TGCATGT-CATAG 24421

Bos TTCTTTTA----------------------------------------GAATAA-CATAA 3854

Rattus TCATTTNCTATTTTTTATTCTGTCATGCATGT---------GTGTGTTTCCAAAGGAAGT 32918

Danio TCATT----------------------------------------------AAAAAGAGC 2900

Mus CCAAT----------------------------------------------GAAATAATC 28796

Gallus GTGATT---------------------------------------------AGAATCAGC 22108

Anopheles ------------------------------------------------------------

Homo TTATTTGTCACCAAACCTGGTGTCTTGACAGGTGAAAGGAGATATGAGTATGAGTGAAAC 41042

Pan TTATTTGTCACCAAACCTGGTGTCTTGACAGGTGAAAGGAGATATGAGTATGAGTGAAAC 40449

Drosophila ------------------------------------------------------------

Canis TTACT----------------------------------------------------ATT 24429

Bos TTCCT----------------------------------------------------ACT 3862

Rattus TTAATAACTAGTTTCTTAGATTCTGAAAGAATTGTGTTGCAAGTTT--TATGATAATTGA 32976

Danio T------------------ATTC-----AAACTATCTTG------------------TGA 2919

Mus TTTTGGTTGGGAGTCATCACAACATGAGGAACTGTATTAAAGGGTCA-CAGCACTAGGAA 28855

Gallus TTCTCAGA---------AGATACTCTGTATGTTTTATTGTTAGTGAAGTGTGGTTGGTAG 22159

Anopheles ------------------------------------------------------------

Homo TCTTACAAAGATAGCTGAGATGATCATTGTCAGAGGTTTTAGTATGTCTAACAAAGACAA 41102

Pan TCTTACAAAGATAGCTGAGATGATCATTGTCAGAGGTTTTAGTATGTCTAACAAAGACAA 40509

Drosophila ------------------------------------------------------------

Canis CCTTATA----------------TCGTTGTTTTTAATTCTAAT---TCCACTAATTCCAA 24470

Bos TGATATA----------------T------------------------------------ 3870

Rattus ATTTGTAGATTGCTTTTGATAAGATGGGCATTTTCACAATATTCTATCAGTCATGGATGG 33036

Danio AACTGTATAT------------------------CCCGATATTC---------------- 2939

Mus GGTTAAGGATCACTGAT-----------------CCAGACACTTCATGC----------- 28887

Gallus GGCTGTGAAATACTGTTTAAA-------------TGTCATACCTTACACA---------- 22196

Anopheles ------------------------------------------------------------

Homo GGGAGTGATTTGCTGAAATGAGGAGG-------TGAAGATGTCTCAAATTTAGAAAGGCA 41155

Pan GGGAGTGATTTGCTGAAATGAGGAGG-------TGAAGATGTCTCAAATTTAGAAAGGCA 40562

Drosophila ------------------------------------------------------------

Canis ATGTGTTGTTCACT---------------------AACACATTTTCACTTTCTGAGGGTA 24509

Bos ------------------------------------------------------------

Rattus GAAATCTCTTTGTCTTATGGTGTC----TTCAGTTTCTTTCATTAGTGTTTTAGAGTTCT 33092

Danio ------------------------------------------------------------

Mus ------------------------------------------------TTTAAAGACTTT 28899

Gallus --------------------------------------------------TTTAGGCTTT 22206

Anopheles ------------------------------------------------------------

Homo AATATTTTGGGGGCCTAGAGTATTGGGATAGAACCATGTACAGGGACATTGAAGTCACTT 41215

Pan AATATTTTGGGGGCCTAGAGTATTGGGATAGAACCATGTACAGGGACATTGAAGTCACTT 40622

Drosophila ------------------------------------------------------------

Canis TCAATTGTTGTGGCTT-----------------CCTTAT------------------CTT 24534

Bos ------------------------------------TAT------------------CTT 3876

Rattus CATTGT--------------ATAGTGTTTCCACTTCTTTGAATAAGATTATTTCAATA-- 33136

Danio -ATTGC--------------AGA--------------------AAAATTA---------- 2954

Mus TGTTGA--------------ATAGA-----TATTAATTTTGATGAGCCTGCTTTATGAG- 28939

Gallus TACAGT--------------ACAACATGGAGTTTAGTCTGGTTAACTACATTTGTGTG-- 22250

Anopheles ------------------------------------------------------------

Homo TGCTGATGATGTAACTGGGGGCAAAGTGGAGGCTTAAATATGTGGGTTTAATTGACCAGA 41275

Pan TGCTGATGATGTAACTGGGGGCAAAGTGGAGGCTTAAATATGTGGGTTTAATTGACCAGA 40682

Drosophila ------------------------------------------------------------

Canis TAT----------------------------GCCTATATTCATTACTTATTTT------- 24559

Bos AA--------------------------------------CATCA--------------- 3883

Rattus -----------TAATTTTA---TTTTGTTAAATTTTTTATATTGTGAATGGTATAGTTTT 33182

Danio ------------AATATCG---CATTATCAGATTTTTC---------------------- 2977

Mus -----------TGATGTCACTTTTTTCTTGTATCCTTTAGTATCCTTTAGTCTGTGTTTT 28988

Gallus -----------GAATGTCA----------GGACACTTTTGACAGAGGGACACAAAATATA 22289

Anopheles ------------------------------------------------------------

Homo ACAGGGAGGGAAAGAGAAGGCATTCGGTTAGATGACATGAGTTTCAAATTACAAGCTGTT 41335

Pan ACAGAGAGGGAAAGAGAAGGCATTCGGTTAGATGACATGAGTTTCAAATTACAAGCTGTT 40742

Drosophila ------------------------------------------------------------

Canis -----------------------CCAACTACTTGTTATG----------TTTAAGATTTT 24586

Bos -----------------------------------TATG----------T---GAATGTT 3895

Rattus TCTTATTTCTTTTTCAATCTGCTTGTTTATTAGTATATTGGAAGGTTACTGCTCTGTGTG 33242

Danio ------------------------------TAGTATA----------------------- 2984

Mus ATTTATTTATTTTTTAACTA----------TAATATGTTGGGAAG--------------- 29023

Gallus GTGAA-------------------------TAATGTATTTAGAGT--------------- 22309

Anopheles ------------------------------------------------------------

Homo TTTTTGTTGTTTTTAATACAGGGAATTTTGCCGTTTATTTTTAATACAGGGAATTAGAAG 41395

Pan TTTTTGTTGTTTTTAATACAGGGAATTTTGTCGTTTATTTTTAATACAGGGAATTAGAAG 40802

Drosophila ------------------------------------------------------------

Canis TTTCTCTCTCTCTTTTTA----AGATTTTA---TTTATTCATGA---------------- 24623

Bos TTT-------------------AAATTTTT---TTTATT--------------------- 3912

Rattus TGTGTTTGTA-------------TTAAATTTGTACCCTGCGACATTGTTGAATGTGTTTT 33289

Danio --------------------------------------------------AATGTATGTT 2994

Mus --------------------------AATTTATTTACT--GGCCTTTTGTATTGTGTTTT 29055

Gallus -------------------------------------------------GGAGGTGCAGC 22320

Anopheles ------------------------------------------------------------

Homo AATAATGGTGGACTTAGGAGTTTTAGGAGTCACATAAAAGGGTTGCATGATAGGCAGTGC 41455

Pan AATAATGGTGGACTTAGGAGTTTTAGGAGTCACATAAAAGGGTTGCATGATAGGCAGTGC 40862

Drosophila ------------------------------------------------------------

Canis ------------------------AAGACACAGAGAGAGAGGTAGAGACATAGGTAG--- 24656

Bos --------------------------------------------GAGTTATAG------- 3921

Rattus CTTAG---TGAATAGGATTTTTTTTTTTTCTGATGGAGATATTTAGAATCTTTTAGGTAT 33346

Danio TTCGA---CTAACAG-----TTTCTACTTTTGATGG------------------------ 3022

Mus TCTAGGCTTTTGTCCACACATCTCTACTTGCAAATGT----------------------- 29092

Gallus ACTGAGGGTAGAGCGCATTTGCTAATTCTGTGAGGAG----------------------- 22357

Anopheles ------------------------------------------------------------

Homo CTTTGGGGAGGAGCCAGGCTTTCATGAAAGCTAAGAAGTTGAGGGGCCATTAT------- 41508

Pan CTTTGGGGAGGAGCCAGGCTTTCATGAAAGCTAAGAAGTTGAGGGGCCATTAT------- 40915

Drosophila ------------------------------------------------------------

Canis ----AGGGCGAAGCAGGCTCCTCGC-------AGGGAGCTG------------------- 24686

Bos ------------------------------------------------------------

Rattus AGAATCATTTCATTTGTGATAGGATACTTTAACAATTTCTATCTGATTTCAGTTCCCTCT 33406

Danio -----CATTTC------------------TAACAA------------------------- 3034

Mus ----TCATTGC-------------------AATGAGTT---------------------- 29107

Gallus ------------------------------ACCAA------------------------- 22362

Anopheles ------------------------------------------------------------

Homo -GTAAAGTAGTTGAAGATGGGGGATAGCCTATGGGTCTTCAGAAAGCCTCTG-------- 41559

Pan -GTAAAGTAGTTGAAGATGGGGGATAGCCTATGGGTCTTCAGAAAGCCTCTG-------- 40966

Drosophila ------------------------------------------------------------

Canis ---------------GATGTAGGAT------TTGATCTCCAGA----------------- 24708

Bos -------------------------------TTGAT------------------------ 3926

Rattus GTAACTTTCACTTATTAGCATTATATTGAACAGGAATGGGCAAAGTTGACATCATTGCCA 33466

Danio -------------GTTAGTATTGTATTCA----------------------------CCA 3053

Mus -------------ATTGGT-CTATTTTGAG-------------GCCTCTAGGTTCTGCCG 29140

Gallus ---------------CAGCCCTTTTTTTCA--------------------------GCCC 22381

Anopheles ------------------------------------------------------------

Homo ---------GGTTTCTAGAGATCTTTCTGGAAG---------AGGTTAGGAGGATGAGTC 41601

Pan ---------GGTTTCTAGAGATCTTTCTGGAAG---------AGGTTAGGAGGATGAGTC 41008

Drosophila ------------------------------------------------------------

Canis -------------TCTGGAGATC------------------------------ATGCCCT 24725

Bos ------------------------------------------------------------

Rattus AATTACTAATTTTATTGAAATGCTTTGAAGTTTTTCTACTTGTTTTTCTACTTGTTA--- 33523

Danio AA-------------------GCTCTA-------------------TCTATTAGTTA--- 3072

Mus TATTGGATCCTCAACCAGGACTCCTGGA----------------TATCCTGTTGTTA--- 29181

Gallus TGT-------------GGAGGACTTGGGGG---------------TCCTGGTAGACA--- 22410

Anopheles ------------------------------------------------------------

Homo AAGTTTAGAATGGAAGAGGATAGATGAAGC---------------TTGCATTTGGTAGTA 41646

Pan AAGTTTAGAATGGAAGAGGATAGATGAAGC---------------TTGCATTTGGTAGTA 41053

Drosophila ------------------------------------------------------------

Canis GAGCT----------GAAGGCAGATG--------------------CTCAACTGCT---- 24751

Bos ------------------------------------------------------------

Rattus ---------------------------TGGTGTTGGATGCTGGCTTGT------TACATA 33550

Danio ---------------------------AATTGT--AATGCTGTCT--------------- 3088

Mus ---------------------------CCCTGTGTCATGGAGATC--------------- 29199

Gallus ---------------------------AGAAGCTGGACATGAGCCAG------------- 22430

Anopheles ------------------------------------------------------------

Homo AAAACCAAGGATGAATGTGTGAGGCATGATTATTTGTCACAAGTTTCCAGGTGACACTCT 41706

Pan AAAACCAAGGATGAATGTGTGAGGCATGATTATTTGTCACAAGTTTCCAGGTGACACTCT 41113

Drosophila ------------------------------------------------------------

Canis ----------------------GACCCACCTATGTGTCCCAAGATC-------------- 24775

Bos ------------------------------------------------------------

Rattus ATGGCTTTATTATGTTATTATGTACTCTGTATCTCTAGATTTTCCAGAACATTTACCATT 33610

Danio --------------------------------------------CAGAA-GTCTATC--- 3100

Mus --------------------------CTGCAGTTTTGGATGTG-CAGAACTGGCAACTTC 29232

Gallus ------------------------CAGTGTGTGCTTGCAGCCCGGAAGGCCAACTGTGTT 22466

Anopheles ------------------------------------------------------------

Homo GGCACTCAGTCCTTGTTGAATTAAGCAAGCTTTCTTACTGTTTTACTTGGCTGTGTTAAA 41766

Pan GGCATTCAGTCCTTGTTGAATTAAGCAAGCTTTCTTACTGTTTTACTTGGCTGTGTTAAA 41173

Drosophila ------------------------------------------------------------

Canis -------------------------------TTTTTTCAACTTTAATCATCTGTGTT--- 24801

Bos ------------------------------------------------------------

Rattus ATGAGATATTTGATTTTATCAATGACCTTTTCACATCTTAATGAGATGATCTTGTAGTTT 33670

Danio -TGAAAT------------CAGT------TTCACA--------AGGTGCTTTT------- 3126

Mus ATAAGTT-----------CCAGCAG----ATCATAATTGGAGTAGATGTTGGGGTAGGCC 29277

Gallus CTGGGCTGCAT-----TAAAAAAGGGGTGACCAGCAGGGAGAGGGAGGTGATTGTGCCCC 22521

Anopheles ------------------------------------------------------------

Homo GTAGAGTAACAGGA--AATTAGACTTCCCATAATGTCTCAATAGAGCTGTTTTAAGTTTC 41824

Pan GTAGAGTAACAGGA--AATTAGACTTCCCATAATGTCTCAATAGAGCTGTTT-AAGTTTC 41230

Drosophila ------------------------------------------------------------

Canis GTTGGGCCATC-------TCAGTCTTCTAAT-----CCTAATGA---------------C 24834

Bos ------------------------------------------------------------

Rattus CTGTGATTGTCTATGTGGTGGATTACATTTATTTAGTTGTGTATGTA------------- 33717

Danio ------------ATGCAG------------------------------------------ 3132

Mus CTGGGTCTGTGCTTGGGAGGTAGTTGAGTTATTTTTCT---------------------- 29315

Gallus TCTACTCGGCTCTTGTGAGG---------------------------------------- 22541

Anopheles ------------------------------------------------------------

Homo TAGCCATAATTGGTATGGGAATATAGCTCTAAACCTTCAAGGCTGCTACCATTTCTCACA 41884

Pan TAGCCATAATTGGTATGGGAATATAGCTCTAAACCTTCAAGGCTGCTACCATTTCTCACA 41290

Drosophila ------------------------------------------------------------

Canis TTGCC---ATTGGTATAGGAATAT-----TAAAC-------------------------- 24860

Bos TTGC---------------AATAT-----T------------------------------ 3936

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTCCTATATCTAGAAACTGTAGCCAGGCAGCACTTTCAGTGAGGTGAGTGGGTCCAGGTT 41944

Pan TTCCTATATCTAGAAACTGTAGCCAGGCAGCACTTTCAGTGAGGTGAGTAGGTCCAGGTT 41350

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -----------TGATGAACAGTCCCTACATTCTAGATGAATGATCATGGTGACTATTTTT 33766

Danio ---------------AAACA----CCAC-CTCCAGAT------------TCACTGTCTC- 3159

Mus --------------CAGCCGAGGTCAACTCTCAAG---------------CACTATCCTG 29346

Gallus -----------------------CCCCATCTGGAG---------------TACTACTTC- 22562

Anopheles ------------------------------------------------------------

Homo TGTTCAATTACTTTTGTACCAACCTAATACCTTAA---------------TAGTATTTGT 41989

Pan TGTTCAATTACTTTTGTACCAACCTAATACCTTAA---------------TAGTATTTGT 41395

Drosophila ------------------------------------------------------------

Canis --------------------------ATACTTTCC---------------TAGTATTTAT 24879

Bos ----------------------------------------------------GTGTTAGT 3944

Rattus TTCTGATCAATTTTTGACATTATTTTGTATGTATTTTGTTGAGAATTTCTTGGTCCATGT 33826

Danio ------------------------------------------------------------

Mus CT---------------------------------------------------------- 29348

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CCTAATTTACAAAAATAGGTAATGAAGGATTCTTGGTTTTAC---------------CTC 42034

Pan CCTAATTTACAAAAATAGGTAATGAAGGATTCTTGGTTTTAC---------------CTC 41440

Drosophila ------------------------------------------------------------

Canis CTCCTT-------GATAGGTAA-------------------------------------- 24894

Bos TTC-------------AGGTA--------------------------------------- 3952

Rattus TCATTAGAGATACTGACATATAGTATAAATTACATGTATTTTAATTTGACATTATAT--- 33883

Danio ------------------------ATAA-------------------GGCATTGTA---- 3172

Mus -------------TAACTTACCCAATGAAGCA---------GGATCAGCCCTTGTGCTCT 29386

Gallus ---------------------------------------------CAGGCCTGGGGATCC 22577

Anopheles ------------------------------------------------------------

Homo AGAGCTAACTGTCCATTAATGGCAACATCCCACATTTGTTGAAGCATGATTTTGTTGTTT 42094

Pan AGAGCTAACTGTCCATTAATGGCAACATCCCACATTTGTTGAAGCATGATTTTGTTGTTT 41500

Drosophila ------------------------------------------------------------

Canis --------------ATTAA--GCTGCTATACATAGTTATGG-----TTAGCTTATAATTT 24933

Bos ----------------------------TACA-----------------GCATATTGGTT 3967

Rattus --ATATTACATGTATTTTAATTATATTATATATGTGTATGTTGTATATAATTACACATTA 33941

Danio --ATATC-CA-------------------------GTCTGCTAC-------------CTA 3191

Mus CAATGTC-CTTGCATCCAGCTT-------------ACCTGCAACAT-------CACCATA 29425

Gallus CAGTACAGGAAGGACATGGAGA-------------TCTTGCAGCGG-------------- 22610

Anopheles ------------------------------------------------------------

Homo GTACTTTGACATGCATTTGATATTTTAAGTAACGCCTTGAATGCATCTTAAATAATAATT 42154

Pan GTACTTTGACATGCATTTGATATTTTAAGTAACGCCTTGAATGCATCTTAAATAATAATT 41560

Drosophila ------------------------------------------------------------

Canis TTATCATTA---------------------------TTACAGGCATGTT---------TT 24957

Bos TT----------------------------------TTGCAGA----------------T 3977

Rattus AACATATGTTATAATATACATATTTACATATATGATATATATGTATATATATCTTTGTTT 34001

Danio AAC------------------------------------------------------TTT 3197

Mus GCCAG-------------------------------------------------CTTTTC 29436

Gallus --------------------------------------------------------GTCC 22614

Anopheles ------------------------------------------------------------

Homo TATATACA--------------------------------GTTAACACTCCTGTTTGTTT 42182

Pan TATATACA--------------------------------GTTAACCCTCCCGTTTGTTT 41588

Drosophila ------------------------------------------------------------

Canis TTTGT------------------------------------------------TTTGTTT 24969

Bos TATAT------------------------------------------------TTCATTA 3989

Rattus TGGTCTCAGTGTAATGTTGGCATCGTCAAACGTTCCA----------------------- 34038

Danio TGG----------ATGCTGCCATAGT---------------------------------- 3213

Mus TGA------------GCTGTTATAGTCAATTTGCAGG----------------------- 29461

Gallus AGA----GGAGGGCCACTACGATGATCAGAGGGCTGG----------------------- 22647

Anopheles ------------------------------------------------------------

Homo TTAGGAATTCTTAGTGTTGCCAATTTCCTAGGATGTAGAAGAGCATAGTAAAAAAAAAAA 42242

Pan TTAGGAATTCTTAGTGTTGCCAATTTCCTAGGATGTAGAAGAGCATAGTAAAAAAAAAA- 41647

Drosophila ------------------------------------------------------------

Canis T----ATTTTGTTCTGTTG----------------------------------------- 24984

Bos T----ATGTTATTGT--------------------------------------------- 4000

Rattus --AGTTTTCCTTCTAGTTTTTGGAATAAGTTGAATACTAGCAGTTCTTTGAAGGGCTGGT 34096

Danio ----TCTTCCT-------------------------------GTTCTT-------CT--- 3228

Mus --ACCTGTGCTCCTGAGT--------------GATTCAATCAGTAAGGGAAAGGGCCAGT 29505

Gallus --AGCACCTCTCCTA---------------------TGAGGAAAGGTTGAGGGAACTGGG 22684

Anopheles ------------------------------------------------------------

Homo TTATTAATACTCTTA----------------------AACAAGTGTTTTTAACAACTGGA 42280

Pan TTATTAATACTCTTA----------------------AACAAGTGTTTTTAACAACTGGA 41685

Drosophila ------------------------------------------------------------

Canis -----AATACT-----------------------------GGATTGATTCAAAAACTAGA 25010

Bos -----AAGACT-----------------------------GG------------------ 4008

Rattus AGTATTCCATGCTTCATCTATCTGGTCCTGGGTTTTTTTAATTGAGAGAATTTGTAAATT 34156

Danio --------------------TCTGACC-----------------AGGGAATGTG------ 3245

Mus ----------------TCTACCTGCTGTAGG-------TAGTGAGAGGGGGGTAGAAGAA 29542

Gallus A----------------TTGTTTAGTTTGGA-----------GAAGAGAAGG-------- 22709

Anopheles ------------------------------------------------------------

Homo C--------------ACCATTTTGTAGTTAAGCCT-AGAAACAGAACTAATGCAATAACC 42325

Pan C--------------ACCATTTTGTAGTTAAGCCT-AGAAACAGAACTAATGCAATAACC 41730

Drosophila ------------------------------------------------------------

Canis --------------------TTTGAAGTCAGA----AAACATGGTATTAGTGCCATTGAT 25046

Bos -------------------------------------------GTAT------------- 4012

Rattus ACTGTTTCTA-----------------GGCTTATGATGGTTGTGTATACCTTTAATCCCA 34199

Danio ---GTTTC-------------------AGCTAAA-------------------AATCCCA 3264

Mus GGCATCTCTCCCT--------------ACCCCATG-----------------CCGTCCCA 29571

Gallus -----CTCCGGAG--------------ACCTCACTGTGG--------------CCTTCCA 22736

Anopheles ------------------------------------------------------------

Homo CAGATCTTTTCATTTATTCGTATGTTTATTTTACCTGGATTTACTTTAGTTTTTTGTTTT 42385

Pan CAGATCTTTTCATTTATTTGTATGTTTATTTTACCTGGATTTACTTTAGTTTTTTGTTTT 41790

Drosophila ------------------------------------------------------------

Canis GACACCTTGGTTTTCCTTT-----TTCAGCTGCTCATGACTGAAACCATTTCTTCTTCCA 25101

Bos ---------------------------AATTGCCCGTG--------CAGTCCTT------ 4031

Rattus GCACTTGGGAGGTATAAATGGATGATCTTTGATTTCAAGGCCTGCCTGGTCTACTGA--- 34256

Danio ---------------------------TTTAAT---AAG--------------------- 3273

Mus -------------------------CCTCAGATGTGGGG--------------------- 29585

Gallus -----------------------------GTACTTGAAG--------------------- 22746

Anopheles ------------------------------------------------------------

Homo --------------------GTTTGCTTGTTGTTTGAGATATTGTCTTGCTCTGTCATAA 42425

Pan --------------------GTTTGCTTATTGTTTGAGATATTGTCTTGCTCTGTCATAA 41830

Drosophila ------------------------------------------------------------

Canis --------------------GTTGATTGACTGTTCCAAAA-------------------- 25121

Bos --------------------GTTGCTTATCT----------------------------- 4042

Rattus --GCTAGTTCCAGGACAGTCAGGGCTACACAGAGAAACTCATGACTT------------- 34301

Danio ----------CAGGA--------------------------------------------- 3278

Mus ---------CTAAAGCAG-------------------------ATCT------------- 29598

Gallus -----------AGAGCAG------------------------------------------ 22753

Anopheles ------------------------------------------------------------

Homo GTGATACAGCTAGAGTGCAGTGGTGTGATCAGAGCTCACTACAACTTTGAATTCCTGGGC 42485

Pan GTGATACAGCTAGAGTGCAGTGGTGTGATCAGAGCTCACTACAACTTTGAATTCCTGGGC 41890

Drosophila ------------------------------------------------------------

Canis -------AGTTATAGTATGGTG-------------------------------------- 25136

Bos -------AGTT------------------------------------------------- 4046

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCAAGTGATCCTCATGCCTCAGCCTCCTGAGTAGCTGGGACTACAGGCATGTGCCACCAT 42545

Pan TCAAGTGATCCTCATGCCTCAGCCTCCTGAGTAGCTGGGACTACAGGCACGTGCCACCAT 41950

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------GAAAAACAAAATAGATTACTCTGGGTCTGTTTAGATTATTTTACCATACGTACA 34355

Danio ------GAAAGACA-------TCAC------------------------CCA-------- 3293

Mus ------CCAGTACATATGCCCTTGGGTTGGATTGTTCTAT----TTTTATCA-------- 29640

Gallus -------AAAAACAGGAAGGGGAATGGC-------------------------------- 22774

Anopheles ------------------------------------------------------------

Homo GCCAGGCTAAAACAGTGTTTTTGTTTGTTTGTTTGTTT----TTTGTAGAGA-------- 42593

Pan GCCAGGCTAAAACAGTGTTTTTGTTTGTTTGTTTGTTTGTTTTTTGTAGAGA-------- 42002

Drosophila ------------------------------------------------------------

Canis -----------ACAGTATTTTCTTGTAGTGTTTTATTT-----------TGA-------- 25166

Bos ------------------------------------------------------------

Rattus CACACACACACACACACACACACACACACACACACTTTATAATTTAAAGTATGACCTATA 34415

Danio ----------------------------------------AATTTGGGGTGTG------- 3306

Mus --------------------------CAGAAGAGTTTTACAATGTTGAGGAAGAGGGCTA 29674

Gallus ---------------------------------------TGTTTACAAGGGTGGATAGTA 22795

Anopheles ------------------------------------------------------------

Homo --------------------------CAGGGTCTCACTATGTTGCCCAGGCTGGTCTTGA 42627

Pan --------------------------CAGGGTCTCACCATGTTGCCCAGGCTGGTCTTGA 42036

Drosophila ------------------------------------------------------------

Canis --------------------------AAACTTCTATACATGTAGCA-AAGTTGAA---AG 25196

Bos -----------------------------------TACATGT------AGTTG------- 4058

Rattus ATTTGTTAGCTTTCCTCAATATTTGT---TTTAATATTTTCTTTTCCATCACTGTTTTTA 34472

Danio -TTTGAGGGC-------AAT---------TATAATA-----------------------A 3326

Mus ATTTAGTGCAGGATTGGAATATCAGTTTATTTGGCACGTGCCTTTTTGT-----TCTTAG 29729

Gallus ATAGAACAAGGG---GGAATG-------GTTTTAAACT---------------------G 22824

Anopheles ------------------------------------------------------------

Homo ACTCTTGGCCCCAAAGTAATCCT------TCTGCCTTGGCCTCACAAAGTGCTGGGACTA 42681

Pan ACTCTTGGCCCCAAAGTAATCCT------TCTGCCTTGGCCTCACAAAGTGCTGGGACTA 42090

Drosophila ------------------------------------------------------------

Canis ATTTTTGCAATTGACGCAATATG------TCTATCAT----------------------- 25227

Bos ---TTTGTAGTTAATCCCATACT------CCTA--------------------------- 4082

Rattus TTACTTTAGATCCTGTCTTTCTTTGGTTAATTTGGCTAAGGTTTGTTGGAAGTTGTTTAT 34532

Danio TTA-------------------TTGGTTAA-------AAAGT------------------ 3342

Mus ACATTCTAGATACTAA-----TTCTGTTAGATG---TATAGTTTTCTGCA---------- 29771

Gallus AGACGGGAGGT----------TTAGGTTAGACAGGAGGAAGTTTTTCACA---------- 22864

Anopheles ------------------------------------------------------------

Homo CAGACGTGAGCCACCGTGCCTGGCCATGGATTTTGTTTAAATTTATAAATA--------- 42732

Pan CAGACGTGAGCCACCGTGCCTGGCCGTGGATTTTGTTTAAATTTATAAATA--------- 42141

Drosophila ------------------------------------------------------------

Canis -----------------------------------CTAGATTTTACTAATA--------- 25243

Bos ------------------------------------------------------------

Rattus CTTTTCATAGATCCAATGTTTGATTTCATTGATTCTTTGTATTTTTTTTTTTTGTTTTTG 34592

Danio ----------------------------------------ATTTTTT------------- 3349

Mus ----------------------------------TTAAAGATTTTCTTCCATTATTTTGG 29797

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ----------------------------------------CCGTGTTGTAGAATCTCTTT 42752

Pan ----------------------------------------CTGTGTTGTAGAATCTCTTT 42161

Drosophila ------------------------------------------------------------

Canis ----------------------------------------ATATTT-------------- 25249

Bos ------------------------------------------------------------

Rattus TTTTTTACTTCATTAACTTCATCTGAGATTTTTATTCTCTCTTCTCATTTGGTGTGTTTT 34652

Danio --------------------ATC----------------------CATTTGGT------- 3360

Mus TTGTCT-CTTCACTA--CTGATTTGCCTTTTAACTGTTGCAGTCTCATTTGTCAGTTTTT 29854

Gallus ------------------------------CAGAGGGTGGTAACACACTTGAA------- 22887

Anopheles ------------------------------------------------------------

Homo GTATGTATTAATTTAGACACCTTAGTTTTCTTAATGATTTCATACCAGTTTCTCAG---- 42808

Pan GTATGTATTAATTTAGACACCTTAATTTTCTTAATGATTTCATACCAGTTTCTCCG---- 42217

Drosophila ------------------------------------------------------------

Canis ------------------ACCTTGTTTT--------ATCACATATCATTTTGCCCA---- 25279

Bos ----------------------------------------------ATTTGGCTC----- 4091

Rattus TATTTTTCAAAATGCTCAGTTGGATTAAGTTATTAGACATTTAGTGCTATAAACGTCTTT 34712

Danio --------------------TGGCTTA--------------------------------- 3367

Mus ------------------GCTATATTCATTTCTC-------------------TCTCTCT 29877

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo --------------------TAACTTCAGATTTT--------------------TTTTTT 42828

Pan --------------------TAACTTCAGATTTT--------------------TTTTTT 42237

Drosophila ------------------------------------------------------------

Canis --------------------TGATTCGATCTTTT--------------------ATTTTT 25299

Bos ------------------------------------------------------------

Rattus ATACTGCCTTTATTATGCCCCATAAAATATGTTTTTTCCATTCACTTCCTAGAATTTTAA 34772

Danio ------------------------------------------------------------

Mus CTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTGTGTGTGTCT 29937

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GAGATGGAATCTTGCTCTGTCACCCAGGCTGGAGTGCAGTGGCGCAATTTGGCTCACTGC 42888

Pan GAGGTGGAATCTTGCTCTGTCACCCAGGCTGGAGTGCAGTGGCGCGATTTGGCTCACTGC 42297

Drosophila ------------------------------------------------------------

Canis CA---------------TGCATTTCAAATTG---------------------CTGACTTC 25323

Bos ------------------------------------------------------------

Rattus ATATTCTGTCAGTCTTTTTTCTTCACCAACTTAACTGTTCAGTAATGTTATTTAGTTTCC 34832

Danio ----TCCGTCAGT----------------------------------------------- 3376

Mus GT-CTCTGTCACTCTGTCTC-------------------------------------TCT 29959

Gallus ----CATGTTGCCC---------------------------------------------- 22897

Anopheles ------------------------------------------------------------

Homo AACCCCTGCCTCCCAGGATGAAGCAATTCTCCTGCC--------------TCAGCCACCC 42934

Pan AACCCCTGCCTCCCAGGTTGAAGCAATTCTCCTGCC--------------TCAGCCACCC 42343

Drosophila ------------------------------------------------------------

Canis AGTGCCCTTCCCCCTAGGTGAAACTATT-------------------------------- 25351

Bos ----CCCTTCCC------------------------------------------------ 4099

Rattus ATGCTTTCTGCAATATCTATCACTGTTAATATTTAATTTTATTCCATTGTATTCAATACA 34892

Danio ------------------------------------------------------------

Mus GGGTTTCTTGGGATCTTT------------------------------------------ 29977

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GAGTAGCTGAGATTACAGGCATGTGCCACCATGCCTGGCTAATTTTGTATTTTTAGTAGA 42994

Pan GAGTAGCTGAGATTACAGGCATGTGCCACCATGCCTGGCTAATTTTGTATTTTTAGTAGA 42403

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AAGAATTGTGTGTTACAGTATTATGTATTGTTGTGATTCTTATCAGTATCTTGATAGGTA 34952

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GACAGAGTTTCACCATATTGGCCAGGCTGGTCTTGAACTCCTGACCTCGTGATCTGCCTG 43054

Pan GACAGAGTTTCACCATATTGGCCAGGCTGGTCTTGAACTCCTGACCTCGTGATCTGCCTG 42463

Drosophila ------------------------------------------------------------

Canis -------TTTTAAAATATT---------------------------------TCTGTTAA 25371

Bos ---------------TATC---------------------------------CCT----- 4106

Rattus GTTGATTTTTTTAGAAAATTCCATAGACTGAGACGAATGTGTATTAGTATGTATGTGGAA 35012

Danio -----------TAAAAAGT------------GAAGAAT---------------------- 3391

Mus GTAGGGTTATATAGAAAAGCCC-----------TGGTTATGTCTTTCTTTTTGCTACAAG 30026

Gallus ------------AAGGAGGCTG-----------TGGATGCCCC----------------- 22917

Anopheles ------------------------------------------------------------

Homo CCTCGGCCTTCCAGAGCGCTGGGATTACAGGCTTGAGCCACCGCACCCAACCAGATCAGA 43114

Pan CCTCAGCCTTCCAGAGCGCTGGGATTACAGACTTGAGCCACCGCACCCAACCAGATCAGA 42523

Drosophila ------------------------------------------------------------

Canis CTT-----TTCTAGAGT-----------AACTTTGGCCTACCACATGTAA---------- 25405

Bos -------------------------------------CCACCA----------------- 4112

Rattus TCTTCTATAGATATCTGTTACATCCATTTGATTTATTATGTCATTTAACTCCAGAGTTTC 35072

Danio ------------------------------ATTTA------------------------- 3396

Mus T-----------------------------GTTTATCAGAGTCCTTAAGTAAAGAAT--- 30054

Gallus -------------------------------ATCCCTGAGGCATTCAAGGCCAGGCT--- 22943

Anopheles ------------------------------------------------------------

Homo TTT--------------TTTATGTTTGGTATTTACTCTTTACCTCTAACACTAAGGCTAT 43160

Pan TTT--------------TTTGTGTTTGGTATTTACTCTTTACCTCTAACACTAAGGCTAT 42569

Drosophila ------------------------------------------------------------

Canis -----------------TTCATTTGTAGAACTGTCTCACTTAATCGAGCCTTAG------ 25442

Bos ----------------------TTATATAAG-GTCTCTCTTTAT---GTCTTG------- 4139

Rattus TGTTTAATTTTTATCTAGATGATCTGTTGGAGGGAGTTGGGTATTGAAGTCACTGTGTTG 35132

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTTTCCAGATGTATAACTATAAATGGAGCAGGGGTAAATACAACAAGTGATTTATGGTTC 43220

Pan GTTTCCAGATGTATAACTATAAATGGAGCAGGGGTAAATACAACAAGTGATTTATGGTTC 42629

Drosophila ------------------------------------------------------------

Canis -----------------------------------AAATAAAATAAGTAG---------- 25457

Bos ------------------------------------------------------------

Rattus TGACTGATGTGTGGTTTTAGATGTAATCGCATTTCTCTTATGAAATTGTGCTTTGGTTTT 35192

Danio ------------------AAATGTAA---------------GA----------------- 3406

Mus --GCTTTTGTGTACTTACAGAGATAAT------------------TTGTTCTTTTCTTTC 30094

Gallus ------------------GGATGTGG---------------------------------- 22951

Anopheles ------------------------------------------------------------

Homo AGTAAAGCAAGTTAGTTTTAATAAATGCTCAGTTTACTGTAAATGTCAGAAATGCCCCAG 43280

Pan AGTAAAGCAAGTTAGTTTTAATAAATGCTCAGTTTACTGTAAATGTCAGAAATGCCCCAG 42689

Drosophila ------------------------------------------------------------

Canis -ATAATATTACCTGTTTTAAATACATACT--------TTCAGGTGTCT------------ 25496

Bos --TAATTTTCTTTGCTCTGAATA------------------------------------- 4160

Rattus TGTTGCTTATGTTTTTAAAATTGTAGCAATCACCTGGTAGATACTATTCCTCTAATTTTA 35252

Danio ------------------------------CACTTGGCAG------------------TA 3418

Mus C-----------------------------CATTTGTTTTGTTCTGGTTTTTCTTGTTTT 30125

Gallus ------------------------------CTCTGGGCAG--------CCTGGTCTGGTG 22973

Anopheles ------------------------------------------------------------

Homo G----------------------ACTCTGTCTATTGACAACTCTTCTATTTCCATCGTCA 43318

Pan G----------------------ACTCTGTCTGTTGACAACTCTTCTATTTCCATCGTCA 42727

Drosophila ------------------------------------------------------------

Canis -----------------------ACTTTAACT-TTGAGAGCT------TTCTCACTGGAA 25526

Bos ------------------------------------------------------------

Rattus TTTTGTGTCTTTGGAGAGGGGATTAAGACCATTTACAATAAGAG---------------- 35296

Danio CACAGTGCC--------------------------------AAG---------------- 3430

Mus CTCTATGACTTCAGAGTGCTACATTGAATAAT-----ATTATAG---------------- 30164

Gallus GTTAGTGACCCTGCACAT-------------------AGCAGAG---------------- 22998

Anopheles ------------------------------------------------------------

Homo GCTCTTGCCCTCTGAACTGTAGACTGATTTATCCAACAGTTAAGTCTGGTTCTCAAACTT 43378

Pan GCTCTTGCCCTCTGAACTGTAGACTGATTTATCCAACAGTTAAGTCTGGTTCTCAAACTT 42787

Drosophila ------------------------------------------------------------

Canis GATCTCACTCGCCCTCCTACA---TTATTGACTCAGTAAGAAA----------------- 25566

Bos ------------------------------------------------------------

Rattus TAATTGAAAGATATGTTTTTATTCTGTTTATCATGGAAAATTTGTATTTGTCTTTCAGTT 35356

Danio CAATTAA----------------------------------------------------- 3437

Mus AAACTGAACACCCTTGTCACATGTCTGATATTAGAGAAAAATGACTTCAGTATTTT--TT 30222

Gallus GGGTTGAAACTC------------------------GATGATCATTGTGGTCCTTTT--- 23031

Anopheles ------------------------------------------------------------

Homo AACCTGTCCTAAGTGGAGC--TCCTGATTTTCATCATCCCAAACCTACGTCTCTCATAAT 43436

Pan AACCTGTCCTAAGTGGAGC--TCCTGATTTTCATCATCCCAAACCTACGTCTCTCATAAT 42845

Drosophila ------------------------------------------------------------

Canis AGTCTGTGATATGTGA---------GAAAATTATAAAAAGTAAGCTATATTTTT---AAT 25614

Bos ------TGATATG---------------------------------ATGT---------- 4171

Rattus TTTATGTAAAGTTTTACAACTATAATGTTTGTGTTATCAGTTGTGATCTTTCAGGATCCA 35416

Danio -------------------------------TGTTAT----------------------- 3443

Mus TTTATTTAA-----CATAACAATAGT-CTCAGGTTATT---------------------- 30254

Gallus ----------------TAACCCAGGCCATTCTGTGATT---------------------- 23053

Anopheles ------------------------------------------------------------

Homo ATTTTGCCATCTCAGTCAATAACAGCTTTTTTCCCCTCCTGTGCAGCCA----------- 43485

Pan ATTTTGCCATCTCAGTCAATAACAGCTTTTTTTCCCTCCTGTGCAGCCA----------- 42894

Drosophila ------------------------------------------------------------

Canis TTTTTG-----------AGGAACTGCCATATTGTTTTCTAGGGTGGCT------------ 25651

Bos --------------------AAC------------------------------------- 4174

Rattus TCCTGTTTTCAACCTGAGAGTTATAACTGCCACAAGGGTTGCATATCAGATATCCTGAAT 35476

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -------------------------------------------------GAAGCCTTGGA 43496

Pan -------------------------------------------------AAAGCCTTGGA 42905

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ATCAGATATTTACATTACGGTTGATAACAATAGCAATATTTATGAACTCTTAGTGAAATA 35536

Danio -----------ATATTAGGGCTGG--------GCGATATT------------GCAAAAAA 3472

Mus -TTATAGCCTTTTAGTATGTTTGA--------GGTGTGTT--------CTTTTCTAAGTG 30297

Gallus -CTATGATTTTGCTTAATATTTGATAA----AATTTTGTT--------TTCTTCTGAATA 23100

Anopheles ------------------------------------------------------------

Homo AGCATCTTTTAATTTCTCTATGTCACATACTCAAATTATTGGTAAATCTTGTTGGCTACA 43556

Pan AGCATCTTTTAATTTCTCTATGTCACATACTCAAATTATTGGTAAATCTTGTTGGCTACA 42965

Drosophila ------------------------------------------------------------

Canis -GTACCAGTTTGCATTCCTACCAACAGTGCAAGAGGGATTTGCCTTTCTC------CATA 25704

Bos ------------CATTCCT-----------------GATTTGTTTTGCT----------- 4194

Rattus ATCTTA---------TGGTTGGGGGTTATCACAGCATGAGGAAGTGTATTAAACAGTCAA 35587

Danio ----TA---------TAGTTATG---TATCACAATAT----------------------- 3493

Mus CTCTTAC-------CTGGTTTGGAACTCTCAAAATA------------------------ 30326

Gallus ---TGAG-------ACAGTCTGAAGGGCTCCTGCAAG----------------------- 23127

Anopheles ------------------------------------------------------------

Homo CCTTCCAAATACCCATAATTCATTTTATTTTTTTTAA----------------------- 43593

Pan CCTTCAAAATACCCACAATTCATTTTATTTTTTTTAA----------------------- 43002

Drosophila ------------------------------------------------------------

Canis TCCTC-----ACCAACAACT---GTTATTCCTTGTG------------------------ 25732

Bos ------------------------TTGCTCTTTGT------------------------- 4205

Rattus AGCATTAGTAAGGTTAAGAACCACTGATCCAGATTCTTCATGCTTTAAAGTTCTTTGTTG 35647

Danio --------------------------------------CATGTTTCA------------- 3502

Mus ---------------------------------------ATATTTTTG------------ 30335

Gallus --------------------------------------TATGCTTATTG----------- 23138

Anopheles ------------------------------------------------------------

Homo ----------------------------CCATTATACTTCTGTTTACTCTGTTTAAAGGC 43625

Pan ----------------------------TCATTATACTTCTGTTTACTCTGTTTAAAGGC 43034

Drosophila ------------------------------------------------------------

Canis ---------------------------------------TTGTTGATTTTAGCCA----- 25748

Bos ------------------------------------------------------------

Rattus ATTAGATATTAATTTTGATGGGTCTGCTTTATGAGTGATTTCACTTTTCTCTCGTATCCT 35707

Danio ------------------------------------------------------TGTCAT 3508

Mus ------------------TAGAATGGCTTTAGTAGT--------TTTCATTCCCTGTTTG 30369

Gallus --------------------------------------------TTTCACTTCTTTCCAT 23154

Anopheles ------------------------------------------------------------

Homo ATCA----------TCTTTTGGCAAAAGAAAGAAATTGTTTCCCAGGAGTCTTGTGCTTT 43675

Pan ATCA----------TCTTTTGGCAAAAGAAAGAAATTGTTTCCCAGGAGTCTTGTGCTTT 43084

Drosophila ------------------------------------------------------------

Canis ----------------TTCTGACATGTGTGAATTGCTGTCTCCTTGTAGTTTTGATTTGT 25792

Bos ------------------------------------------------------------

Rattus TTAGTACCCTTT----TGTCATGTATTTTAATTTTTTTTAAA------------------ 35745

Danio TCAGTA---------------------TTGATATTTATTAA------------------- 3528

Mus GTAGAACACTTTGAGGTTTTTTGCCGTTTGTTCTTCTATAAAGAA--------------- 30414

Gallus TAAAGACA----------------GAGTTGATCTTTTCTTGGTCT--------------- 23183

Anopheles ------------------------------------------------------------

Homo ACAGTGTATTCTCTAGTAGCAGCCGGAATGATCTTTTTAAAATCTGAGTTAAACCATGTT 43735

Pan ACAGTGTATTCTCTAGTAGCAGCCAGAATGATCTTTTTAAAATCTGAGTTAAACCATGTT 43144

Drosophila ------------------------------------------------------------

Canis ATTG------CCCTGATGATGGGTGGTATGGAGCAT------------------------ 25822

Bos -----------------------TAGCATGATGTAT------------------------ 4218

Rattus -----------CTATAATATGTTGGGG--------------------------------- 35761

Danio -----------------------GAAA--------------------------------- 3532

Mus -----------CTGGTAATTTTAGCAA--------------------------------- 30430

Gallus -----------TGCAGCTAGTACACAG--------------------------------- 23199

Anopheles ------------------------------------------------------------

Homo ATTTACTATGCACAGAACTTTTCAGAGGCTTCCCATCTTAAAAGTAAAATCTGGAGATTT 43795

Pan ATTTACTATGCTCAGAACTTTTCAGAGGCTTCCCATCTTAAAAGTAAAATCTGGAGATTT 43204

Drosophila ------------------------------------------------------------

Canis -----------------CTTTTCA------------------------------------ 25829

Bos -----------------CTTTT-------------------------------------- 4223

Rattus ---------TGAATTTATTTACTGGTCTTTTGTATTGTGTTTTCTAGGCTTCTTAGATCT 35812

Danio ---------TAAATTTATTAA--------------------------------------- 3544

Mus ---------TGAATCTATTCTTTGCTTTTCTTTATTG----------------------- 30458

Gallus ---------TGTTAGTATTTAGGAGTCCTTACT--------------------------- 23223

Anopheles ------------------------------------------------------------

Homo ACATGGCCCTGTGTGAACTGGCTTCCTTTCATTTCTGTGATCTCTCT------------- 43842

Pan ACATGGCCCTGTATGAACTGGCTTCCTTTCATTTCTGTGATCTCTCT------------- 43251

Drosophila ------------------------------------------------------------

Canis ---------TGTGTCTGCTGGCCATCTGT-ATTTCTTTGAAA------------------ 25861

Bos -------------------------------TTTCTTTCAA------------------- 4233

Rattus GGGTGGTATCTCTCAAAAGATGGGAAATATTCTTCTCCTCTTTTACTGAAGACACTCTGT 35872

Danio -----------------------GAAATA------------------------------- 3550

Mus ---------------------GTAGGATGTACTGCTTCAGTTTTGTTG------CTTTCT 30491

Gallus ----------------------TAAAATCTGGAGAGCT---------------------- 23239

Anopheles ------------------------------------------------------------

Homo -------------------ACCGCACTTGCTCATCTCTGTCTAAAATGGCTGTATCTTTG 43883

Pan -------------------ACCACACTTGCTCATCTCTGTCTAAAATGGCTGTATCTTTG 43292

Drosophila ------------------------------------------------------------

Canis -------------------AAAATACCTATTCGTCTTC---------------------- 25880

Bos -------------------------CCTATCGATGTTC---------------------- 4246

Rattus ATGCCTCTTCTTTGGTTTTCTTTCCGTCTATGCTCATAATTGTGAGCTTAGGATTTTTAT 35932

Danio --------------------------------------------AATTTAGGAGTATTAT 3566

Mus GTATCTTTAGTTTTTTTTAATTTCCTTTT---------------AATATA--ATTTTTAT 30534

Gallus ---------------------------------------------ACTGAAATGATTTGT 23254

Anopheles ------------------------------------------------------------

Homo TCATCTTAAGGCTTGTAACTATTGTCTGTGACCCTGTGACCCTTCTCTGTGATAATCCAT 43943

Pan TCATCTTAAGGCTTGTAACTATTGTCTGTGACCCTGTGACCCTTCTCTGTGATAATCCAT 43352

Drosophila ------------------------------------------------------------

Canis TCATTTTTAAATTGG--ATTATTGTTT------------------TTTGGGGTGTTTTAT 25920

Bos TGAATTTGAAAT-------------------------------------GAGTTTCTTAC 4269

Rattus GAAG------TCCCTATGAAGTCCCAAAACTCTTTCATGCTCCTTTCATTTAAAAATGTA 35986

Danio GA----------------------------TTTTT--------TTTTACTTAA------- 3583

Mus AGAT------CATACCTGTTG----AGGAATTTATAA-----CTTTCTTCTAGATA---- 30575

Gallus GCAG------T-----TAAAGTTATAAAAACTAAT-------CTAACACCTGATAAT--- 23293

Anopheles ------------------------------------------------------------

Homo GTGGCTTCCTTCCTCACTTGATTCAGAGAGCTCTC-------TGCTCAAATGATGCTTTT 43996

Pan GTGGCTTCCTTCCTCACTTGATTCAGAGAGCTCTC-------TGCTCAAATGATGCTTTT 43405

Drosophila ------------------------------------------------------------

Canis AAG-------TTCTTTGTATATTTTGAATACTAAC-------CTTTTATTAGATATGTTG 25966

Bos AAA-------T---------------------------------------AGCTGAGTC- 4282

Rattus ATTTAGTTTACTGAGTGAGTGGTTGGAGTCCTCTTCTTTGTCTTCCAT------------ 36034

Danio --------------------------------CTACTTTATTTT---------------- 3595

Mus --------------------------------CTTCATTCTTTT---------------- 30587

Gallus --------------------------ACCTCTCTACTTTCTTCT---------------- 23311

Anopheles ------------------------------------------------------------

Homo CCTGACCGGCTGCATCAAAGAATGATCATGTTCTTCTGCATTCCCCTTAACTTGCTGCAT 44056

Pan CCTGACCGGCTGCATCAAAGAATGATCATGTTCTTCTGCATTCCCCTTACCTTGCTGCAT 43465

Drosophila ------------------------------------------------------------

Canis TTTG-----------CAA---------ATATTTTCTCCTATTC----------------- 25989

Bos ---------------------------ATGTTTTTT--TACTC----------------- 4296

Rattus ----------------TGTTGACTGCCTGCTTTTGACAT------GATTCTGTTGGTGAT 36072

Danio --------------------AA---------TTTAACAA------AATT----------- 3609

Mus -------------------TAAATGT-TGCTTTTCATATT-----AATT----------- 30611

Gallus -------------------------TTTGTCTTCAATAAC-----AAATTTGT------- 23334

Anopheles ------------------------------------------------------------

Homo TTTTCTTCATGGGATTTAATGTCATTTGACTTCTTGCATATTGATTTCTTTGTTGTTTTG 44116

Pan TTTTCTTCATGGGATTTAATGTCATTTGACTTCTTGCATATTGATTTCTTTGTTGTTTTG 43525

Drosophila ------------------------------------------------------------

Canis -------------------TGTAAGTTGCCTTTTAGT-----------TTTGTTGATTGT 26019

Bos -------------------TGTCAGT---------------------------------- 4303

Rattus GCATTCCACTGAAGATTTTAGCTGGCTTATTGAAGTTTTTCTTTTTCAGGATTATTTATT 36132

Danio -------GCTAAAGA--------------------------------------------- 3617

Mus -------ACTAAAGACCTCATGTG------------------TTTTCAGTACTACAT--- 30643

Gallus --------TCAAAGAGAGTAAGGCAC---------------------------------- 23352

Anopheles ------------------------------------------------------------

Homo CTTCTTTACCACTAGAATGGAAGCCTAATGACAGTGCCTGGCATACAGTAGGTAGTCA-- 44174

Pan CTTCTTTACCACTAGAATGGAAGCCTAATGACAGTGCCTGGCATACAGTAGGTAGTCA-- 43583

Drosophila ------------------------------------------------------------

Canis TTCCTTTGCTG--------------------------------TGCAGAAG--------- 26038

Bos ---CTTTGCC-------------------------------------------------- 4310

Rattus TTTATTGGCTTTTTTTTCTTCAATAATTCAAAC---AATTTTCCTGGGTCGATTTCACAC 36189

Danio -----------------------------AAAT---GATTTT------------------ 3627

Mus ----------TTTATTTTGTCCTCATCTTAACCTTGAATTTTATTAATTTGGTCTTG--- 30690

Gallus --------------TGTAAGCTTCTATTTAATCCTGAACTTAAGT--------------- 23383

Anopheles ------------------------------------------------------------

Homo ---GTAACTACTTCCTACATGAAAGAATGAAGCTAGTAAATTTATGCAAAATGTTTGTTT 44231

Pan ---GTAACTACTTCCTACATGAAAGAATGAAGCTAGTAAATTTATGCAAAATGTTTGTTT 43640

Drosophila ------------------------------------------------------------

Canis ----------CTTTTTATCTTGATGAA--GTCCCAGTAGTTT--------ATTTTTGCTC 26078

Bos -------------TTTA---------------------------------ATTGTTG--- 4321

Rattus ATCTCATCTTTATTTTCTTTGACTATAGGTATAATTATTCTTTTGAAT-----------T 36238

Danio ---------------------------------ATCA----------------------- 3631

Mus --CCTTTCTTTGGTTATTTGGGCTA-AGGAATTGTTATTCTCTTCAA------------- 30734

Gallus ----------------------------------TTATTCC------------------- 23390

Anopheles ------------------------------------------------------------

Homo CTGCCTTTTTAATTATCTTGCAGAAATGTAGGAAGAATTTTTTAGGATCAGTTTATGTAT 44291

Pan CTGCCTTTTTAATTATCTTGCAGAAATGTAGGAAGAATTTTTTAGGATCAGTTTATGTAT 43700

Drosophila ------------------------------------------------------------

Canis TTGTTTCTCT---------------------------TTCCTCAGGAG--------ACAT 26103

Bos -----------------------------------------------------------T 4322

Rattus CTTTGTCCAGAACTTT----TTTCAGGTCATTTTC---TTTAGTATCATTACT--CTGCG 36289

Danio ----GTCAAAAAC----------------------------------------------- 3640

Mus ----AGAAAGAACTCTGTGTTTTAGAGTTCAGTAC---ATTAATTTCTATACTGGTCTTT 30787

Gallus ----AGTAATAATTC--------------------------------------------- 23401

Anopheles ------------------------------------------------------------

Homo ATATATAAACTGATAAGTATGTACACAGCCTGTAGAATGTGGGTAATACCACCTATCATC 44351

Pan ATATATAAACTGATAAGTATGTACACAGCCTGTAGAATGTGGGTAATACCACCTATCATC 43760

Drosophila ------------------------------------------------------------

Canis ATCTAGAAAGAAGTTGCTATGGCCAATGTCAGTAG--TTTTGGTTGCACTACC------- 26154

Bos ATTTAGA----------------------------------------------------- 4329

Rattus ATTTCTATTTTTTGGA-------------------------------------------- 36305

Danio ------------------------------------------------------------

Mus ATTCTTTTTTTTTTCC-------------------------------------------- 30803

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTTTGAGCATTTACCATGTAGCAAGTGACTGTGCTCCATAATCCACATGCATTATCTTG 44411

Pan TTTTTGAGCATTTACCATGTAGCAAGTCACTGTGCTCCATAATCCACATGCATTATCTTG 43820

Drosophila ------------------------------------------------------------

Canis -----AAGTATTTACC-------------------------------------------- 26165

Bos ------------------------------------------------------------

Rattus -------------------------------------------GGAAATTATTTTTGCT- 36321

Danio --------------------------------------------AAAAATATTT------ 3650

Mus -------------------------------------------AGGTATTAGTTTGTAG- 30819

Gallus ---------------------------------------------AAGTTACTTTTGCT- 23415

Anopheles ------------------------------------------------------------

Homo AATTTGATAGGAGAGCTGAGCTTTTTAATCAGAGTAGACCATAGAAATATAGCTTGGATG 44471

Pan AATTTGATAGGAGAGCTGAGCTTTTTAATCAGAGTAGACCATAGAAATATAGCTTGGATG 43880

Drosophila ------------------------------------------------------------

Canis ----------------------------------CAAAGAATAAAAAAATACT------- 26184

Bos ------------------------------------------------------------

Rattus -TTTTG--TGTTTTCATTTTTT----ATAGTTATCTTTTTTGTTTTGTTTTTTC---TCA 36371

Danio ------------------------------------------------------------

Mus -TTTGGGTTGTTCTTATTTTTCTGAGATTGTGATGTGCATTGTTAAGTTTTTAT---TTG 30875

Gallus -TT-----------------------GTAGTTGGGTACATTTAAGGGCTTTTTT---ATT 23448

Anopheles ------------------------------------------------------------

Homo CTTTTATTTCCTATATGACTTCTTCGGTGTACTTACACATCTATAAGCATTTATGGGTCA 44531

Pan CTTTTATTTCCTATATGACTTCTTCGGTGTACTTACACATCTATAAGCATTTATGGGTCA 43940

Drosophila ------------------------------------------------------------

Canis -----------------AATTCAGAGAGATACATGCACCTC----GGTATTTAT------ 26217

Bos ------------------------------------------------------------

Rattus GGTTGCCTATTTTTTCTTTCTTTAAAAAAATATTGAT----TCTTTGTGTTTTTTTTTTT 36427

Danio -----------------------AAACAAA------------------------------ 3657

Mus AATTC----TGACCGAATTTTCTAAAGGAAGGAG-----------TGAAACTTCACTGTT 30920

Gallus AAGATAGTGTTTCTCAATCTTTTGAAAAGGCAT--------------------------- 23481

Anopheles ------------------------------------------------------------

Homo AGTAACATACTGAAATATTTTCTGAAGTAAAAGAAATCTCTTTAATCAAATAAGTGGTTC 44591

Pan AGTAACATACTGAAATATTTTCTGAAGTAAAAGAAATCTCTTTAATGAAATAAGTGGTTC 44000

Drosophila ------------------------------------------------------------

Canis AGTAGCAT-------TATCTACAGTAGCCAAA----------TTATGAAA---------- 26250

Bos ------------------------------------------------------------

Rattus AATAGCACATACCTATAT-ACCACTCATTTCCTAATCCCTTTGTTTCCACCCTCCACCCT 36486

Danio --------ATATCTGTAT-A---------------------------------------- 3668

Mus AGAGATGCCTTTCTGTATCATAATATATTTTCCTTTCTTGATTTTT-------------- 30966

Gallus ---------TAATTGTGT------------------------------------------ 23490

Anopheles ------------------------------------------------------------

Homo TCCTATAGGTTCTCATATCATATTCTTGGTCTCCAGATTGAGAAGGTCCTTTTGTATGCT 44651

Pan TCCTATAGGTTCTCATATCATATTCTTGGTCTCCAGATTGAGAAGGTCCTTTTGTATGCT 44060

Drosophila ------------------------------------------------------------

Canis -------------------ACAGCCCAAGTATCCAGCTGATGAGTG-------------- 26277

Bos ------------------------------------------------------------

Rattus TGCAACCTCCCCCCTAAAACAAAATAAAAT----TAAAATAGAAAAAATATTGTTTTGGA 36542

Danio -----------------------ATAAAAT----AAATGTGTAAAAA------------- 3688

Mus -------TTTTTAACATGACAAAATAAAATACAATAAGATGAAGCAAAAACTATCATGGT 31019

Gallus --------------------AAACTCAAGCA---TAGCATTTAAA--------------- 23512

Anopheles ------------------------------------------------------------

Homo TCCAG-----TATACTCGAAACCAGGAGGTAGTCTGACATCTATTTCCCTTCAAGGTCAA 44706

Pan TCCAG-----TATACTCGAAACCAGGAGGTAGTCTGACATCTATTTCCCTTCAAGGTCAA 44115

Drosophila ------------------------------------------------------------

Canis -------------------GATAAGGAAGATGTGGGATATATA--------CACAATGGA 26310

Bos ------------------------------------------------------------

Rattus AGCTGTAGTGTGTGACACAGTTCTTTTGTCCACACATCTCTACTTTTGAATATTCATTTC 36602

Danio ------------------------------------------------------------

Mus AG------------------------------------TCTGCCTTGGTAAACAAGAGGA 31043

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATAATTAGAGAAAGGT-------------------TTAATTGACACTGTTATCGAGACAG 44747

Pan ATAATTAGAGAAAGGTAGG---------------TTTAATTGACACTGTTATCGAGACAG 44160

Drosophila ------------------------------------------------------------

Canis ATATT-------------------------------------ACTCAGCCATTAAAACAA 26333

Bos ------------------------------------------------------------

Rattus CGTGAGTTATTGGTCTATTTTGAGACCTCTGGATTCTGCCATACTGACTCCTCACCAGGA 36662

Danio ------------------------------------------------------------

Mus AAAGAGTCACAAGAGCAGGCATAAGAGTCAGAAGCCTAATTCGTT--------------- 31088

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TATCAGAAGAGAAATTGAAAAATCTCTGTTGAGACTCTGTAATTTG-------------- 44793

Pan TATCAGAAGAGAAATTGAAAAATCTCTGTTGAGACTCTGTAATTTG-------------- 44206

Drosophila ------------------------------------------------------------

Canis TA--------------AAATCTTGCCATTTGCAACGTCGTGAAT---------------- 26363

Bos ------------------------CCATTTG----------------------------- 4336

Rattus TTCCTCTTGGCTATCCTATTATCCTGTGTCATGGAG-ATCCTGCAGTTTTGGATCTGCAG 36721

Danio -------------------------GTGTTAAAGAG-ACTCT------------------ 3704

Mus ----------------------CTCACACCAGGGAGTACCATACAATACTAAACCTATAG 31126

Gallus -------------------------TCACTGTCAAGTATCATC----------------- 23530

Anopheles ------------------------------------------------------------

Homo ----------------------CTAGGTTCTGAGGATACGACAGTAAATAAGTTATTAGG 44831

Pan ----------------------CTAGGTTCTGAGGATACGACAGTAAATAAGTTATTAGG 44244

Drosophila ------------------------------------------------------------

Canis ------------------------GGAGCTAGAGAGTATTACACTAAGTGAA--ATTAAG 26397

Bos ------------------------------------TATTG------------------- 4341

Rattus AAATGGCCACTTCATAAT--TTCTAGTAGATCATAATTGGAGTAGATGTTAGGATAAGCT 36779

Danio --------------------------TAAA------------------------------ 3708

Mus --------------------CTATTTTACATGTGTGTTTGTGTGCACATGCGTGTGTGCC 31166

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCATATACCTCAGCTTCCCATTTAATTAATAGGCAGTTATTATATATAATAGAATAGGTA 44891

Pan TCATATACCTCAGCTTCCCATTTAATTAATAGGCAGTTATAATATATAATAGAATAGGTA 44304

Drosophila ------------------------------------------------------------

Canis TCAGA----------------------GAAAGACAA--ATACTGCATAAT---------- 26423

Bos ------------------------------------------------------------

Rattus CTGGGTCTGGGCTTGGGAGGTAGTTGAGTTACTTAGTCACTCAGATGCTTGAGTTAGCTC 36839

Danio -----------------------------------------------CTTGA-------- 3713

Mus T----------------ATGTGTGTGTGTATTATATGTATATACATATTTGTAGTATAAA 31210

Gallus ---------------------------------------------TGTCTGTAGTTAGTC 23545

Anopheles ------------------------------------------------------------

Homo CTG-------GTTGGTATGAGACTACAGAGGAAGAATACCTAATTATCTTAAAAGTGGTA 44944

Pan CTG-------GTTGGTATGAGACTTCAGAGGAAGAATACCTAATTATCTTAAAAGTGGTA 44357

Drosophila ------------------------------------------------------------

Canis TTC-------ACTCATGTGAAATTTAAGAAACAAAA---CTAATGAACATAAGGGGC--- 26470

Bos ---------------------------------------------------AGGG----- 4345

Rattus TCAAGCACTATTCTGCTTAGCTTACCCAGTGAAGGAGTACCATAAAATACTAAT-TGTAT 36898

Danio -CAA-------------------------------------ATAAAAT------------ 3723

Mus TATACTACATATATATGTAATACACGTAATATATGTAATACATGTAGTACATGTATGTAT 31270

Gallus TCA--------------------------------------------------------- 23548

Anopheles ------------------------------------------------------------

Homo TATAAGCTGAAACCTTGAGGATGCTTGGGAATAGCTAAGAATCATAGTGTTCTAGGCAGG 45004

Pan TGTAAGCTGAAACCTTGAGGATGCTTGGGAATAGCTAAGAATCATAGTGTTCTAGGCAGG 44417

Drosophila ------------------------------------------------------------

Canis ---------AAACTCT------------GGAAAACCAAGAGACAAACTCT---------- 26499

Bos ------------------------------------------------------------

Rattus AGCTAT-TTTACATATGTGTGTGTGTGTGTGTGTGCTTATA-----CACGCACGCACACA 36952

Danio -------CTTACAAA-GTGTGT-------------------------------------A 3738

Mus GTATATGCATACATATACATGCATACATACATACATATATAATACACACAGACACTTACA 31330

Gallus -------TTTACATATGTTGAT------------------------------CACTTACA 23571

Anopheles ------------------------------------------------------------

Homo AAGAATAACACCTGGAATCAGAGAAGACAGCAGA-----------------------ACA 45041

Pan AAGAATAACACCTGGAATCAGAGAAGACAGCAGA-----------------------ACA 44454

Drosophila ------------------------------------------------------------

Canis -----TAACTATAGATATCAGAGAAAG------------------------------ACA 26524

Bos -----TAATTATTGATAC------------------------------------------ 4358

Rattus AACATATACGTTCATACATACTAAC--------CTGGTACAGACCCACCTGTGCTTGCTG 37004

Danio A----------------------------------------------------------- 3739

Mus AATACATACAGACATACATACAGACATACATACCTGGTACAGACCCA----------CTG 31380

Gallus A----------------------------------------------------------- 23572

Anopheles ------------------------------------------------------------

Homo AGTCCACTGAGTAGTAAGAAGTTCCGTATTGCAGTAATGTAGAGTTA------------G 45089

Pan AGTCCACTGAGTAGTAAGAAGTTCCGTATTGCAGTAATGTAGAGTTA------------G 44502

Drosophila ------------------------------------------------------------

Canis AAT--ACTATATAGT--------------------------------------------- 26537

Bos ------------------------------------------------------------

Rattus CTTCAGTTTCTGAGATCTCATATGAGACTTTCTTAGTTGATTCAGAGGGCTTTGTTCTAG 37064

Danio ---------------------------------TAGTTAA-------------------- 3746

Mus CTTCAGTTTATGACATTTCCTATGAGACTTTCGTAGTTGATTTAGAGGGTCTTGTTCTGG 31440

Gallus ----------------------TAATTGTCTAATAAGTGATTTTGCAAAAC--------- 23601

Anopheles ------------------------------------------------------------

Homo CTGATGGGAGAAGGTGTGAAAAAATGCATTTGGATATAGAAAGCCAGGAGCACGCTAAGG 45149

Pan CTGATGGGAGAAGGTGTGAAAAAATGCATTTGGATGTAGAAAGCCAGGAGCACGCTAAGG 44562

Drosophila ------------------------------------------------------------

Canis ------------------------TTCGTTCATAAGTAGAATTTAAGAAACA-------- 26565

Bos ----------------------------------GGTAGGACTCAAG------------- 4371

Rattus TACC---TTCATCTCCTCTGGCTCTTAAAGGTTTTCTACCTTCTTTTCTGAGGAATTCTC 37121

Danio ------------------------------------------------------------

Mus TATCG--TCCATCCCCTCTGGCTCTTAAAGTTTTTCCACCTTCTCTTCCAAGGGCTTCCC 31498

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CCCTTTGCTTTCTTCTGACAGACACAGGAGCCCATGAAAGGCATCACGTGTGGAAGGAAG 45209

Pan CCCTTTGCTTTCTTCTGACAGACACAGGAGCCCATGAAAGGCATCACGTGTGGAAGGAAG 44622

Drosophila ------------------------------------------------------------

Canis ---------------------------AAACCAATGAA--------CGTTGGGGGCGGGG 26590

Bos ------------------------------------------------------------

Rattus TGAGCTGC----------------------------AAGGATTTTATTGAGAGCTCCCAT 37153

Danio ------------------------------------------------------------

Mus TGCTCTCTGCTGTA----------------------AAGTATTTGATTGAGAGCTCCCAT 31536

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGACACGAGTCATAGTCTGCCCTGCTTTTCTACCACCTGAAGCATCATATAAACCTATAT 45269

Pan TGACACGAGTCATAGTCTGCCCTGCTTTTCTACCACCTGAAGCATCATATAAACCTATAT 44682

Drosophila ------------------------------------------------------------

Canis TGGGGGGAGTG--------------------------TGGAAAATCAAGAAA-------- 26616

Bos ------------------------------------------------------------

Rattus TTAAATACTCTGGCCATGTAATGTCTGACTGCGGTCTTTGTATCTCTGCATCTGTTCACA 37213

Danio ---------------GTGTAA--------------------------------------- 3752

Mus TTAAATATTCTGTCCATGTAATGTCTGACTGTGGTCTCTCCATCTCTGCACCTGTTTCCA 31596

Gallus -----------AATCATTTAATGCCT---------------------------------- 23616

Anopheles ------------------------------------------------------------

Homo CTTCTGTTTCAAATGTAAGGAAACATACTTCTAGTTCAC-AGTAGGGATAGTTGAATGGA 45328

Pan CTTCTGTTTCAAATGTAAGGAAACATACTTCTAGTTCAC-AGTAGGGATAGTTGAATGGA 44741

Drosophila ------------------------------------------------------------

Canis ---CAAACTCTAACTATAGAGAACAAACTGATGGTTTACCAGTAGGGAGA--TGGGTGGG 26671

Bos ------------------------------------------------------------

Rattus TCTAC----CAGAGGAAGCCCCTCT-GACGATGACTAGATAAGATAC----------TGA 37258

Danio -------------------------------------------ACAC----------TGA 3759

Mus TCTGCTGC-CAGAGAAAACCTCTTTTGACAGTAACTAGATTAGGCAC----------TGA 31645

Gallus ----------------------------------------TCAGATC----------TGA 23626

Anopheles ------------------------------------------------------------

Homo TGAACTGTTTCTGGCTGAATCTTCTCAAAGTAGAATGAGCAAAACATGGCTATATTATGA 45388

Pan TGAACTGCTTCTGGCTGAATCTTCTCAAAGTAGAATGAGCAAAACATGGCTATATTATGA 44801

Drosophila ------------------------------------------------------------

Canis GGAG---------------------------GGGATGGGTTAAATAGG---------TGA 26695

Bos ------------------------------------------------------------

Rattus TATATTATGTATACAAGAATATCATTAGTAATCATTTTATTGACTTTAAAATTTTTTAA- 37317

Danio ------------ACAA-----------------------------TCAAA-----TCAA- 3772

Mus TACAATGTGTATACCA------------TAATCATTTTATTGACTTTAAAATTTTTTAAG 31693

Gallus GATGTTTTACAGAAAAA----------------------------CAAAAAAAAATCAGG 23658

Anopheles ------------------------------------------------------------

Homo GATTATCTAAGGAAAGATTTTTATAATCATGTGAATTTTGAATTTCTTTATATCTTAATT 45448

Pan GATTATCTAAGGAAAGATTTTTATAATCATGTGAATTTTGAATTTCTTTATATCTTAATT 44861

Drosophila ------------------------------------------------------------

Canis CGGGAATTAAGGAA---------TATACATTTGA--------------TGAGTACTGAGT 26732

Bos ------------------------------------------------------------

Rattus ------------TTTTTAAAGTATCATT-AGTATTT--GTTTTACCATATGTCTCTGGTT 37362

Danio ------------ACTTTAAGGTGTCAAT-AATAAT------------------------- 3794

Mus ATTTAAAAAAAAAATTTAAAACGTAAGT-AGTGTTTTTGTTTTACCCTAGGTTTCTGGTT 31752

Gallus CAT---------TTTTCCTGATATTGCT-TGCATTG------------------------ 23684

Anopheles ------------------------------------------------------------

Homo ATTCCAAGAGATTTTTGGGAACATTAATGAGAATAGTTTACCTTTAGT--ACATAGAACT 45506

Pan ATTCCAAGAGATTTTTGGAAACATTAATGAGAATAGTTTACCTTTAGT--ACATAGAACT 44919

Drosophila ------------------------------------------------------------

Canis ATTGTGTGGAAGTGTTG-AATCACTAT-----ATTGTATACCTGAAACTAATATTAGACT 26786

Bos ------------------------------------------------------------

Rattus CTTAGTTATCCA---AGCAGTTTTGGGTATGGGTTTCTTCTCCTGGATTGGGCCTTAAGT 37419

Danio -------------------------GATACAG----------------TAAACCTCAAAT 3813

Mus CTTAGTTATCCA---AGCAGTCT-GGATATAGGCTTCTTCTCATGGAGTGGGCCTTAAGT 31808

Gallus ----------------AAAAGCCAGGATGCAG---------------TTAACCCCTTATT 23713

Anopheles ------------------------------------------------------------

Homo TCTTGTCAGCTATAAATGAGGATCAAACCCAAAAGAGATTAACAAAAATAAAAGGGATGC 45566

Pan TCTTGTCAGCTATAAATGAGGATCAAACCCAAAAGAGAT-AACAAAAATAAAAGGGATGC 44978

Drosophila ------------------------------------------------------------

Canis GTATGTTAACTA---ATTGGAATTGAA----ATAAAAACTTTTAAAAAAAGAAAGTAAGC 26839

Bos ------------------------------------------------------------

Rattus CATA-------------------------------------------------------- 37423

Danio ------------------------------------------------------------

Mus CAAA-------------------------------------------------------- 31812

Gallus CA---------------------------------------------------------- 23715

Anopheles ------------------------------------------------------------

Homo TAT--------------------------------------------------------- 45569

Pan TATGATCNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 45038

Drosophila ------------------------------------------------------------

Canis CATA-------------------------------------------------------- 26843

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 45098

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 45158

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 45218

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNAACATGGTATTAGAGTATTTAGAAAGATT 45278

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTAATCAGGGAATTGAATTCTTATTCTAATATCCAAAGATTTTGAAACATTATGAGAATA 45338

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GTTACTTTAGTACATAGACTTCTGTCAGCTATAAATGAGGATCAAACCCAAAAGAGATTA 45398

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus --------------------------------------------------TGAGACATTC 37433

Danio ------------------------------------------------------------

Mus --------------------------------------------------TCAGACATTG 31822

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -------------------TTCCCCAAATTAGCAGAACTTTTTGATTCACCGAGTTCTTT 45610

Pan CAAAATAAAGGGATGCTATTTCCCCAAATTAGCAGAACTTTTTGATTCACCGAGTTCTTT 45458

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TTTGACCACTCCCACTTGTTCTGTATATT-ACTGCTTTAGCATATTTTACAGGAAGGACA 37492

Danio -------------------TCTGTAAAC--------------------------AAAACA 3828

Mus GTTGGCTACTCCCACTAGTTCTTTGCCCCTACTGCCTTAGCATATTTTACAGGAAGGACA 31882

Gallus -------------------TCTCTAAATTCCTTGGCTAACTGAATATT---GAAATGATA 23753

Anopheles ------------------------------------------------------------

Homo GTTTTTTAACTGCTGTCTGCCTCTTAACATAATTGAGTATTCAGTGATATAATATAAATA 45670

Pan GTTTTTTAACTGCTGTCTGCCTCTTAACATAATTGAGTATTCAGTGATATAATATAAATA 45518

Drosophila ------------------------------------------------------------

Canis -----------GTTGTCCTCTTGTAGTTTTGATTGAGTG--------------ACAGATA 26878

Bos ------------------------------------------------------------

Rattus GA-----GGTCAAAGG-----------TTTTGTGGTTGGGTTGATATACATGTAT----- 37531

Danio -----------------------------------------------ACATGT------- 3834

Mus GATTGTAGGTCAAAGG-----------TTTTGTGGCTGGGTTGGTGTGCGTATATCTCTT 31931

Gallus GG----------------------------------------AGCCTGGATATGA----- 23768

Anopheles ------------------------------------------------------------

Homo AATCACTTACTAAATGCTGATGAACGCTTGTTTTTACTAACATCTCAGCTTGTAGCATAT 45730

Pan AATCACTTACTAAATGCTGATGAACGCTTGTTTTTATTAACATCTCAGCTTGTAGCATAT 45578

Drosophila ------------------------------------------------------------

Canis AGGTTGTCCCTAAAGG-------------GATCTGATAAGGAAAGGAGTCTGT------- 26918

Bos -------------------------------TCTG--------------CTAT------- 4379

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TTGGTAGCTTGTAGAGTACCTTCCTACACCAAAGAAGTAGAGTGTAGGGGTGAAGAGTCC 31991

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTTGTTGCCCATACCAGAAACCCTACCCATTA-------------------------CCT 45765

Pan CTTGTTGCCCATACCAGAAACCCCACCCATTA-------------------------CCT 45613

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus --GTGGGTACCAGCTTGGCTTCTCCATGTTTATTGAGTTGTGTGGGTATGTGGGTGTTAG 37589

Danio ------GCAC--------------------------GTCGTGCAAGTA------------ 3850

Mus ATGCAGGCAGCAGCTTGGCTTCTCCGTGTTCATTGGGTAGTGTGGATAT--------TGT 32043

Gallus -----------------------------------AGCTGTGGAATTAG--------TCT 23785

Anopheles ------------------------------------------------------------

Homo CTGGCTCTTCCAGCTTATTTACCTCTTACAAACTACTTATTTTAAATAT----------- 45814

Pan CTAGCTCTTCCAGCTTATTTACCTCTTACAAACTACTTATTTTAAATAT----------- 45662

Drosophila ------------------------------------------------------------

Canis -------------CTTAATTTCCTT----------CCTTTTTTCTATAT----------- 26944

Bos -------------TTTA------------------------------------------- 4383

Rattus CCTCAGCAGTAAGGCTCTACTGTTAGGTTTCAGGTAGTAACC-ATTGTTTTAGTAACAGC 37648

Danio --------GCACGCCTCCATTG-------------------------------------- 3864

Mus CCTTAGCAGTAGGGCTCTACTGTTAGTTTTCAGGTAGCAACCTGTTGTTTTGACAACAGC 32103

Gallus GTGGAATAATATGTTTCTAGAGCCTAGAGTTAGTTAATAATCAGCAG------------- 23832

Anopheles ------------------------------------------------------------

Homo -TTCCTGGGTCAATTTCATCTTTTTTTTTCTTCCTACTGCTACATTATTTGTCCGGACTA 45873

Pan -TTCCTGGGTCAATTTCATCTTTTTTTTTCTTCCTACTGCTACATTCTTTGTCTGGACTA 45721

Drosophila ------------------------------------------------------------

Canis -CTTTTTGTTCTTTTTC--TTTTTATCTCTTTACTACTTTTTCTTTCTCTCTCCT----- 26996

Bos ----TTTGTT----------TTCTGTTTCTTTGCTCCT---------------------- 4407

Rattus CTGGGCTGTAGGAAATTTCTATGAGATTCTATTTATTTAATTGAAGTGCAACTCATTTTG 37708

Danio ------------------------------------------------------------

Mus TTAGGCTGTTTGGGGATT-------ATTCTTTCTTTCT-------------TTCTTTCTT 32143

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTACAGTAGTCATTACCTAACTGGATTGCTTGCCTCCAGTTTTGCCCACTTTGGTTTCAG 45933

Pan TTACAGTAGTCATTACCTAACTGGATTGCTTGCCTCCAGTTTTGCCCACTTTGGTTTCAG 45781

Drosophila ------------------------------------------------------------

Canis TTAATTTAATCATAATTGGGATAAAGTGCACA-------TTTTGC------TGCATTGAT 27043

Bos ----------CATAGTT----------------------CCTTGT------TGTCTT--T 4427

Rattus GTTGTCTGGAGACAAGAGGTGACAACTTGAGATTCTGTATC------------------- 37749

Danio ---------------GAAATGATAAACTTACACCCT------------------------ 3885

Mus TCTTTC-------------TTTCTTTCTTTCTTTCTTTCTT------------------- 32171

Gallus -------------AAGAAATGACAGTAATGAGGACTGCTTT------------------- 23860

Anopheles ------------------------------------------------------------

Homo TTATTGAAAAGGCAAATTTTGTCAGTCACTTAACCTGCTTAAAACCCTTCAGTGACTCCT 45993

Pan TTGTTGAAAAGGCAAATTTTGTCAGTCACTTA-CCTGCTTAAAACCCTTCAGTGACTCCT 45840

Drosophila ------------------------------------------------------------

Canis TTGCTGAGGAGAGTGAGCAGGCCATGTGCTTA---------------------------- 27075

Bos TTGCT------------------------------------------------------- 4432

Rattus ----------------TTCTATTACTTGACTACCTCATTAGGA----------------- 37776

Danio ------------------------------TAGCTTGTTGGCA----------------- 3898

Mus ----------------TCTTTCTTTCTTTCTTTCTTGTCGTCT----------------- 32198

Gallus ----------------TCAGATAA---GAGTGCAACAAGGTAG----------------- 23884

Anopheles ------------------------------------------------------------

Homo TGTGTTTTAGTTCTTATCTAATGGTTTATGAATGTAGTGGGTTACGAATCTTCCGGAAGA 46053

Pan TGTGTTTTAGTTCTTATCTAATGGTTTATGAATGTAGTGGGTTACGAATCTTCCGGAAGA 45900

Drosophila ------------------------------------------------------------

Canis -------------------GATGG-----AAATGTCATTGGAGAGCAA-------GGAAC 27104

Bos ------------------------------------------------------------

Rattus ------TCATTTTCATATATTTTAGGAAGTTTCCACTGCACTAGGTTTCCACAACAACAT 37830

Danio ------TTCTTTCCA--------AGG---------CTGCACTCAG--------------- 3920

Mus ------TCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTC---------- 32242

Gallus ------TTGCTCTGTGAGGTAGATGGAGAGATGTTCTGATCATGTTTTTGAGA------- 23931

Anopheles ------------------------------------------------------------

Homo GTGCATTTGCACTCCTGAAGTGTGCATGTATTTTTATGAGGAGAAGATCTTTAGCTTTTA 46113

Pan GTGCATTTGCACTCCTGAAGTGTGCATGTATTTTTATGAGGAGAAGATCTTTAGCTTTTA 45960

Drosophila ------------------------------------------------------------

Canis ACAGACTCTAAATTGAGAGTTGGGAAATTTTTCCTGTGAAGGGCC--------------- 27149

Bos -------------------------------TTCTGTGA--------------------- 4440

Rattus GAGACTGCCCCTCTCTCCAATTCCAGCTGTTTCTACCACTCTTACTCTCCACCCCATCTC 37890

Danio -----------------------CAGCT-------------------------------- 3925

Mus ---------TTCTTCTTCTTCTTCTTCTTCTTCTCCTCCTCCTCCTCCTCCTCCTCCTCC 32293

Gallus --------------CCATCTCTCTAGCTGTCTCTGCT----------------------- 23954

Anopheles ------------------------------------------------------------

Homo TTAGATTACTCCTCTTTTGGCTAAAAAAAGAATTACTTATCATGGCTATTGAGGTCTTCC 46173

Pan TTAGATTACTCCTCTTTTGGCTAAAAAAAGAATTACTTATCATGGCTATTGAGGTCTTCC 46020

Drosophila ------------------------------------------------------------

Canis ---------------------------AGGTGGTATTTAT--------TTTAGGATTTGC 27174

Bos ------------------------------------------------------------

Rattus TTCCCCAAACCCCCACCCCCTTACCCCCCAACATATACCTGATAGCTCTCC----CTATC 37946

Danio ------------------------------ACATAT---TAATA---------------- 3936

Mus TCCTCCTCCTCCTCCTCCTCCTCCTCCTCCTCTTCTCTTTTCTCCCTCTTC----CTCCT 32349

Gallus -----------------------TTGCTCCGTATATCCAAGAGACTCTTCT----GTTCT 23987

Anopheles ------------------------------------------------------------

Homo ATGATCTGGCTTTTCCCTGCCTCTCCATTTTCATATTTTTGAAACTTTTCTTGAACTTTA 46233

Pan ATGATCTGGCTTTTCCCTGCCTCTCTATTTTCATATTTTTGAAACTTTTCTTGAACTTTA 46080

Drosophila ------------------------------------------------------------

Canis AAGCTGTA-----------------------CAGTCTCTTAAAACTACTC---AACTCT- 27207

Bos ------------------------------------------------------------

Rattus TGCTCCCAGTTGTCCTGTAAAATCTATTTCCCTCTTTTAGGGATATTCATGTATTCCCTC 38006

Danio ------------------AAA--------------------------------------- 3939

Mus CCTCCTCCTCCTTCTTCTAAGATTTATTTATTTC-------------------------- 32383

Gallus CAGGCTCATCTTTCTTGAAAAAGT------------------------------------ 24011

Anopheles ------------------------------------------------------------

Homo GGCTCTTGAAGTGCTTGGAATTGTCTTATAATATCATGTTTTCAGGCCCCTGTGCTTTTA 46293

Pan GGCTCTTGAAGTGCTTGGAATTGTCTTATAATATCATGTTTTCAGGCCCCTGTGCTTTTA 46140

Drosophila ------------------------------------------------------------

Canis -GCTGTTGTAGTGC--GAAACAGCCATAGACAATAAT----------------------- 27241

Bos ------------------------------------------------------------

Rattus CTGGACTCCCTTCTGTTTACCTAACCTTTCTG-----------------------GTCTA 38043

Danio ---------------------------------------------------------CTA 3942

Mus ---------------------------------------------------------ATA 32386

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTCATTTTCCTCTATCTGAAACATTCTTCCCCTGTCTGAAACATTCTTCCCACCCATAGT 46353

Pan CTCATTTTCCTCTATCTGAAACATTCTTCCCCTATCTGAAACATTCTTCCCACCCATAGT 46200

Drosophila ------------------------------------------------------------

Canis --------------------------------------------------------TAAA 27245

Bos ------------------------------------------------------------

Rattus TAGATTGTACATTGGTTATTATTTACTTAACTTCTAATATCTTTCTTTTAAGTGAGTACA 38103

Danio TAG---------CGATT-----------------------------------------CA 3952

Mus TAAGTGGGTACACTGTTGCTGTCTTC-----------------------------AGACA 32417

Gallus -----------GCGATGACTCTTTCA-------------------------------GCA 24029

Anopheles ------------------------------------------------------------

Homo GTCATCAGCTCCTAGTCATCTTTTGTGATTC-------ACCTCTCCTAAGTTGCCTCTCT 46406

Pan GTCATCAGCTCCTAGTCATCTTTTGTGATTC-------ACCTCTCCTAAGTTGCCTCTCT 46253

Drosophila ------------------------------------------------------------

Canis TTAATGAGCT--TGGTTATGTTTTAA--------------------TAAGAC-------- 27275

Bos --------------GTTAC----------------------------------------- 4445

Rattus TACCATATATATCTTTGTCGGTCTGAGTTACTTCACTAAGGATGATTTTTGCTGTATCCT 38163

Danio TACCA------------------------------------------------------- 3957

Mus CACCA------------------------------------------------------- 32422

Gallus CACAA------------------------------------------------------- 24034

Anopheles ------------------------------------------------------------

Homo TTTTATTGCTATTCCTCTGTAGTCATCTCTGTGATATTGAAATC---------------- 46450

Pan TTTTATTGCTATTTCTCTGTAGTCATCTCTGTGATATTGAAATCAT-------------- 46299

Drosophila ------------------------------------------------------------

Canis TTTTAGT---------------------------CACTGGAACT---------------- 27292

Bos --TTAGT---------------------------TACTTGAAC----------------- 4459

Rattus AGTATGTTTTCTTTTCATTTGACTTACTCCTTTAAAAATGTTTCTTTTCTGACTTCTTCA 38223

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GTGATTCTTTAAGATACACAAGATTGTATTGTATTGTCTCCAGGTATTTGTGTGGTTTGC 38283

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ---------------------------------GTGGCTTTCTCTT--TCTTTAGACATC 46475

Pan ---------------------------------GTGGCTTTCTCTT--TCTTTAGACATC 46324

Drosophila ------------------------------------------------------------

Canis ----------------------------------TGAATTTCATATAATTTTTGCACAAA 27318

Bos -----------------------------------------------ATTTTT------A 4466

Rattus ATAGTTCCTTTTGCATTTCTAACTTTATTGTCTTATGATCTGATCAATGCAGGAAAGTAA 38343

Danio ------------------------------------------------------AAGCAT 3963

Mus ----------------------------------------------------GAAGAGGG 32430

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATAATTCCTTGAAGAGCCCTTTTTATGTAGCCTGACAAGCAGAATTTATACTGAAGTAGA 46535

Pan ATAATTCCTTGAAGAGCCCTTTTTATGTAGCCTGACAAGCAGAATTTATACTGAAGTAGA 46384

Drosophila ------------------------------------------------------------

Canis ATAATTTCTT---------TTTTGAC---------------------------------- 27335

Bos AGGATTTCTT---------CTT-GAT---------------------------------- 4482

Rattus TTTTTATTGTTGTTACTGACTTGCTTAA----TGTTAAAAAAATACTATATATCTGTTAG 38399

Danio TTTTTATTGTTATT---GAC---------------------AATAGTGTACG---GTCAA 3996

Mus CATTGGATCCTATTACAGAT-------------GGTTGTGAGCCACCATATGGTTGCTGG 32477

Gallus TTCCTGGAGACACATCAGAT----------------------CCAACATGTGTGGTGAAG 24072

Anopheles ------------------------------------------------------------

Homo CATTTGGAAGTCATTTAGTTATTGCTCAATCCTTGAAAGATGAAACTGTCCAAAGGGAAA 46595

Pan CATTTGGAAGTCATTTAGTTATTGCTCAATCCTTGAAAGATGAAACTGTCCAAAGGGAAA 46444

Drosophila ------------------------------------------------------------

Canis --TTTGTCAACCATTTA--------------------AAATAGAACCATTTTGGGGGCTA 27373

Bos --TTTGGTA-----TT-----------------------------CTGTTTTTG------ 4500

Rattus T----------GAATTCCATGGGCTGCCAAGGTTTATTCTGAAGGTGAGATGTTCTCCAG 38449

Danio T----------AAATACC------------------------------------------ 4004

Mus G----------GATTGAGCTTAG------------------------------------- 32490

Gallus T----------GGGTGCCCCCAC------------------------------------- 24085

Anopheles ------------------------------------------------------------

Homo TTTAAAAGGGAAAGTATCTAATAGCTGATCCCTGGAGAATACAAATGT------------ 46643

Pan TTTAAAAGGGAAAGTATCTAATAGCTGATCCCTGGAGAATACAAATGT------------ 46492

Drosophila ------------------------------------------------------------

Canis T---AAAAACCAAGTGTCTGG--------------------------------------- 27391

Bos --------------TGTGTG---------------------------------------- 4506

Rattus ATGTCTTGAATAAGTCCATTTGATGTTTGGTACAGTTTAGGTAAATCAATCTATCTATCT 38509

Danio ------------------------------------------------------------

Mus ---------------------GACCTCTGGAAGAGC------------------------ 32505

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------CTCTAGATTTGGAAGGGAAGTCTCTGAAAAACAGCCAGAGAG 46685

Pan ------------------CTCTAGATTTGGAAGGGAAGTCTCTGAAAAACAGCCAGAGAG 46534

Drosophila ------------------------------------------------------------

Canis --------------------CTAGATTTGG------------------------------ 27401

Bos ---------------------------TTG------------------------------ 4509

Rattus ATCTATCTATCTATCTATCTATCTATCTATCTCTATCTATCTTTCTATCTTTCTATCTTT 38569

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAGGGAGGAAACCAAGAAATAGTGTCCTAGACCCAAAAGTCAATAATTTCCAAAAGGTCT 46745

Pan AAGGGAGGAAACCAAGAAATAGTGTCCTAGACCCAAAAGTCAATAATTTCCAAAAGGTCT 46594

Drosophila ------------------------------------------------------------

Canis -------------------------------------------------CTCATGAGCCT 27412

Bos -------------------------------------------------CTTA------- 4513

Rattus CTATCTTTCTTT---GTTTTTTTCTTTTGGTTATATAAGCTACTAATTTGGAAAGTTTAG 38626

Danio --------------------------------------GATACCAATTT----------- 4015

Mus -------------------------------------AGTCAGTGGTCT----------- 32517

Gallus ---------------------------------------TCAGGGAGTCA---------- 24096

Anopheles ------------------------------------------------------------

Homo ATATTTCTTAGGAAGGCCAAGTAAAATAAGTAGTGAAAAGTGATGACCTGACTAGAGCAG 46805

Pan ATATTTCTTAGGAAGGCCAAGTAAAATAAGTAGTGAAAAGTGATGACCTGATTAGAGCAG 46654

Drosophila ------------------------------------------------------------

Canis AGATTTGGTG---------------ACTGCTACTGTATAGCAATAACTTTGC----ACAA 27453

Bos ----------------------------------GTATAGTG------------------ 4521

Rattus ATTATTGTATTTGAACTTAACTTGTTACTTTCTATATGGACA--------------TAGT 38672

Danio --TATCGC-------CCAGACTTATTA-----TATAT----------------------- 4038

Mus -TAACTGCT----GAGCCATCTTTCCAGCC-CTGTTTGGG-------------------- 32551

Gallus -----------------CAGTCTGCACCCAGCTATTGGGG-------------------- 24119

Anopheles ------------------------------------------------------------

Homo ATTCTTCATTTCCAGTTACAGAAGCTAG--GTTATAGGTACAGTAAGCTCTGGACATGTT 46863

Pan ATTCTTCATTTCCAGTTACAGAAGCTAG--GTTATAGGTACAGTAAGCGCTGGACATGTT 46712

Drosophila ------------------------------------------------------------

Canis CTTATTTAT--------AAAAATGTTA----TTATTAGTG----------------TATG 27485

Bos -TTCTTCAT--------G-----GTTG----CTGTTGGTA----------------TTTG 4547

Rattus ACTTTCGGGTGTGAGGT----TGGATATTACAGTAGTCTAGTATTGTTTCTTTTTATGAA 38728

Danio ACTTT----TATAATGA----TGCATAAGACA-----TCAGCATTGTGTGCTTTTGCA-- 4083

Mus AATTTC---TATGGGACCCTCTTCACTTAACTGAAGTGCAACTCACTTTGGTTGTCTGGA 32608

Gallus --TTCACTGCCTGAGAA-----GCACATCATG-----CTGAGAGGATCAGGGTTTG---- 24163

Anopheles ------------------------------------------------------------

Homo CTTTTCCCACATGGAACGTTATTCGTGTTCTCCACTGCTGCTTTGAACTATTCCTTTTAC 46923

Pan CTTTTCCCACATGGAATGTTATTCGTGTTCTCCACTGCTGCTTTGAACTATTCCTTTTAC 46772

Drosophila ------------------------------------------------------------

Canis CATTCCCAACATGGAG--------GCCTTTTATA----TGCTCTAAATTAT--------- 27524

Bos TAT---CAACAT---------------TTCT----------TCCA--------------- 4564

Rattus TTTGGGTACACTATCATTTAATACATATGTACATACTTATAATTGTATATTCCTCATTGG 38788

Danio ------------------TGACACATA--------------------------------- 4092

Mus GA----------------CAAGAGATG--------------------------------- 32619

Gallus -------------------GAAACGTG--------------------------------- 24171

Anopheles ------------------------------------------------------------

Homo TCT-------CTCAGCATAAAAATCCCT-------------------------------- 46944

Pan TCT-------CTCAGCATAAAAATCCCT-------------------------------- 46793

Drosophila ------------------------------------------------------------

Canis ----------------ATGGGGATACAG-------------------------------- 27536

Bos ------------------------------------------------------------

Rattus TTGTTTTCTTTTATACTATATAGTTATATATTTATTTCACTATTCCAGTTCTTTTTTTAT 38848

Danio --------------ACCA----------------------------AGGGCTTTGTTTAC 4110

Mus --------------GCCACTT-------------------------AAGATTCTATAT-C 32639

Gallus ----------------------------------------------AGCTCCGTGTGTGT 24185

Anopheles ------------------------------------------------------------

Homo --------------GCTCCTTTGAAGCTTATGCCTTCTGGTTTTGTCTTCCTCTGTCTGC 46990

Pan --------------GCTTCTTTGAAGCTTATGCCTTCTGGTTTTGTCTTCCTCTGTCTGC 46839

Drosophila ------------------------------------------------------------

Canis --------------AATTGTACAGAGATAAT------------------TCAAGGTGTCA 27564

Bos ------------------------------------------------------------

Rattus TTCCACTCAATTTTCATAGTCTCCATTTTTTCTCTTTTAGCTTGT--AATCGAGTGAAAT 38906

Danio TTCCA------------------------------------TTGT--GACCG-------- 4124

Mus TTCCA------------------------------------TTACTAGACCA-------- 32655

Gallus TTCCA------------------------------------------------------- 24190

Anopheles ------------------------------------------------------------

Homo CTTCAGTGAGCTATCAGTTTCTTCTCGGTTTTTGAGGACTGCTAC--------------- 47035

Pan CTTCAGTGAGCTATCAGTTTCGTCTCGGTTTTTGAAGACTGCTAC--------------- 46884

Drosophila ------------------------------------------------------------

Canis CTGGTGTGAGGAAGAAG----------------AAAAATGTTTATA-------------- 27594

Bos -----GTGAGG------------------------------------------------- 4570

Rattus ACATTCCTGTTTTAAATTCACTCTGCTAATCTTTGTCTTAATTGGAATGCTAAAAACATT 38966

Danio ----------TTTAAATCCATCATTATGATTTCTGT---------------AAGTGCGTG 4159

Mus ------TTTTATTAGGGTCACTTTCATACATTCAAGGACATTTCCAATGC--ACTAGGTT 32707

Gallus ----------------GGCATACGTTCAGCCTTTGGC-----TGAAGTGGGCAGAAGGTA 24229

Anopheles ------------------------------------------------------------

Homo -----------CTGAACTTATTCTTCTTCACTCTTTCCCAAATCTGCTGCCATCTTTATT 47084

Pan -----------CTGAACTTATTCTTCTTCACTCTTTCCCAAATCTGCTGCCATCTTTATT 46933

Drosophila ------------------------------------------------------------

Canis -----------TTAAACATATATATATTAAC-------CATATTGGTTGATTGCACGGAT 27636

Bos ------------------------------------------------------------

Rattus TATATTTT--GTTGGCCAAATTTTATTGTTTCTTTTATAATTCTCTTGTTTTTTTTTTGA 39024

Danio TATGTATT--ATT----ATACTTTATT------------------------------TAA 4183

Mus TCTACACC--AACATGGAAATTCTTTCCTCCC-------------------------CAA 32740

Gallus T-TATAGC--ATCACTGGAACCAAGGGGT------------------------------- 24255

Anopheles ------------------------------------------------------------

Homo TATATGATTAACCCCTCAGTCCCTAGCAAGTCA-------------------------AA 47119

Pan TATATGATTAACCCCTCAGTCCCTAGCAAGTCA-------------------------AA 46968

Drosophila ------------------------------------------------------------

Canis AACATGG----------AGGTTCTGGCATGGC---------------------------- 27658

Bos --TATGG----------AAA-----------C---------------------------- 4579

Rattus TTAACTTATGTAGGCACAGTTGTTTCTTTCTTAATTTTTATTTTTCAACTATAGAATTAC 39084

Danio TTGAG----------------GTTT----------------------------GAGTCAC 4199

Mus TTC-------------CAGCTGTTTCT----------------------------ACCAC 32759

Gallus ------------------GGTGCTC-----------------------------GGTTCC 24268

Anopheles ------------------------------------------------------------

Homo TTCCCAT------------CCGTTTTTAT---------------------------CTAC 47140

Pan TTCCCAT------------CCGTTTTTAT---------------------------CTAC 46989

Drosophila ------------------------------------------------------------

Canis CTCCTTT------------CAGTCCTT--------------------------------- 27673

Bos CTTATTT------------C---------------------------------------- 4587

Rattus AAAATGAATTTTCCTTGAGCTCCTGTGTTTGTGTCAATCTCCTGTGTGTATTTTTCCTTA 39144

Danio ----TGA-TTTTGCTTGAACCTTTAT---------------------------------- 4220

Mus ------ACTTTCCCTCAACCCCATCTCT-------------------------------- 32781

Gallus -----GGCTCTGGGTGGAACTTCCGGCA-------------------------------- 24291

Anopheles ------------------------------------------------------------

Homo AGTAATGTTCACCTCTGCATCACTGCTG-------------------------------- 47168

Pan AGTAACGTTCACCTCTGCATCACTGCTG-------------------------------- 47017

Drosophila ------------------------------------------------------------

Canis --------TCTCATCTGTGTGACTGGT--------------------------------- 27692

Bos -----------CATTTGAGTCTCTTAC--------------------------------- 4603

Rattus AAATATGTACTGTAAATCTTTAAAATAAAAAGTCTCCCAACAAAAAAGGCCCAGGACCAA 39204

Danio ------------------TTTAAA------------------------------------ 4226

Mus ----------------CCCTCCA------------------------------------- 32788

Gallus -----------------TTTTGA------------------------------------- 24297

Anopheles ------------------------------------------------------------

Homo ----------------CTTCCCATGTCT-------------------------------- 47180

Pan ----------------CTTCCCATGTCT-------------------------------- 47029

Drosophila ------------------------------------------------------------

Canis ----------------TTTTCTAGGTCTTGG----------------------------- 27707

Bos ----------------TTTCCC-------------------------------------- 4609

Rattus ATGGATTTAGTGCAGAATTCTATCAGACATACAAAGAAGACCTAAAACCAATACTCTTCA 39264

Danio -------------------TTATCACAAATACTGA------------------------- 4242

Mus -------------------CCTGCTCACCTCCCCA------------------------- 32804

Gallus -------------------TGTGCAGGCATGCTTTG------------------------ 24314

Anopheles ------------------------------------------------------------

Homo ------------------ACAGGCATGCCAACTCAAAACTGTTTTACCCCAAAAGCTTCA 47222

Pan ------------------ACAGGCATGCCAACTCAAAACTGTTTTACCCCAAAAGCTTCA 47071

Drosophila ------------------------------------------------------------

Canis ------------------GCAGAGAAGCAGACTGAATA---------------------- 27727

Bos ---------------------------CACATTTAA------------------------ 4618

Rattus TACTATTCTACAAAATAGAAACAGGAGAAACAATGCCCAGTTCATTCTATGAAGCCAGAA 39324

Danio ------------------------------------------CATTTGATTAA------- 4253

Mus ------------------------------------------CACCTGCTTACTCT---- 32818

Gallus ---------------------------------TGGGCAGTGCTTTTACTGGAA------ 24335

Anopheles ------------------------------------------------------------

Homo ------------------GTGAAAACACCTTACCTCAGGTTGCCGTCTTTGAAT------ 47258

Pan ------------------GTGAAAACACCTTACCTCAGGTTGCAGTCTTTGAAT------ 47107

Drosophila ------------------------------------------------------------

Canis -----------------------------------------GTAGGATATAATT------ 27740

Bos ----------------------------------------------ATACAATT------ 4626

Rattus GTACGCTTATACCTAAATGACACAAAGTCCCAACAAAGAAAAAGAACTTCAGGCCAATTT 39384

Danio -----CCTAT-------------------------------------------------- 4258

Mus ----CCCTAT-------------------------------------------------- 32824

Gallus ----ACCTCT-------------------------------------------------- 24341

Anopheles ------------------------------------------------------------

Homo ----GCTTTTCTA----------------------------------------------- 47267

Pan ----GCTTTTCTA----------------------------------------------- 47116

Drosophila ------------------------------------------------------------

Canis ----TCCTTTGTC----------------------------------------------- 27749

Bos ----GTCTTG-------------------------------------------------- 4632

Rattus CCCTTATGAATATCAGTGCAACAAAACTCAATAAAATCTCATTAACCGAATCTAAGAACA 39444

Danio ---------------------CAAACCCCAAT---------------------------- 4269

Mus ---------------------CTACTCCCAGTTGGCT----------------------- 32840

Gallus -------------------------CTTCAA----------------------------- 24347

Anopheles ------------------------------------------------------------

Homo ---------------------CTATCTTAAACTTGTTTTCTTTCAT-------------- 47292

Pan ---------------------CTATCTTAAACTTGTTTTCTTTCAT-------------- 47141

Drosophila ------------------------------------------------------------

Canis ---------------------TGGTATTAAAT---------------------------- 27760

Bos ----------------------AGTATTA------------------------------- 4639

Rattus GATCAAAACAATCATCCGTCATGAGTAAGTAGGCTTCATCCCAGTGATGCAAGGATGATT 39504

Danio --------------------------------GTTTTGT----GTGATGT---------- 4283

Mus --------------------------------GTATAATCTATTTCACTCT--------- 32859

Gallus --------------------------------GCATTGCCATTATTACAC---------- 24365

Anopheles ------------------------------------------------------------

Homo -----------------------------TGCGCCTTTTCTTCCTTCTCTTAGAGACTTG 47323

Pan -----------------------------TGCGCCTTTTCTTCCTTCTCTTAGAGACTTA 47172

Drosophila ------------------------------------------------------------

Canis ----------------------------------CTCCTCTTCGTGATGTTAAAAACCCA 27786

Bos -------------------------------------------GTGATGTTG------TA 4650

Rattus GAATGTACAGA------AATCCATCAACATAATCCACTATATAACCAAACTCAAGGAAAA 39558

Danio ---TATATACA------AATTTGCCAA----ATTTACTATATA----------------- 4313

Mus ---TCTAGGGA------GATCCTTGTAT---CCCTACTGGATCCCC-------------- 32893

Gallus -----TTAATT------AACCAGAAGAAGGAAAACAACAGGCAA---------------- 24398

Anopheles ------------------------------------------------------------

Homo TCCTATGGCTCTTCTACTGTCTTCCAGCTACAATTCCCTCTTGTTCCT-------GACAT 47376

Pan TCCTATGGCTCTTCTACTGTCTTCCAGCTACAATTCCCTCTTGTACCT-------GACAT 47225

Drosophila ------------------------------------------------------------

Canis AGTTTTGAGTC------CGTCTTG-GGCTCAAATCTCTTATT--------------AGAT 27825

Bos ATTTTTGTATC------AGTCAT------CAAATCT------------------------ 4674

Rattus AAAGCACATGATCATCTCATTAGGTGCTGAGAAAAAATTTGACAAAATTCAACACCCCTT 39618

Danio ------------------------------------------------------------

Mus ------------------------------------------------------CCTCTT 32899

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTACTGCTCAGAGCCAGGAGATGGATAAGTAGTAGTATTTCACATGCACTTTTTTCTCTG 47436

Pan GTACTGCTCAGAGCCAGGAGATGGATAAGTAGTAGTATTTCACATGTACTTTTTTCTCTG 47285

Drosophila ------------------------------------------------------------

Canis GTGTGACT-------------TGTTTATGTAACAG--------------------CTCTG 27852

Bos ------------------------------------------------------------

Rattus CATTTTAAAAGTCTTAGAACGATCAGCAATTCAAAGCCCATACCTAAAAAATAGTAACAG 39678

Danio ------------------------------------------------------------

Mus TACCTAACCTCTCT--------------------------------------------GG 32915

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GGGAGCAGTAGTCATACAATAATTGATTA----------AGATAAAACAGGTTTTTATCA 47486

Pan GGGAGCAGTAGTCATATAATAATTGATTA----------AGATAAAACAGGTTTTTATCA 47335

Drosophila ------------------------------------------------------------

Canis AGCATCAGCAG------AATGAT------------------------------------G 27870

Bos -----------------------------------------------------------G 4675

Rattus CAATATACAGCAAACCGATAGCCAA------CATCAAACTAAATGGAGAGAAACTTGAAC 39732

Danio ---TATACA------------------------------TAAATG--------------- 4325

Mus CTCTATAGATTGTACC----------------------TTGGTTA--------------- 32938

Gallus -AGTTTAAA-------------------------------AGACA--------------- 24411

Anopheles ------------------------------------------------------------

Homo GTTTATATAAGAGGTAAAGAAAACAATGGGGTAGAGTTTTAAAAATTGTCAAAAACAACA 47546

Pan GTTTATATAAGAGGTAAAGAAAACAATGGGGTAGAGTTTTAAAAATTGTCAAAAACAACA 47395

Drosophila ------------------------------------------------------------

Canis GTTTATATAGCTAATTCATAGA---------------CTTAGGAGT-------------- 27901

Bos ATTTATA----AAATTCATG--------------------AGGAG--------------- 4696

Rattus CACTA-AACCAAGGACTAGACAAGGCTGTCCACTCTTCAACTACCTGCTGAATATAGTAC 39791

Danio -----------------------------------------TGCTT--TGAATGT----- 4337

Mus --------------------------------TTATTTACTTAACTGCT-AATAT----- 32960

Gallus --------------------------------------------CTCTCAAAGAC----- 24422

Anopheles ------------------------------------------------------------

Homo CATTTTACCATATTAATGATTTGAAGTGTACGGTACAATTGTGGTAACTGTGCACATTGT 47606

Pan AATTTTACCATATTAATGATTTGAAGTGTACAGTACAATTGTGGTAACTGTGCACATTGT 47455

Drosophila ------------------------------------------------------------

Canis ------ATCTTAGTAATAACT--AGGTGCCAGGTAG---TGTTGTAACTGTATAT----- 27945

Bos ------------------------------------------------------------

Rattus TCAAAGTCCTAGGCAGAGCAATTAGGTAACAAAAGGAGGTCAAATGGATCGAAATTGGAA 39851

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGTGCAGCAGATCTCTAGAACTTTTTCATCTTGTAAAACAGAAACTCTACATTCATTGAA 47666

Pan TGTGCAGCAGATCTCTAAAACTTTTTCATCTTGTAAAACAGAAACTCTACATTCATTGAA 47515

Drosophila ------------------------------------------------------------

Canis ----TAACTCATTT----AATTCTCTC---------------------ACAGTCGT---- 27972

Bos ------------------AATT--------------------------ACAGTC------ 4706

Rattus AGGAAGAAGTCAAAATATCACTCTTTGCAGATGATATGATAGCATATTTAAGTGACCCCA 39911

Danio -----------------TTTCTTTT-------------ATGGCACATT------------ 4355

Mus ---------------CCTTTTTTTTTATAAGTGAATACATACCATATTT----------- 32994

Gallus ---------------------------------------CAGCAT--------------- 24428

Anopheles ------------------------------------------------------------

Homo CAACTCTTCTTTTCCCCCTTCTTCCTATTCCTTGGCAAATGCCATTCTACTTTTTGCCTC 47726

Pan CAACTCTTCTTTTCCCCCTTCTTCCTATTCCTTGGCAAATGCCATTCTACTTTTTGCCTC 47575

Drosophila ------------------------------------------------------------

Canis ---------------------------------GGTAATTGTCATGTATACCATCACTTT 27999

Bos ---------------------------------------TGTTGTATGTCCCTTCGTTT- 4726

Rattus AAAATTTCATCAAAGAACTCTTAAGCCTGATAAACAACTTCTGCAAAGTGTCTGGGTGTA 39971

Danio ---AT------------------------------------------------------- 4357

Mus ---ATCT------------------------------------------GTCTGAGT--- 33006

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAAAATTTGACTGTTTTGGCTACTTCATGTCAGTGGAATCATTAAGTATTTGTCTTTTGT 47786

Pan TAAAATTTGACTGTTTTGGCTACTTCATGTTAGTGGAATCATTAAGTATTTGTCTTTTGT 47635

Drosophila ------------------------------------------------------------

Canis ------------------------------------AATGATGAGGAATCTGAG------ 28017

Bos -------------------------------------------------CTG-------- 4729

Rattus AAAATAA---CTCAGACAAATCAGTAGCCTTCTTCTACTCGAAGGATAAACAGGCTGAGA 40028

Danio --------------GACAGATCAGTG---------------------------------- 4369

Mus ----------CTGAGTTACTTCACTG----------------AGGATGATTTTGCTG--- 33037

Gallus ---------------TCAGATTCGCA---------------------------------- 24439

Anopheles ------------------------------------------------------------

Homo TGACTGGCCTATTTCACATAGCAATGTCCTC----------AAGGTTCATTTGTGTTGT- 47835

Pan TGACTGGCCTATTTCACATAGCAATGTCCTC----------AAGGTTCATTTGTGTTGT- 47684

Drosophila ------------------------------------------------------------

Canis ---------------ACACAGAAATGTT-------------AAGG--------------- 28034

Bos ------------------------------------------------------------

Rattus AAGAAATTGGGGAAACGAAAACCTTCACAATAGTCACAAATAATATAAAATACCTTGGTG 40088

Danio -----------------------------------------------------CATGTTA 4376

Mus ----------------------------------------TTTCCTAGTGTGTTTTCTTT 33057

Gallus ----------------------------------------------AAGATGGCTGTCTG 24453

Anopheles ------------------------------------------------------------

Homo ------------------------------------AGCATATTACAGAATTTCTTTCTT 47859

Pan ------------------------------------AGCATATTACAGAATTTCTTTCTT 47708

Drosophila ------------------------------------------------------------

Canis ------------------------------------AACTCATT-CAAAGTCCCGTAGTT 28057

Bos --------------------------------------CTCTTT-CT--GTTCCGT---- 4744

Rattus TGACTCTAGC----------------CAAGCAAGTAAGACATCTGTAACAGTAACTTCAA 40132

Danio TGTTTTTGTC----------------CATGCA--TAAAGCATTT---------------- 4402

Mus TCATTTGACT----------------TATTCCTTTAAAACACTTC--------------- 33086

Gallus TAACTACACT----------------TCGGTATGTGAGATGTTTT--------------- 24482

Anopheles ------------------------------------------------------------

Homo TTCTTTTAGGCTGAATAACATTTTGTTATATATGTATACCACATTT-------------- 47905

Pan TTCTTTTAGGCTGAATAACATTTTGTTATATATGTATACCACATTT-------------- 47754

Drosophila ------------------------------------------------------------

Canis TTGTTTTAAG---------ATTTT---ATTTATTTATGACACA----------------- 28088

Bos CTGCCTCAGA---------ATCC----ATCT-TTTAT----------------------- 4767

Rattus GTCTCTGAAGGAAGAAATTGAAGAAGGTGCTGGAGAGGATGCAGAGAAATAGGAACACTC 40192

Danio ---------------------------------------TGCA----------------- 4406

Mus ---------------------------------------TGTT----------------- 33090

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ---------------------------TCTTTAACCATTTGTTGATGGATGTTTAGGTTC 47938

Pan ---------------------------TCGTTAACCATTTGTTGATGGATGTTTAGGTTC 47787

Drosophila ------------------------------------------------------------

Canis -----------------------------------CACATGTAGAGAGA----------- 28102

Bos ------------------------------------------------------------

Rattus CTCCAT--------------TGTTGTTGAGAT---TGTAATCTGGTACATCAACTCTGGA 40235

Danio --------------------------TGAG--------------------CAGCT----- 4415

Mus -------------------------CTGAT---------------TCCTTCAGTT----- 33105

Gallus --------------------------TGAC---------------TCCTTTGGGT----- 24496

Anopheles ------------------------------------------------------------

Homo CTTCCACTTCTTGAATATTGTAATGTTGAAATAAACATGGGTATACAAATATTTTTTTGA 47998

Pan CTTCCACTTCTTGAATATTGTAATGTTGAAATAAACATGGGTGTACAAATACTTTTTTGA 47847

Drosophila ------------------------------------------------------------

Canis -------------------GAGAGGCAGAGACACAGGCAGAGGGAGAAGCAGGCTCC--- 28140

Bos ------------------------------------------------------------

Rattus AATCAGTCTTGCAGTTCTCAGAAAA------TTGGACATAGTATTACCTGAGGACCTAGC 40289

Danio ----------------------------------------GCATTAT------------- 4422

Mus -------------ACTCTTATGATA------CTTAAGATTGTATTAT------------- 33133

Gallus -------------------------------CTGAAGGTGATCTTAT------------- 24512

Anopheles ------------------------------------------------------------

Homo GAACCTGTTTTTAATATATTTGGAAGTATACCCAGGTGTAGGATTACTGGATCATATGTA 48058

Pan GAACCTGTTTTTAATATATTTGGAAGTATACCCAGGTGTAGGATTACTGGATCATATGTA 47907

Drosophila ------------------------------------------------------------

Canis ---------------ATGCAGGGAA------CCTGACATGGGACTC-------------- 28165

Bos ------------------------------------------------------------

Rattus T---------------ATACAATTCCTTGGTATATGCCCAAAAGATGCTC-CAACATACA 40333

Danio ------------------------------------------AGATGTTT-C-------- 4431

Mus ---------------------------------ATTGTCTTCAGGTATTTGTAGCATAC- 33159

Gallus -------------------------------------TTCCAAAGTGTAGTATACTTAC- 24534

Anopheles ------------------------------------------------------------

Homo TTCTATTTTTTTTTAGATTTTTTTTTTTTTTACAGGAGTTCTAGGTTCACAGAATTGAGA 48118

Pan TTCTATTTTTTTTTAGATTTTTTTTTTTTTTACAGGAGTTCTAGGTTCACAGAATTGAGA 47967

Drosophila ------------------------------------------------------------

Canis ------------------------------------GATCCCAGGTCTCCAGGATCAGG- 28188

Bos ------------------------------------------------------------

Rattus ATAAGAACACATGCTCCACTATGTTCAT-------------------------------- 40361

Danio ------------------------------------------------------------

Mus ---------------CTAGTTTTTTTTT-------------------------------- 33172

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GGAAGGTACAGAGATTTCCCCTGTACCTCCTTCCACACACATGTATGGATTCTCTCATAG 48178

Pan GGAAGGTACAGAGATTTCCCCTGTACCTCCTTCCACACACATGTATAGATTCTCTCATAG 48027

Drosophila ------------------------------------------------------------

Canis ------------------CCCTGGGCTG-------------------------------- 28198

Bos ------------------------------------------------------------

Rattus ---------------------------------------------AGAACTTTAATATAG 40376

Danio ---------------------------------------------------TTGAT---- 4436

Mus ---------------------------------------------TGCATTTTAATTTT- 33186

Gallus ---------------------------------------------------TTGACCTAT 24543

Anopheles ------------------------------------------------------------

Homo CCAGTGTGCATCTCCCACCAGAGTGGTACATGTCTTTCTGATGAACCTATATTGATACAT 48238

Pan CCAGTGTGCATCTCCCACCAGAATGGTACATGTCTTTCTGATGAACCTATATTGATACAT 48087

Drosophila ------------------------------------------------------------

Canis -------------------AAGGCGGTGC------------CAAACC---ACTGAGCCAC 28224

Bos ----------------------------------------------C---ACT------- 4771

Rattus CCAGAAGCTGGAAAGAACCCAGATGCCCTTCAACAGAGGAATGGATACAGAAAATGTGGT 40436

Danio -------------------------CTCTT------------------------------ 4441

Mus ----------------------ATTCTCTT------------------------------ 33194

Gallus T--------------------AAGTCTCTT------------------------------ 24553

Anopheles ------------------------------------------------------------

Homo CA---------TAATTACCCAAAGTCC-GT------------------------------ 48258

Pan CA---------TAATTACCCAAAGTCT-GT------------------------------ 48107

Drosophila ------------------------------------------------------------

Canis CT---------GGGCTGCCCAAGGTCCAGT------------------------------ 28245

Bos ------------------------TCCTTT------------------------------ 4777

Rattus ACATCTACACAATGGAGTACTACTCAGCTAAAAACAATGACTTAATGAAATTCTTAGGCA 40496

Danio ---------------------------------------------------TCTT----- 4445

Mus -------------------------------------------------ATTATTTG--- 33202

Gallus --------------------------------------------------TTTTTCC--- 24560

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------AGTTTATATTAG 48270

Pan ------------------------------------------------AGTTTATATTAG 48119

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------AGTTAATAAGTG 28257

Bos ------------------------------------------------AGTTAGTA---- 4785

Rattus AATGAATGGAACTAGAAAATATCATCCTGAATGAGGTAACCCTGCCAAAAAAGAACACAC 40556

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GGATCATT-----------CTTAGTGCTGTACGTTCTGTGGCTTTGAACAAAGTACAATG 48319

Pan GGATCATT-----------CTTAGTGCTGTACGTTCTGTGGCTTTGAACAAAGTACAATG 48168

Drosophila ------------------------------------------------------------

Canis G--------------------TAGAGC----CAACATGTGAATTTGGGCAGTCTG----- 28288

Bos ------------------------------------------------------------

Rattus ATGATATGCACTCACTGATAAGTAGTTATTAGCTCAAATGCTTAGAA-TACCTAAAAAAA 40615

Danio ---------------------------------TCAAATG-----AA-TA---------- 4456

Mus ---------------------------------TTAAGTACAAGAAAGTA---------- 33219

Gallus ---------------------------------TCTGTTGCAAAAAA-TG---------- 24576

Anopheles ------------------------------------------------------------

Homo ACATGTATCTACCATTATATCATACAGAATGTTTTCACTGCCCCAAAATCCTCTGTGTTC 48379

Pan ACATGTATCTACCATTATATCATACAGAATGTTTTCACTGCCCCAAAATCCTCTGTGTTG 48228

Drosophila ------------------------------------------------------------

Canis ---------------------------------------GCTTCAGAGT----------- 28298

Bos -----------------------------------------TTCAAAG------------ 4792

Rattus AATTCATAGATCATGTGA--------ACGTGAAGGAAAAGAAAGACCAAAATGTGGATGC 40667

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGCCTATTTATCTTTCCTTCCCTCCCACTCCTTGGCAATCACCGATCCTTTTACTGTGTC 48439

Pan TACCTATTTATCTTTCCTTCCCTCCCACTCCTTGGCAATCACCGATCCTTTTACTGTGTC 48288

Drosophila ------------------------------------------------------------

Canis ----------------------------------GCAAGCTCTTAGC---TGGTAGGGTT 28321

Bos ----------------------------------GCAG---------------------- 4796

Rattus TTCATTCCTTCCTAGAAGGGAGAACATAATACTCACGGGAGGAAATAGAGGGACAAAGAG 40727

Danio ---ATTCTTTTGAAGAATGGAAGACATACTGCTC-------------------------- 4487

Mus ---ATTTTTACTATTGTTGACTTGCCTAATGTTCA------------------------- 33251

Gallus -----TTTGCTTTATGTAGCATTTCTCTGTATTTA------------------------- 24606

Anopheles ------------------------------------------------------------

Homo TCTAACTTTGCCTTTTCCAGCATATTATATACTTGTAATCATAC---------------- 48483

Pan TCTAACTTTGCCTTTTCCAGCATATTATATACTTGTAATCATAG---------------- 48332

Drosophila ------------------------------------------------------------

Canis TACAGCCTT-------CCAAAGTGGGA-ACATCTGT------------------------ 28349

Bos ------------------------------ATCTG------------------------- 4801

Rattus TAGAACAGGGACTGAAGAAAAGTTAATCCAGAGGCTGCCTCACGTGGGGATCCATACCAT 40787

Danio ---------------------------------GCTTTCTT------------------- 4495

Mus ------------------------AAAATGTGGTTTATCTC------------------- 33268

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------AGTATATAGCCCTTTCAGCTTGACTATTTTT----- 48514

Pan ------------------------AGTATATAGCCTTTTCAGCTTGACTATTTTT----- 48363

Drosophila ------------------------------------------------------------

Canis ------------------------AGCACGTAGGTTCTCAAGA----------------- 28368

Bos ------------------------------------CT---------------------- 4803

Rattus ATGCAGCCACCAAACCCTGTCAGTATTGCTGATGCCAAGAAGTGCTTGCTGACAGGAGCC 40847

Danio -----------------TGTCA------------------------TCTTAACAGCAGCC 4514

Mus -------------------TTAGA-------------------GAGTTCCATGGGCTGCC 33290

Gallus -----------------------------------------------GCTTAAGATATCT 24619

Anopheles ------------------------------------------------------------

Homo -------------------------------------------ACTTACTAATATGCATT 48531

Pan -------------------------------------------ACTTACTAATATGCATT 48380

Drosophila ------------------------------------------------------------

Canis -------------------------------------------AATTACAGATA--CATT 28383

Bos -------------------------------------------AATGACTAATT--CTTT 4818

Rattus AGATATGCTAGTCTTCTGAGAGGTTTTGTTAGAGCCCTACTGATACAGATGAGGATGCTT 40907

Danio GATT-------------------TTTCAT-------------ATGCACATG--------- 4533

Mus AAGG--------------------TTTATT------------CTGCAGAAG--------- 33309

Gallus GAGAA-------------------------------------ATGCAAGTTAG------- 24635

Anopheles ------------------------------------------------------------

Homo AAAGTTTCTTCCAT-------GTCTTTTCATAGGTTGTTAGTACCTCTCTTTTTCCATTT 48584

Pan AAAGTTTCTTCCAT-------GTCTTTTCATAGGTTGTTAGTACCTCTCTTTGTCCATTT 48433

Drosophila ------------------------------------------------------------

Canis AAG---------------------TTTATAGAATTTTGTGGCATGTTTCCTCTCAGA--- 28419

Bos TAG---------------------TTT--------------------TCCT--------- 4828

Rattus GCAGCTAACCATTGAACTGAACAAGGGGACCCTGATGGAGGAGTTAGAGAAAGGACTAAA 40967

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCTG-------------------------------------------------------- 48588

Pan TCTG-------------------------------------------------------- 48437

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GGATCTGACGGGGTTTGTAACCCCATAGGAAGAACAACAGTATCAACCAAGCAGATCCCA 41027

Danio ----------------------------------CAACAGT------------------- 4540

Mus ---------------------------------------GTG------------------ 33312

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ----------------------------GACATATCACAGTTTGTGAATG---------- 48610

Pan ----------------------------GACATATCACAGTTTGTGAATG---------- 48459

Drosophila ------------------------------------------------------------

Canis ------------------------------------AAAGTTGGT--------------- 28428

Bos ------------------------------------------------------------

Rattus CCAGAACTCCCAGGGACTAAACCACCAACAAATGAGCACACATGGAGTGACTCATGACTC 41087

Danio --------------------------------------CACAT----------------- 4545

Mus ---------------------------------------AGATG---------------- 33317

Gallus ---------------------------------------ATATA---------------- 24640

Anopheles ------------------------------------------------------------

Homo --------------------AATATTCACCTAATGAAGGACATTGTG------------- 48637

Pan --------------------AATATTCACCTAATGAAGGACATTGTG------------- 48486

Drosophila ------------------------------------------------------------

Canis ---------------------ATACTTGTGAGATAGCAGATAT----------------- 28450

Bos -------------------------TTGTCAGAGGGT-GATTT----------------- 4845

Rattus CAGCTGCTTGTGTAGCAGAGGATAACATTGTCCAACATCAATAGGAAGAAAAGCTCTTGG 41147

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo --------------------------GTTGCTTCCACATTTTGCTAATTATGAATAAAAC 48671

Pan --------------------------GTTGCTTCCACATTTTGCTAATTATGAATAAAAC 48520

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TCCTGTGAAGGCTCCTTTCTGCAGTATGTGGGAATACCAGGGCATTGGGTTGGAGTGTGT 41207

Danio ---TTTGACGGTT-----------------------------------GTTGGA------ 4561

Mus TTTTTTAGATGTC------------------------------------TTGAA------ 33335

Gallus TTGTGTTGAAACT------------------------------------TTTGA------ 24658

Anopheles ------------------------------------------------------------

Homo TGCTGTAGATATCGGT-------------------------GTGCAGGTTTTTGTGTGGA 48706

Pan TGCTGTAGATATCGGT-------------------------GTGCAGGTTTTTGTGTGGA 48555

Drosophila ------------------------------------------------------------

Canis --CCATAAATGTAAG--------------------------ATTCAGATTTTGAT----- 28477

Bos --CCAC--------------------------------------------TTTAT----- 4854

Rattus GTGTGTGGGAGTGCGACCATACTCATTGAAGCGGGAAGTGGGAAGGGAGTATGGGAGATG 41267

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTT--------------------------------------------------------- 48709

Pan CTT--------------------------------------------------------- 48558

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TCAGGAAAAGAGATAACATTTGAAATGTAAGTACATAAAATATCCAAGAAAAGTAAAATA 41327

Danio --------------------------------------------------------AATG 4565

Mus ---------------------------------------------------------ATA 33338

Gallus ---------------------------------------------------------ACC 24661

Anopheles ------------------------------------------------------------

Homo -------------------------------------------------AGGTTTTCAGC 48720

Pan -------------------------------------------------AGGTTTTCAGC 48569

Drosophila ------------------------------------------------------------

Canis ----------------------------------------------------TTTTCAGG 28485

Bos ----------------------------------------------------TTCTGAAC 4862

Rattus AAAATAAAAGAGAAAGGCTTGAAGAAGATCTCAGAAAGATGGAAAGATCTCCCATGCTCA 41387

Danio AAAAT------------------------------------------------------- 4570

Mus AGTCCA--------------------------------------------------TTTG 33348

Gallus AGCACA------------------------------------------------------ 24667

Anopheles ------------------------------------------------------------

Homo GACTTTCTGTAAATACTAGGGAGTGCAATTGCTGGATCTTATGGTAA------AAGTGTT 48774

Pan GACTTTCTGTAAATACTAGGGAGTGCAATTGCTGGATCTTATGGTAA------AAGTGTT 48623

Drosophila ------------------------------------------------------------

Canis TGTTTT----------------------------GCTCTTTT----------------TT 28501

Bos AGTTTT----------------------------G------------------------- 4869

Rattus TGGTTTGGCAGGATTCATATAGTAAAAATGGCCATTTGCCAAAAACAATCTCCAGTTTCA 41447

Danio -GGTT------GATT-----AGTAGACATGTATATCTGC--------------------- 4597

Mus ATGTTTGGTACAGTTTAGATAAAATCAATCTTCCTTCCTT-------------------- 33388

Gallus -------------TTCAGTTCCTTGTTTTTTGTATGTCTT-------------------- 24694

Anopheles ------------------------------------------------------------

Homo TAGTTTTGTAGGAAACATCCAAACTGTCTTCTAATATGACG------------------- 48815

Pan TAGTTTTGTAGGAAACATCCAAACTGTCTTCTAATATGACG------------------- 48664

Drosophila ------------------------------------------------------------

Canis CAGTTACGTAGTATTTATGGAA--TTTTTTTTGGTAGGAC-------------------- 28539

Bos -------------TTTAT------------------------------------------ 4874

Rattus ATGCAATTCCCATCAAATTTCCAACTCAATTCTTCATAAAATTAGAAAGAGCAATTTGTG 41507

Danio ----------------------------------------ACTGG-----------TGTG 4606

Mus ------CCTTCCTTCCTTCCTTCCTTCCTTCCTTCTTTCCATCAG------------ATA 33430

Gallus --------------------------------------------------------TATG 24698

Anopheles ------------------------------------------------------------

Homo ---CTATCCTTTTACATTTTTCACCAGCAATGAGTGAGTGTTTCTTTTGCTCTACATCTT 48872

Pan ---CTATCCTTTTACGTTTTTCACCAGCAATGAGTGAGTGTTTCTGTTGCTCTACATCTT 48721

Drosophila ------------------------------------------------------------

Canis ----------------TTTTT---------------AGTACTACTATTG---------TT 28559

Bos ------------------------------------------------------------

Rattus A---ATTCATTTAGAATAACAAAA----AATCCAGGACAGGGAAAATGATTCTATTCTCA 41560

Danio A---ACTTATTTTGGG-------------------------------------------- 4619

Mus AGTTATTAATTTGGAA-------------------------------------------- 33446

Gallus A--CATCCATCAGAAGG------------------------------------------- 24713

Anopheles ------------------------------------------------------------

Homo CACCAGTATTTGGTGTTATCAGTGTTCTGAATTTTGTCCATTCTGATAGGTGTGTAGAGG 48932

Pan CACCAGTATTTGGTGTTATCAGTGTTCTGAATTTTGTCCATTCTGATAGGTGTGTAGAGG 48781

Drosophila ------------------------------------------------------------

Canis AAGAATTATTTTGAAAT-----------GAATCACTTTCTGTGAGACAGTATAGTGGAAA 28608

Bos ----ACTGTTT---------------------------------------------GAAG 4885

Rattus ACAATTAAAGAACTTCTGGGGGAATTACCATTCCTGAATTCAAACTGTATTACAGAGCAA 41620

Danio ---ATTAAA------------------CCATACT--AATCCCCACTG------------- 4643

Mus --AGTTAAG-----------------ATTATTACTGTATTTT-ACTGTA----------- 33475

Gallus --AACTGGAA---------------------AGCGAGACTTACGAGGAG----------- 24739

Anopheles ------------------------------------------------------------

Homo TATCTTATAATTTTAATTTGTGTTTCTCTGATGCCATATGATGTGTGGG----------- 48981

Pan TATCTTATAATTTTAATTTGTGTTTCTCTGATGCCATATGATGTGTGGG----------- 48830

Drosophila ------------------------------------------------------------

Canis TTACTTAGA----------------CTCCAGAGCAAAAAGACCCATG------------- 28639

Bos TTTCTTAA---------------------------------------------------- 4893

Rattus TCATGATAAGAACTGTGTGGTATTGGTACAGAGACAGGCAGGTAGATCAGTGGAATAGAA 41680

Danio ------------CTGT-------------------------------------------- 4647

Mus ------------TTTTG------------------------------------------- 33480

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TTGAAGACACAGAAATGAACAAACACACCTATTGTCACTAGATCTTTGACAAAGGAGCTA 41740

Danio ---------------------------CCTGTT-----TGAATGTCTGATACAGGA---- 4671

Mus --------------------------ACTTGTT--------ACTTTCTATAT-GGATATT 33505

Gallus ---------------------------------------------TCTCTGAGGGAGCTG 24754

Anopheles ------------------------------------------------------------

Homo ------------------------ACATCTTTTCATA------TGCTGAATTGCCATCTG 49011

Pan ------------------------ACATCTTTTCATA------TGCTGAATTGCCATCTG 48860

Drosophila ------------------------------------------------------------

Canis ------------------------ATTCCTTTTCTTA------TCCTGATTGTGCATTT- 28668

Bos ------------------------------CTTCTTA----------AAT---------- 4903

Rattus AAACAAACCAGTGGACAGCATTTCAGTAAAAGGTCCTGGTTTAAGTAGAGGTCAGCATGT 41800

Danio ---------AGCGAGCGGC----------------------------------------- 4681

Mus GTACTTTCTGGTGAGAGGT----------------------------------------- 33524

Gallus AGGCTGTTCAATGTGGAGA----------------------------------------- 24773

Anopheles ------------------------------------------------------------

Homo TATATCTTTGGTGAGGTGTCTGTTAAGGTTGTTGGCCAATTTTTTAATTGGGTTGTTTGT 49071

Pan TATATCTTTGGTGAGGTGTCTGTTAAGGTTGTTGGCCAATTTTTTAATTGGGTTGTTTGT 48920

Drosophila ------------------------------------------------------------

Canis ----TCCTTTGTGTGATCTTGGATA----------------------------------- 28689

Bos ------CTATGTGT---------------------------------------------- 4911

Rattus AGAAAAATGCAAATCGATCTATTCTTTTTTTTTTTATTTCTATATTATTTTTTTTATTAA 41860

Danio -------TGCAAAGC----------------------------------------ATTTA 4694

Mus -------TGGATTTT--------------------------------TTTTTAAGATTTA 33545

Gallus --------AGAGGCTG------------------------------------AGGGGAGA 24789

Anopheles ------------------------------------------------------------

Homo TTTCTTGTGGAATTTTAAGAGTTCCTTAC-----------------ACTGTCTCTGTCTG 49114

Pan TTTCTTGTGGAATTTTAGGAGTTCCTTAC-----------------ACTGTCTCTGTCTG 48963

Drosophila ------------------------------------------------------------

Canis -------TATGATTTTA----------------------------------CTCTTTCAG 28708

Bos ------------------------------------------------------------

Rattus CTTGAGTATTTCTTATATACATTTCAAGTGTTATTCCCTTTCCCGGTATCCGGGCAAACA 41920

Danio ATTGAGCGCTACTA---------------------------------------------- 4708

Mus TTTATTTATTATATGTAAGTA--------------------------------------- 33566

Gallus CCTTATTGTTCTCT---------------------------------------------- 24803

Anopheles ------------------------------------------------------------

Homo TCTTGTCTGTCTGTCTGTCTGTCTGTTGAGACA----------------------GAGCC 49152

Pan TCTTGTCTGTCTGTCTGTCTGTCTATTGAGACA----------------------GAGCC 49001

Drosophila ------------------------------------------------------------

Canis TTCTGTCTCTTT---TAGCTGTGAACTGAAG----------------------------- 28736

Bos TTCTGTCTTTCT------------------------------------------------ 4923

Rattus TCCCCCTCCCCCCTCCCCTTCCTTATGGGTGTTCCCCTCCCAACCCTCCCCCCATTGCCG 41980

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCGCTCTGTCACCCAGGTTGCAGTACAGTGGCACAGTCTTGGCTCCCTGCAACCTCTGCC 49212

Pan TCGCTCTGTCACCCAGGTTGCAGTACAGTGGCACAGTCTTGGCTCCCTGCAACCTCTGCC 49061

Drosophila ------------------------------------------------------------

Canis ------------------------ATATCTTCAAAGTCATGG------------------ 28754

Bos ------------------------------------------------------------

Rattus CCCTCCCCCCACCAGTCTAGTTCACTGGGGGTTCAGTCTTAGCAGGACCCAGGGCTTCCC 42040

Danio --------CCACCAGT-----------------------TAACAG-----AGGGCT---- 4728

Mus ----CACTGCAGCTGTCT--------------TCAGACAGACCAGAAG--AGGGC----- 33601

Gallus --------GCAACTGCCT---------------------TAACAGG-------------- 24820

Anopheles ------------------------------------------------------------

Homo ACCTGGGTTCAAGTGATTCTCCTGCGTCAGCCTCCCGAGTAGCTGGGATTATACCCGTGC 49272

Pan ACCTGGGTTCAAGTGATTCTCCTGCGTCAGCCTCCCGAGTAGCTGGGATTATACGCGTGC 49121

Drosophila ------------------------------------------------------------

Canis -----GATTCAAAT---------------------------------------------- 28763

Bos ------------------------------------------------------------

Rattus CTTCCACTGGTGCTCTTACTAGGATATGCATTGCTACCTATGAGGTCAGAGTCCAGGGTC 42100

Danio ---------GTG---------GAA---------------ATGAGGCC------------- 4742

Mus ---------------------------------------GTCAGATC------------- 33609

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ACCACCACACCTGGCTAATTTTTGTAT-TTTTAGTAGACACGGGGTTTCACTATGTTAGC 49331

Pan GCCACCACACCTGGCTAATTTTTGTAT-TTTTAGTAGACACGAGGTTTCACTATGTTAGC 49180

Drosophila ------------------------------------------------------------

Canis -----------------------------------------GAGAGATAACTATG----- 28777

Bos -----------------------------------------GGGAG-------------- 4928

Rattus AGTCCATGTATAGTCTTTGGGTAGGGGCTTAGTCCCTGGAAGCTCTGGTTGCTTGGCATT 42160

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CAGGCTGGTCTCGACCTCCTGACCTCAGGTGATCCACCCACCTTGGCCTCCCAAAGTGCT 49391

Pan CAGGCTGGTCTCGACCTCCTGACCTCAGGTGATCCACCCACCTTGGCCTCCCAAAGTGCT 49240

Drosophila ------------------------------------------------------------

Canis --------------------------------------------------CCAGAGTGC- 28786

Bos ------------------------------------------------------------

Rattus G---------TTGT-ACATATGGAGTCTCGAGCCCCTTCAAGCTCTTCCAGTTCTTTCTC 42210

Danio -----------TGC-ACGAATGAGG-------------------CTTGTGGCTCTTCTCC 4771

Mus ----------TTGTTACAGATGG----------------------TTGTGAGCCACCATG 33637

Gallus ----------CTGCAGCAAGGTGG---------------------TGTCGATCTCTTTTC 24849

Anopheles ------------------------------------------------------------

Homo GGGATGTGAGCCACCACACCCAGCCTCCTTACACATTTTAG---TTAATAGTTCTTTATC 49448

Pan GGGATGTGAGCCACCACGCCCAGCCTCCTTACACATTTTAG---TTAATAGTTCTTTATC 49297

Drosophila ------------------------------------------------------------

Canis -------------CCAGGCACAGTATGTCTA-------------------GTATGTTATC 28814

Bos -----------------------------------------------------TGTT--- 4932

Rattus TGATTCCTTCAACGGGGGTCCTATTCTCAGTTCAGTGGTTTGCTGCTGGCATTCGCCTCT 42270

Danio GGGTT------------------------------------------------------- 4776

Mus TGGTTGCTGGGAT----------------------------------------------- 33650

Gallus T----------------------------------------------------------- 24850

Anopheles ------------------------------------------------------------

Homo AGATGTGTCTTATGTAAATATTTCCTCCCTATCTGTGGCTTGTCTTTTCATACTCTTGAC 49508

Pan AGATGTGTCTTATGCAAATATTTCCTCCCTATCTGTGGCTTGTCTTTTCATACTCTTGAC 49357

Drosophila ------------------------------------------------------------

Canis AGACATTCCT----CAAACACTAGTACCTTGTTCGC------------------------ 28846

Bos --------------------------CTTTG----------------------------- 4937

Rattus GTATTTGCTGTATTCTGGCTGTGTCTCTTAGGAGCGATCTACATCCAGCTCCTGTAGGTC 42330

Danio -------------------------------------------TCCAGC----------- 4782

Mus -------------------------------------------TTGAAC----------- 33656

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATTGTCTTTTGCAAAAGACAACAATTTTTAAGAAACAAGTAGACAATTTTAATGAAGTCT 49568

Pan ATTGTCTTTTTCAAAAGACAACAATTTTTAAGAAACAAGTAGACAATTTTAATGAAGTCT 49417

Drosophila ------------------------------------------------------------

Canis -CTACCTATTACATAGAATAAC-----CTAA----------------------------- 28871

Bos ------------------------------------------------------------

Rattus TGCACTTCTTTGCTTCATCCATCTTGTCTAATTGGGTGGCTATATATGTATGGGCCACAT 42390

Danio -----------------------------------------------GCATGGATAACA- 4794

Mus ------------------------------------------------TCGGGACCTTCG 33668

Gallus ------------------------------------------------CAGGGATAAGCG 24862

Anopheles ------------------------------------------------------------

Homo GGCTTATCAGTTCTTTTCTTCATGGTTGGTACCTTTGGTGCCGTATCTAAAA-GTCATCA 49627

Pan GGCTTATCAGTTCTTTTCTTCATGGTTGGTACCTTTGGTGCCGTATCTAAAAAGTCATCA 49477

Drosophila ------------------------------------------------------------

Canis ------------------------------ACCTTAG-------AACTGAAAGATGGG-- 28892

Bos ------------------------------------------------------------

Rattus GTGGGGCAGACTCTGAATGGGTGTTCCTTCAGTCTCTGTTTTAATCTTTGCCTCTCTCTT 42450

Danio ATGCAGCAG--------------------------------------------------- 4803

Mus GAAGAGCAGTC-------GGGTG--------------------------------CTCTT 33689

Gallus CTAGGATG---------------------------------------------------- 24870

Anopheles ------------------------------------------------------------

Homo CCAAACCCAAGATCTAGATTTTTTCTTATG-----------TTATCCTCTAGGAGTTTTA 49676

Pan CCAAACCCAAGATCTAGATTTTTTCTTATG-----------TTATCCTCTAGGAGTTTTA 49526

Drosophila ------------------------------------------------------------

Canis --AAAACTGAGGCTCAGACCATTACTTGT------------------------------- 28919

Bos ------------------CCATTATTTCT------------------------------- 4948

Rattus CCCTGCCAAGGGTATTCTT--------------------GTTCCCCTTTTAAAGAAGGAG 42490

Danio --CCATCAAGG--------------------------------CCCT---------GGAG 4820

Mus ACCCACTGAGC-----------------------------CATCTCACCAGCCCGAGAGG 33720

Gallus --CCAGGAAAC-------------------------------TTCCTT---------AGG 24888

Anopheles ------------------------------------------------------------

Homo TAGTTTTGAGTTTTACATTTAATTCTCTGGTTTATTTTGAGTTTATTTTTGTGAAGGGTG 49736

Pan TAGTTTTGAGTTTTACATTTAATTCTCTGGTTTATTTTGAGTTTATTTTTGTGAAGGGTG 49586

Drosophila ------------------------------------------------------------

Canis ------TGAGGGTTGCAC---------------------AGGTTATT-----AGAGGCAG 28947

Bos ------CGA--------------------------------------------------- 4951

Rattus TGAAGCATTCACATTTTGATCATCTGTCTTGAGTTTCATTTGCTCTAGGCATCTAGGGTA 42550

Danio T----------------------------------------------------------- 4821

Mus T----------------------------------------------------------- 33721

Gallus T----------------------------------------------------------- 24889

Anopheles ------------------------------------------------------------

Homo TAAGACCTGTGTCTAGACTCTTTTTTTTTTT----------------------------- 49767

Pan TAAGACCTGTGTCTAGACTCTTTTTTTTTTTTTTTTT----------------------- 49623

Drosophila ------------------------------------------------------------

Canis AAGGAGCTGT-------------------------------------------------- 28957

Bos ------------------------------------------------------------

Rattus ATTCAAGCATTTGGGCTAATAGCCACTTATCAATGAGTGCATACCATGTATGTCTTTCTG 42610

Danio -------------------------------------TATATA----------------- 4827

Mus -------------------------------------TGGATTTTACAGTAGTCT----- 33739

Gallus -------------------------------------TGCATC----------------- 24895

Anopheles ------------------------------------------------------------

Homo --------------GCATGTGGATGTTCAGTTATTACCACTGTTTATTGAAAAAG----- 49808

Pan --------------GCATGTGGATGTTCAGTTATTACCACTGTTTATTGAAAAAG----- 49664

Drosophila ------------------------------------------------------------

Canis ---------------CAT---------------TTAATGCAGTTCAT------------- 28974

Bos -----------------------------------AATGC-------------------- 4956

Rattus TGATTGGGTTAGCTCACTCAGGATGATGTTTTCCAGTTCCAACCATTTGCCTACGAATTT 42670

Danio -------------------AGAATAATG----------CCAA------------------ 4840

Mus ---------------------GGTAGTGCTTGTTTTTATGAAC----------------- 33761

Gallus -------------------AGGAGAATTTTAT---------------------------- 24908

Anopheles ------------------------------------------------------------

Homo ----------ACTATTTTCTTCATTGTATTGCCTTTGCCTCTTTGTCAAATACTGCCATT 49858

Pan ----------ACTATTTTCTTCATTGTATTGCCTTTGCCTCTTTGTCAAATACTGCCATT 49714

Drosophila ------------------------------------------------------------

Canis -----------CTAATTTCTCAGTCTTGTTTTT------------------ACTGTTCAT 29005

Bos ---------------TTTCTCAGTCGCACTCT--------------------CTTTT--- 4978

Rattus CATAAAGTCGTTGTTTTTGATAGCTGAGTAATATTCCATTGTGTAGATGTACCACATTTT 42730

Danio -------------------------------------ACTGTGTG----------ATCCT 4853

Mus --------------------------------------TTGGGTACAC---CATCATTTA 33780

Gallus -------------------------------------ACTGGATA------------TCA 24919

Anopheles ------------------------------------------------------------

Homo GCTCCTTTGACTATGTGGGTCCATTTCTGGGCTCTCTATTCTGTTTCGTTGGTCTGTTTT 49918

Pan GCTCCTTTGACTATGTGGGTCCATTTCTGGGCTCTCTGTTCTGTTTCGTTGATCTGTTTT 49774

Drosophila ------------------------------------------------------------

Canis ACTCCTTTATACAT-----TACATACAGAGGCATTATGTAATAT------GATTGGGCTT 29054

Bos --TCCTTTCT---T-----TCTATGC---------------------------------- 4994

Rattus CTGTATCCATTCCTCTGTTGAAGGGCATCTGGGTTCTTTCCAGCTTCTGGCTATTATGAA 42790

Danio C-------ATCCCTCT-------------------------------------------- 4862

Mus ATGCATATATACTTATA------------------------------------------- 33797

Gallus GGAAGAAGATCTTCCCT------------------------------------------- 24936

Anopheles ------------------------------------------------------------

Homo GTCAGTTCTTTTGTCAGTACCACACCATCTTGACTACTGTAGCTTTACAGTAAATCTTGA 49978

Pan GTCAGTTCTTTTGTCAGTACCACACCATCTTGACTACTGTAGCTTTACAGTAAATCTTGA 49834

Drosophila ------------------------------------------------------------

Canis GGGGGAATTTTCCTTAGGACAAAACC----TGACA--------TTCTTATTAAG----AA 29098

Bos ----------CTCTGATGACA--------------------------------------- 5005

Rattus TAAGGCTGCAATGAACATAGTGGAGCACGTGTCTTTTTTATATGTTGGGGCATCTTTTGG 42850

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AA---------------------------------------------------------- 49980

Pan AA---------------------------------------------------------- 49836

Drosophila ------------------------------------------------------------

Canis AA---------------------------------------------------------- 29100

Bos ------------------------------------------------------------

Rattus GTATATCCCCAAGAGAGGTATAGCTG-----------GATCCTCAGGCAGT--------- 42890

Danio ----------AAGAAAGG--------------------------AGCCAGT--------- 4877

Mus ----------ATTAATTGTACATCC--------------CTCATTGGTTGT--------- 33824

Gallus --------CAGAGAGTTGGTCAAGCA-----------TTGGAATAGGCTGC--------- 24968

Anopheles ------------------------------------------------------------

Homo ---------TCAGTAGTGTCCATCTGACTTTTTCTGTCAATATTGAGTTGTCTCTCACGG 50031

Pan ---------TCAGTAGTGTCCATCTGACTTTTTCTGTCAATATTGAGTTGTCTCTCACGG 49887

Drosophila ------------------------------------------------------------

Canis ---------TAATTAGTGTTTGGT---------------ATTTTGGATTTT--------- 29127

Bos ------------CCAGTGTTCAGT---------------CATTTG--------------- 5023

Rattus ----------------TCAATGTCCAATTTTCTGAGGATTCTCCAGACTGATTTCCAGAA 42934

Danio ----------------TCAGC------CTTCCCGG---------------------AGAA 4894

Mus ----------------TTTCT------TTTTTTAAATATT------------TTTTAAAA 33850

Gallus ----------------CCAGG-----------------------------------GAAA 24977

Anopheles ------------------------------------------------------------

Homo GTCATGGAATAGCTCTTCATTATTTAGTTATTTGATTTCTTTC--ATCAGAGTTCTAAAA 50089

Pan GTCATGGAATAGCTCTTCATTATTTAGTTATTTGATTTCTTTC--ATCAGAGTTCTAAAA 49945

Drosophila ------------------------------------------------------------

Canis -------GATAATTAATCATTAA--AGTCCTATGGACAATTT--------AGCCTCAAGG 29170

Bos ----------------TCACT-----GTCCTGTGTGCA---------------CCTAAGG 5047

Rattus TGGTTGTACCAGTCTGCAATCCCACCAACAATGGAGGAGTGTTCCTCTTTCTCCACATC- 42993

Danio CAGT-------------------GCCAA------AGGAGC------------TCACAAC- 4916

Mus TATTTTTTT-------------------------AGGTATTTTCCTCAA---TTACATT- 33881

Gallus TAGT------------------------------GGAGGT------------CTCCATC- 24994

Anopheles ------------------------------------------------------------

Homo CATTTTTCCTCATATATCTTGTACTAATTTTGTTAGATCTGTACTTAAATATTTCATTTT 50149

Pan CATTTTTCTTCATATATCTTGTACTAATTTTGTTAGATCTGTACTTAAATATTTCATTTT 50005

Drosophila ------------------------------------------------------------

Canis C-TATTCAATCATGTATATGAAATTA-------TAAAACT-------AACATTTTCTCT- 29214

Bos C-TCTT------------------------------------------------------ 5052

Rattus --------CTCACCAGCAAAATCGATCTATTCTTAATCACCTTCTACAAAGCTCAAGTCC 43045

Danio --------TTC--------------TCTGCT----------------------------- 4925

Mus --------TTTA------------ATATATTTT--------------------------- 33894

Gallus --------CTTG-----------GAGGTATTCAT-------------------------- 25009

Anopheles ------------------------------------------------------------

Homo GGGACACGCTAATGTAAAATGGTATTGTGTTTTTAATTTCAAATTCAACTTATGCATTGC 50209

Pan GGGACACGCTAATGTAAAATGGTATTGTGTTTTTAATTTCAAATTCAACTTATGCATTGC 50065

Drosophila ------------------------------------------------------------

Canis -------ATTAATATATGCAAGTAGCATGTTTAT-------------------------- 29241

Bos --------------------AGT------------------------------------- 5055

Rattus AAGTGTAGTAAGGACTTCCACATCAAACCAGATACAGTGACACTAATAGAAGAGAAAGTG 43105

Danio --------------------------------TGCAGCAAC------------------- 4934

Mus --------------------------------TAAAGAGATTT----------------- 33905

Gallus ----------------------------------GAGAGACAC----------------- 25018

Anopheles ------------------------------------------------------------

Homo TGGTT---------------------------TACAGGAAAGCTATTAACTTTTTTATAT 50242

Pan TGGTT---------------------------TACAGGAAAGCTATTAACTTTTTTATAT 50098

Drosophila ------------------------------------------------------------

Canis --------------------------------TATAGAAAAA----------------AT 29253

Bos ------------------------------------------------------------

Rattus GGGAAGAGCCTCGAACACGGGGACATGGGAAAATTTCCTGAACATAACATCAGTGGCTTA 43165

Danio GGAAAGA----TGAAC--------------------------CATAA------------- 4951

Mus --ATTTATTATTATAT---------------------------GTAA------------- 33923

Gallus --------------------------------------------TGAT------------ 25022

Anopheles ------------------------------------------------------------

Homo GAACCTTGTATCCTGCAG------------------CTTTGCTATAATCACTT------- 50277

Pan GAGCCTTGTATCCTGCAG------------------CTTTGCTATAATCACTT------- 50133

Drosophila ------------------------------------------------------------

Canis GAAT--------------------------------------TAGAAGCAA--------- 29266

Bos ------------------------------------------------------------

Rattus TGCTTTAAGATCAGGAATTGACAAATGGGACCTCATAGACTTGAAAAGCTTCTGTAAGGC 43225

Danio ---------------------------GGACCT--------------------------- 4957

Mus ---------------------------GTACACTGTAG---------------------- 33934

Gallus ---------------------------GTGGCTTATG----------------------- 25032

Anopheles ------------------------------------------------------------

Homo ------------------------ATTAGTTCTAGGAGGTTTTTGTTGTTTTTCTTTTTC 50313

Pan ------------------------ATTAGTTCTAGGAGGTTTTTGTTGTTTTTCTTTTTC 50169

Drosophila ------------------------------------------------------------

Canis ---------------------------AAACATAGAAGAATTTTAAA------------- 29286

Bos ------------------------------------------------------------

Rattus AAAGGACACCGCCAATAGGACAAGATGGCAACCAGCAGATTGGGAAAAGATCTTTACCAT 43285

Danio ----------GCCA---------------------------------------------- 4961

Mus --------CTGTCA---------------------------------------------- 33940

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTTTTTCAATTCCTG-------------------------------------------- 50329

Pan TTTTTTTCAATTCCTG-------------------------------------------- 50185

Drosophila ------------------------------------------------------------

Canis --------AAACCCAT-------------------------------------------- 29294

Bos ------------------------------------------------------------

Rattus TCCTACATCCAATAGAGGGCTAATATCAAATATATACAAGGAACTTAACAAGTTCGACTC 43345

Danio -CCCACA------AGGGAG------------------------------------GACTT 4978

Mus --TCAGACACACCAGAAG------------------------------------------ 33956

Gallus ----ACATGTTTTAGTGAT----------------------------------------- 25047

Anopheles ------------------------------------------------------------

Homo -TCTATGTTCTACACATAT----------------------------AGTCATTTCATCT 50360

Pan -TCTATGTTCTACACATAT----------------------------AGTCATTTCATCT 50216

Drosophila ------------------------------------------------------------

Canis -TCAACATCATTTAGAGAA----------------------------AATGTTAACACTT 29325

Bos -------TCTTTCAG--------------------------------------------- 5063

Rattus CAGAGAATCAAATAACCTTATTAAGAATTGGGTACTAAGATAAAAAAATAAGAATTCTCA 43405

Danio TAGAGG--TGAGTAAC--------------GGTGTTA----------------------- 4999

Mus -AGAGTGTCAGATCTC-----------------ATTA----------------------- 33975

Gallus ---AGTACTAGCTATGCC-------------AGGTTG----------------------- 25068

Anopheles ------------------------------------------------------------

Homo GCAAACAAAGGCAGTTGTATTTTTTTGTTCCCCGTTAGTATA------------------ 50402

Pan GCAAACAAAGGCAGTTGTATTTTTTTGTTCCCCGTTAGTATA------------------ 50258

Drosophila ------------------------------------------------------------

Canis TGAAATAAAAGTGGCTTCATCTT-------ACACTTAGAA-------------------- 29358

Bos ------------------------------------------------------------

Rattus ACTGAGGAATATTGAATGACTGTAAAGCACCTAAAGAAATGTTCAACATCCTTAATCATC 43465

Danio ----------------TGTTTGTAGA--------------------CATTTT-----ATC 5018

Mus ------------CAGATGGTTGTGAGC-------------------CACCCTGTGGTTGC 34004

Gallus ---------------GTGGCTGGGCTT-------------------CATATTGAAGGCCT 25094

Anopheles ------------------------------------------------------------

Homo ---------CCCTTTATTTCCTTTTCTTGTCTTAGCTAGGACTTCCAGTATGGAGTGGTG 50453

Pan ---------CCCTTTATTTCCTTTTCTTGTCTTAGCTAGGACTTCCAGTATGGAGTGGTG 50309

Drosophila ------------------------------------------------------------

Canis -----------CTTTGTAACTGACTTTTATCA--------------AATACTGATGAATG 29393

Bos ------------TCTGTA-----TTCTTAT------------------------------ 5076

Rattus AGGGAAATGCAAATCAAAACAATCCTGAGGTTCCACTGCACACTAGTCAGAATGGCTA-- 43523

Danio AGA--------------------------------------ACTAGTTTGA--------- 5031

Mus TGG-----------------------------------------AATTTGAAC------- 34016

Gallus TTC---------------------------------------CCAGTCTAAATTA----- 25110

Anopheles ------------------------------------------------------------

Homo AGGT-----------------GGGGATATTCTTTTCTTGTTCCTGATCTTAGTAAGAAAG 50496

Pan AGGT-----------------GGGGATATTCTTTTCTTGTTCCTGATCTTAGTAAGAAAG 50352

Drosophila ------------------------------------------------------------

Canis AGG------------------AAGGCTATTCCTTGCCAAATTTAGATCTTGGTAA----- 29430

Bos --------------------------------TTGC-----TTGGGTTTTG---A----- 5091

Rattus --------CGGTCAAAAGCTCAGGTGACAGCAGATGCTGGTGAGGATGTGGAGAAAGAAG 43575

Danio -----------TTAAAA------------------------------------------- 5037

Mus -----------TCGGGA------------------------------------------- 34022

Gallus -----------TCCTGTG------------------------------------------ 25117

Anopheles ------------------------------------------------------------

Homo TTTCTAGTTTCTCATCATTAAGGATGGTGTTAGCTGT----------------------- 50533

Pan TTTCTAGTTTCTCATCATTAAGGATGGTGTTAGCTGT----------------------- 50389

Drosophila ------------------------------------------------------------

Canis --------TTTTCATT-------------------------------------------- 29438

Bos --------TCCTC----------------------------------------------- 5096

Rattus AATGCTCCTTCATTTCTGGTGAGACTGTAAGCTGGTACAACCACTGTGCAAATCAGTCTG 43635

Danio ----TTCCTT-------------------------------------------------- 5043

Mus ------CCTT-------------------------------------------------- 34026

Gallus -------CTTC------------------------------------------------- 25121

Anopheles ------------------------------------------------------------

Homo -ATGTTTTTTGTAAACGTTCTTTATCAAGTTGAAGGTGTTCCCTCTATTCCTAGTTTACT 50592

Pan -ATGTTTTTTGTAAACGTTCTTTATCAAGTTGAAGGTGTTCCCTCTATTCCTAGTTTACT 50448

Drosophila ------------------------------------------------------------

Canis --TATTCCATTCTGACATT--------------------------TAATGCAGGTCATCT 29470

Bos ----------------------------------------------------GGTCATCT 5104

Rattus GAGTTCCTCAGAAAGTTGGACATAATTCTACCTGAGGACCCAGCTATACCTCTCCCAGGC 43695

Danio -----------AAAGTT--------TTTTACTGGAA------------------------ 5060

Mus -------TGGAAGAGCAGTAGGTGCTTTTAACCGCTGAGCTA------------------ 34061

Gallus -----------AAAATA-----TTATTTTACCGACA------------------------ 25141

Anopheles ------------------------------------------------------------

Homo AGTTTCTATCATGAGTGGGTGTTAAATTTTGTCACATACTTCTCTC-------------- 50638

Pan AGTTTCTATCATGAGTGGGTGTTAAATTTTGTCACATACTTCTCTC-------------- 50494

Drosophila ------------------------------------------------------------

Canis AATTTCTG-CATGAATGCGTATCAG-TTCATTTACGTAGTCC------------------ 29510

Bos -----------TGA---------------------------C------------------ 5108

Rattus ATATTCCCAAATGATACTCCAACATATAACAAGGACACATGCTCCACTGTGTTCATAGCA 43755

Danio --ATCCTCA-------------CGTAT--------------------------------- 5072

Mus -TCTCTCCAG------CCCAGTTGTTTT-------------------------------- 34082

Gallus ---TCTCTAGG------------------------------------------------- 25149

Anopheles ------------------------------------------------------------

Homo -CATCTATGGTA------TGGTCATGTGATTTTTCTTCTTTAGTCTGTTGATATGGTGAA 50691

Pan -CATCTATGGTA------TGGTCATGTGATTTTTCTTCTTTAGTCTGTTGATATGGTGAA 50547

Drosophila ------------------------------------------------------------

Canis ---CCTATTGT-------TGGGCATGTCATTTTT-------------------------- 29534

Bos ---TCTACTAT-------TG---------------------------------------- 5118

Rattus CCCTTGGCTGGAAACAACCAAGATGACCTAAAGTAAAGGAATGGTACAGAAAATGTACAT 43815

Danio ------------------------------------------------------------

Mus -----------------------------------------------------------C 34083

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTGCATTAATTGATTTTCCAATATTGAACCAGTCTTGCATACCTGGGATAAATCCTACTT 50751

Pan TTGCATTAATTGATTTTCCAATATTGAACCAGTCTTGCATACCTGGGATAAATCCTACTT 50607

Drosophila ------------------------------------------------------------

Canis -TGCA------GATTTCCTA-----GAAACA----------------------------- 29553

Bos ------------------------------A----------------------------- 5119

Rattus TTACATAATGAAATGTACTACTCAGGTATTTAAAACAATGAC------------------ 43857

Danio -----TAATAAA----------CACGCATTTAAAACATATAC------------------ 5099

Mus TTTTATAGTATA------CAGTCATATACTTATGTCAGTAGT------------------ 34119

Gallus ----AAGGTAGA-----------GGCTCAGTAGTACAAGTTT------------------ 25176

Anopheles ------------------------------------------------------------

Homo TGTGCTGGTGTATACTTCTTTTTATACATTGTAGTAAAATTTAGTTTGCTAATACTTTGC 50811

Pan TGTGCTGGTGTATACTTCTTTTTATACATTGTAGTAAAATTTACTTTGCTAATACTTTGC 50667

Drosophila ------------------------------------------------------------

Canis -----------------------ATGCATTTTTGCAAAATT------------------- 29571

Bos -----------------------ATCCATCT----------------------------- 5127

Rattus ------------------------------------------TTCATGAAATTCTTGGGG 43875

Danio ------------------------------------------CT-------TTCT----- 5105

Mus ------------------------------------------CC-----AGTTCTT---- 34128

Gallus ------------------------------------------CTCGTGCTGCCCTG---- 25190

Anopheles ------------------------------------------------------------

Homo TAATACAAAGATTTTTGCATCTTTGTTCATGACAAATATGGGTCTGTAGTTTTCTTTTCT 50871

Pan TAATACAAAGATTTTTGCATCTTTATTCATGACAAATATGGGTCTGTAGTTTTCTTTTCT 50727

Drosophila ------------------------------------------------------------

Canis -----------------------------------------GTCCCAATTATTTTAATTT 29590

Bos -----------------------------------------------AGTATTTT----- 5135

Rattus AAACAGATGGATGTAGAAGATATCCTGAGTGATGTAACTCAGTCACAAAAGAACACATGG 43935

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GATAATGTCTTTGTCTGGTTTGGGTATTAGAGTAATGCTGACTTCATACAATGAGATAGG 50931

Pan GATAATGTCTTTGTCTGGTTTGGGTATTAGAGTAATGCTGACTTCATACAATGAGATAGG 50787

Drosophila ------------------------------------------------------------

Canis GA---------TCTCTGATT---------------------------------------- 29601

Bos -----------TCTCTTACT---------------------------------------- 5144

Rattus TGTGTACTCAGTGATAAGTGGATATTGATAGAAAAGCTCAGAATACCCAAGATACAATTC 43995

Danio -------------------------------------------------AAATATAATT- 5115

Mus ---------------------------------------------TTTTGATTTCCACTC 34143

Gallus ------------------------------------------------CAGATTTGGCAG 25202

Anopheles ------------------------------------------------------------

Homo AGCATCTCCTTTGCTTCTGTCTTCTGAAGGAGATTGTAGAGAACTGGTGTGGTTTCTTCC 50991

Pan AGCATCTCCTTTGCTTCTATCTTCTGAAGGAGATTGTAGAGAACTGGTGTGGTTTCTTCC 50847

Drosophila ------------------------------------------------------------

Canis ----------------------------------------------GTATGATTTATTC- 29614

Bos ----------------------------------------------GTGTGTTTT----- 5153

Rattus ACAGAC-CACATGAAGCTCAAAAAGAAGGAAGACCAAAGTGTGGTTGCTTCAGTCCTTAG 44054

Danio ---------------------------------------------TGCCACAGCC----- 5125

Mus A--------------------------------------------CTTTTCAGTCTCCTT 34159

Gallus ---------------------------------------------CATTTCAATTACAAA 25217

Anopheles ------------------------------------------------------------

Homo TTAAATGTTTAGTAGAATTCATCAGAGAATCCATCTGGGCCTGATGCCTTCTCTTTTAGA 51051

Pan TTAAATGTTTAGTAGAATTCATCAGAGAATCCATCTGGGCCTGATGCCTTCTCTTTTAGA 50907

Drosophila ------------------------------------------------------------

Canis ---------------------------------TCTG-----------TTCATTTTTAAA 29630

Bos ---------------------------------TCAG-----------TTC--------- 5160

Rattus AAGGGATCAAAACATACTCACAGGAGGAAATATGAGAACAAATTGTGAAGTAAAGACTGA 44114

Danio ------------------------------------------------------------

Mus T----------------------------------------------------------- 34160

Gallus TTCAGA------------------------------------------------------ 25223

Anopheles ------------------------------------------------------------

Homo ACATTATTAA--------------------------------TTATGGATTTAATTTCTT 51079

Pan ACATTATTAA--------------------------------TTATGGATTTAATTTCTT 50935

Drosophila ------------------------------------------------------------

Canis AC-------------------------------------------------------TTT 29635

Bos ------------------------------------------------------------

Rattus AGAAATGCCATCCAGATACTGTTCCACCTGGGGAGCAATACCATATGCAGCCAC----CA 44170

Danio ----ATATCACCC--------------------------------TGCAGCC------CA 5143

Mus ----TTTTTTTCC--------------------------------TTTAGCTTCTGTTCA 34184

Gallus ----GTACTTATC----------------------------------TGGCTTTTTATTA 25245

Anopheles ------------------------------------------------------------

Homo TAATATATGCTTTT------------------------TAATCAAGATTATTTCTTCTTA 51115

Pan TAATATATGCTTTT------------------------TAATCAAGATTATTTCTTCTTA 50971

Drosophila ------------------------------------------------------------

Canis TGATATATGTTC----------------------------------ATAATTTTCCTCCA 29661

Bos ------------------------------------------------------------

Rattus AA--CGCAGT--------------------------CAGTTCCTAAAGCCAAGAAGCCAT 44202

Danio AG--ACCGGT--------------------------TACTCACTGAAGCTAAGCAGG--- 5172

Mus AG--TGAAATA-------------------------CATTTCTTATAGACAACAAAT-AA 34216

Gallus GT--TAAAGCA-------------------------CAATTAAAAAAGCCTATAGGG--- 25275

Anopheles ------------------------------------------------------------

Homo GAGTTCTAATAGATTGTGTCTTTTAAGGAATTGATTCATTTCATCTAGGTTACCAAATTC 51175

Pan GAGTTCTAATAGATTGTGTCTTTTAAGGAATTGATTCATTTCATCTAGGTTACCAAATTC 51031

Drosophila ------------------------------------------------------------

Canis GAGTAGAAATACA---TATCCATTAA----------CATTTTCTCTAGGG---------- 29698

Bos ------------------------------------------------------------

Rattus GCTGTCAGTAGCCTGATAACGGTCA--CCGGAGAAGCTCTGCTAGAGCCTGACAAATACA 44260

Danio GCTG-----AGCCTGGT--CAGTAC--CTGGA----------TGGGA---GACCAATAGG 5210

Mus TTTG-----ATCCTGCTTTTAATTCATTTGGCTAATCTGTCTCATAAATGGAACGCTAAA 34271

Gallus ---------ATTCTTTT----ATTTTTTTTAAGTACTTCATGAGTAAGTCGGTGAATATT 25322

Anopheles ------------------------------------------------------------

Homo GTGGCCGTAAAGTTGTTCATAATATCCCTTGATTATCCTTTTAATGTCCATGAGATCTGT 51235

Pan GTGGCCGTAAAGTTGTTCATAATATCCCTTGATTATCCTTTTAATGTCCATGAGATCTGT 51091

Drosophila ------------------------------------------------------------

Canis --------AAAGCT-----------------ACTGTATTTTGGGAGAGGATGGTATTAAT 29733

Bos ---------------------------------TGTAGTTTG-----------------C 5170

Rattus GAGGAGGATGTTTTGAGCTAACCATTGGACTGAGAATAG-----------------GGCC 44303

Danio GAA-------------------CACTAGGTTG---------------------------C 5224

Mus AACA--------------TTTATATTTTGTTG------------------------TTTC 34293

Gallus AAT-------------------TTTTAAAATG---------------------------- 25335

Anopheles ------------------------------------------------------------

Homo AATGATGTCCA-------CTCTTTTCATTCTGATATTAGTTATTTTGTCCTTTGTCTCTT 51288

Pan AATGATGTCCA-------CTCTTTTCATTCTGATATTAGTTATTTTGTCCTTTGTCTCTT 51144

Drosophila ------------------------------------------------------------

Canis A---------------------TTTCATTCT----------------------------- 29743

Bos A---------------------TTTGGCTCT----------------------------- 5180

Rattus TTCAATTGAGGAGTTAGAGAAAGTACTGAAGGAGCTTAAGGAGTGTTTGTAAGCACATAG 44363

Danio T-----------GTTGGA--------------------AGTGGTGTTAGTGAG------- 5246

Mus TTTCATTGTTCTGTTTTTC---------------TTTCATTAACTTATGTAGA------- 34331

Gallus ----GAAAATGGGCTTGTGGAA--------------TTATTGGGCTTTGGGAA------- 25370

Anopheles ------------------------------------------------------------

Homo TTTCTTAGCCTGGCTAGAGGCTTATTGA------TTTTATTGATCTTTTCAGAGAACTA- 51341

Pan TTTCTTAGCCTGGCTAGAGGCTTATTGA------TTTTATTGATCTTTTCAGAGAACTA- 51197

Drosophila ------------------------------------------------------------

Canis TTTCTAGA---GGATAGCAACATACAG----------TATAAATGTTC------------ 29778

Bos TTTTT------------------------------------------------------- 5185

Rattus GAAGAACAATAATATCAACCAGCCAGAACCCCCAGATCTCTAAACCACCTACCAAATAGT 44423

Danio ---------------------GCCAG---------------------------------- 5251

Mus -----------------------CA----------------------------------- 34333

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ACACATAGCTCCAGCTACATCTGTAGCAAAGGATGTCCTTGTTGGACATCAATGGGAAGA 44483

Danio --------------------------CAGGGGGCGCTC---------------------- 5263

Mus --------------------------CAGTTGCTTCTTTCTT------------------ 34349

Gallus ------------------------AGGAAGGAGTTATATATT---------------ACA 25391

Anopheles ------------------------------------------------------------

Homo ------------------------GTTGATTTCTTTGATTTTTCTCT------------A 51365

Pan ------------------------GTTGATTTCTTTGATTTTTCTCT------------A 51221

Drosophila ------------------------------------------------------------

Canis --------------------------TAAATTCTT--ATTCTTCTC-------------- 29796

Bos --------------------------TAA------------------------------- 5188

Rattus GAAGCCCTTGGTCCTGGGAAGACTCAATGCCCCAGTGTAAGGGGATGCCAGAGTGGGAGG 44543

Danio --AACCTGTGGTCTGCGTGAGTCCTAATGCCCCAGTAAAAGTGAA----------GGGGA 5311

Mus --AATTTTTCATATATAGAATTACAAA--ATTCATTTTCCTTGAGCTCC--------TCT 34397

Gallus GTAGGCTCTTGCCCTCGCCAAAGTATAGTGTCTTGCTTAAGAAGGT-------------- 25437

Anopheles ------------------------------------------------------------

Homo TTGATATCTTGTTTTCA----ATTTCATTGATTTCTGCTCTAATTTTTAT-------TAC 51414

Pan TTGATATCTTGTTTTCA----ATTTCATTGATTTCTGCTCTAATTTTTAT-------TAC 51270

Drosophila ------------------------------------------------------------

Canis TTTACATGTTGTC--------ACTTAAAAGTTTTATGTAATAA----------------- 29831

Bos --------TTGTA--------ACTTAAATATTTTGC------------------------ 5208

Rattus GAGTGTATGAGTTGGTAT---------------------------------GGGAGCAGT 44570

Danio CACTATACT-GTCAGT-----------------------------------GGGCACCGT 5335

Mus GTTTGTATCATTCTGC-T---------------------------------ATGTGTAAG 34423

Gallus -TATACAAGGCCTACTGT---------------------------------GTGGGAAGT 25463

Anopheles ------------------------------------------------------------

Homo TTCTATTTGGATTTAATTTGCTTTTTCTAGTTTCATAAGTTGGTAGCTCAGATAATTGAT 51474

Pan TTCTATTTGGATTTAATTTGCTTTTTCTAGTTTCATAAGTTGGTAGCTCAGATAATTGAT 51330

Drosophila ------------------------------------------------------------

Canis ----ATCTGGAAT-----------------------------------------AGTAAT 29846

Bos --------------------------------------------------------TAAG 5212

Rattus TTTATAGAAGTAGGGAAAGGGGGTATCGGATTGGGGTGTTCTGGAGG------------- 44617

Danio CTT----------------------TCGGAT-GAGACGTT-------------------- 5352

Mus TTT----------------------CC---TTTAAGTGT--------------------- 34437

Gallus TAT----------------------CCCTAAGACAGTCTGT------------------- 25482

Anopheles ------------------------------------------------------------

Homo TTTTAGATCATTCTTTTCTTTTCTTTTTTTTTTGAGATGGAGTCTCGCTTTGTCGCCCAG 51534

Pan TTTTAGATCATTCTTTTCTTTTCTTTTCTTTTTGAGGTGGAGTCTCGCTTTGTCGCCCAG 51390

Drosophila ------------------------------------------------------------

Canis CTTTAA----------------------TTTTCAAA------------------------ 29860

Bos ACTTAG----------------------TTTCTGA------------------------- 5225

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GCTGGAGTGCAGTGGCTCGATCTCGGCTCACCGCAAGCTCCGCCTCCCGGGTTCACGCCA 51594

Pan GCTGGAGTGCAGTGGCACGATCTCGGCTCACCGCAAGCTCCGCCTCCCGGGTTCACGCCA 51450

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ---------------------GGAAACCGGGAAAGGGGATAACATTTGAAATGTGAATAA 44656

Danio -----------------------AAACCGAG----------------------------- 5360

Mus -----------------------ATACTGTA----------------------------- 34445

Gallus -----------------------AAAATGTG----------------------------- 25490

Anopheles ------------------------------------------------------------

Homo TTCTCTTGCCTCAGCCTCCCAAGTAGCTGGGACTACAGGCGCCTGCCACCACGTGTGGCT 51654

Pan TTCTCTTGCCTCAGCCTCCCGAGTAGCTGGGACTACAGGCGCCTGCCACCACGTGTGGCT 51510

Drosophila ------------------------------------------------------------

Canis ------------------------AGTTGGG----------------------------T 29868

Bos ------------------------------------------------------------

Rattus AGAAATAACCAATAAAAAAAGTGGATAGTGTAGTTTCATGGTCATGAG------------ 44704

Danio ----------------------------------------GTCCTGAC------------ 5368

Mus --------------------------------GTTTAGTGGTCACAAG------------ 34461

Gallus ------------------------------------------TACAAC------------ 25496

Anopheles ------------------------------------------------------------

Homo AATTTTTTTGTATTTTTAGTAGAGACGGGGTTTCACTGTGTTAGCCAGGATGGTCTTGAT 51714

Pan AATTTTTTTGTATTTTTAGTAGAGACGGGGTTTCCCTGTGTTAGCCAGGATGGTCTTGAT 51570

Drosophila ------------------------------------------------------------

Canis TGTTTGTAGCTATATGTAGTAAAG-----------------TAACTA------------- 29898

Bos TGTTT------------------------------------------------------- 5230

Rattus ----TGCCTTTATGTTATGCCTGCC----------------------------------- 44725

Danio ----TA--TTTGTG---------------------------------------------- 5376

Mus ----TGGCCTTATGTTATGCCTACC----------------------------------- 34482

Gallus ----TGTGCATGTGCA-------------------------------------------- 25508

Anopheles ------------------------------------------------------------

Homo CTCCTGACCATGTGATCCACCCGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCGTGAG 51774

Pan CTCCTGACCATGTGATCCACCCGCCTCAGCCTCCCAAAGTGCTGGGATTACAGGCGTGAG 51630

Drosophila ------------------------------------------------------------

Canis -------TTAAGTGATTC------------------------------------------ 29909

Bos ------------------------------------------------------------

Rattus --------------TCGGAAAGTTTTTATATTAGATTTAAAAGACGACTTTGGATATAGT 44771

Danio ------------------------------------------------------------

Mus --------------TTGGAAAGTTTTTATATTACATTTAAAAGATAACTTTGGATATAGT 34528

Gallus ----------------GGTGAGTTTTGAAATCAGATAGGCAACA-----------ACAGT 25541

Anopheles ------------------------------------------------------------

Homo CCACAGCGCCCGGCCTAGATAATTCTTTTCTAATAAATGCATCA---------GTGTTGT 51825

Pan CCACAGCGCCCGGCCTAGATAATTCTTTTCTAATAAATGCATCA---------GTGTTGT 51681

Drosophila ------------------------------------------------------------

Canis --------------CCATGCAATTTTT-------AAGTGTGT------------TTTTGT 29936

Bos -------------------CAGTTTT---------------------------------- 5237

Rattus AATCATCACCAAAAAGATTTTTATCTTTAATTTTTTCTGGTCAGAGT---TTGGATTTTT 44828

Danio ----GTCATTAAAAA-----------------------------------------TCCC 5391

Mus A---ATCATTGAAAAGATTTTTGTCTTTAAAAATTTCTAGTGAGAGG---TTGGA-TGTT 34581

Gallus GTGAGTCTTCACAAACATGCATGTAAGTCAGCCGCTGCAGTCTGAG------------CT 25589

Anopheles ------------------------------------------------------------

Homo ATGTTTCTTTCTAAGCGCTGCTTTCACTGTATCCCACAAATTTGGATAAGTTGTGTTTTC 51885

Pan ATGTTTCTTTCTAAGCGCTGCTTTCACTGTATCCCACAAATTTGGATAAGTTGTGTTTTC 51741

Drosophila ------------------------------------------------------------

Canis AAGGTTTTTTTT----------TTTTTTTTCTCCCTCTATTTTGCATGCAT-GTATTTGC 29985

Bos ------------------------------------------------------------

Rattus ACAGTGAATT--------------------------------------TGCCTTTGTTAG 44850

Danio ATGGCA------------------------------------------------------ 5397

Mus ACAGTGAATT--------------------------------------TACCTTTGTTAG 34603

Gallus ATGCTATGTC--------------------------------------TGTGTAACAGTG 25611

Anopheles ------------------------------------------------------------

Homo ATGATATTTTCAATTTATAATGGTATT---GGGACACAACCCAATAAGTAAGTTTAGGAG 51942

Pan ATGATATTTTCAATTTATAATGGTATTATTGGGACACAACCCAATAAGTAAGTTTAGGAG 51801

Drosophila ------------------------------------------------------------

Canis ATGGAACATTT-------------------------------------TAAAAATAGAAG 30008

Bos --------------------------------------------------------GAAA 5241

Rattus TATGTTCATAC------------------------------------------------- 44861

Danio ------------------------------------------------------------

Mus TATGTTGATAC------------------------------------------------- 34614

Gallus TACAGTAAACT------------------------------------------------- 25622

Anopheles ------------------------------------------------------------

Homo CATTTGTATGCATAAGCACAATTGTTGACATTATTTTGAACAAATTCTTATTTGTTAGAT 52002

Pan CATTTGTATGCATAAGCACAATTGTTGACATTATTTTGAACAAATTCTTATTTGTTAGAT 51861

Drosophila ------------------------------------------------------------

Canis CATCAGAATG-------------------------------------------------- 30018

Bos CACTAGAAC--------------------------------------------------- 5250

Rattus --------------------------TTTTATTTTCTTTGTAGTGT----------TAGG 44885

Danio ------------------------------------CTTGTCGTG--------------- 5406

Mus --------------------------TTTTATTTTCTTTGTAGTGT----------TAGG 34638

Gallus --------------------------AGCCATTGAATTTGTAG----------------- 25639

Anopheles ------------------------------------------------------------

Homo CAATTAAGTATAAGAAAAATAAAAGGTTTTATTTTACTTTCAGTGTTTCCTTCTTTTGAT 52062

Pan CAATTAAGTATAAGAAAAATAAAAGGTTTTATTTTACTTTCAGTGTTTCCTTCTTTTGAT 51921

Drosophila ------------------------------------------------------------

Canis -AATTGAATGT--------------------TTTGAATTACAGT------------TGAC 30045

Bos -------------------------------------TTATAAT------------TG-- 5259

Rattus ATTTGAAGTACAGTGTGCTAAG---------------------------GAGCAGTCCTT 44918

Danio -------------------AAA---------------------------GAGCAG----- 5415

Mus ATTTGAGCTACACTGTGCTCAG---------------------------GAGCAATTCTT 34671

Gallus --------------------GG---------------------------GACTAGTTACT 25652

Anopheles ------------------------------------------------------------

Homo GCTCTATATATGTAGATTTCAGTTTCTGAACTTCCCAACACTTATTGCAAGGCAGGTGTA 52122

Pan GCTCTATATATGTAGATTTCAGTTTCTGAACTTCCCAACACTTATTGCAAGGCAGGTGTA 51981

Drosophila ------------------------------------------------------------

Canis CCTTGAACAACATAGGTTTGAACTGT-------------------------GCAGGTCCA 30080

Bos -CTT-------------------------------------------------------- 5262

Rattus TCTGGCTATGACTTATTTGGGTTTTA------AGCATCTTTCTGTATAGATGTTCATTTC 44972

Danio ------------------------------------------------------------

Mus TCTGTCCATGATTTATTTGGGTTTTA------CACATCTTTCTGTATAGATGTTCATTTC 34725

Gallus CTTTGCTAGA----------------------------CCCCTGTATAGG---------- 25674

Anopheles ------------------------------------------------------------

Homo CTGACAACAAATTTCCTTAATTTTTGTCTGAGAAAGTGTTTCTTTTTAACTTTTGAATAA 52182

Pan CTGACAACAAATTTCCTTAATTTTTGTCTGAGAAAGTGTTT-TTTTTAACTTTTGAATAA 52040

Drosophila ------------------------------------------------------------

Canis CT-----TAAATTTTTTT---------------------TTTTTTTTAA----------A 30104

Bos -----------------------------------------------------------A 5263

Rattus TTTTTCCAGGTTTAACAGTTTTT---------------------------TTGCTTTTAT 45005

Danio -------GGGTGTAATA--------------------------------------TGTAT 5430

Mus TTTCTCGATATTTTAGAAAATTT---------------------------CTGCTGTTAT 34758

Gallus -------AGCTTAAAGGGTGCTG---------------------------CAGTCTTCAC 25700

Anopheles ------------------------------------------------------------

Homo TAATCTCACAAGGTAGAGTGCTAGGTTTATGGTTTTTTTTTCTCTCAACACTATGAATAT 52242

Pan TAATCTCACAAGGTAGAGTGCTAGGTTTATGGGTTTTTTT-CTCTCAACACTATGACTAT 52099

Drosophila ------------------------------------------------------------

Canis TAGATATATAAACTTGGGTACTG-----------------------ATAAATACCAGTAC 30141

Bos TAGA---ATAA------------------------------------------------- 5271

Rattus TTCATT--------------------CACTTTGTTTTAGTGCCTTTTAGTTCCTTCTGCT 45045

Danio TGCAT---------------------CATATTGTTTG----------------------- 5446

Mus TTCATT--------------------GACTTAGTCTCAGTGCTTTTAAGTTCCTTCTGCT 34798

Gallus TTGTTT--------------------GTTGTTGTTTT----------------------- 25717

Anopheles ------------------------------------------------------------

Homo TTCACTCTTTTTCTTGTTGGAAGTCACATGTATTTTTTCTTTTTTTTCTTTTTTTCCTCT 52302

Pan TTCACTCTTTTTCTTGTAGGAAGTCACATGTATTTTTTCTTTTTTTTCTTTTTTTCCTCT 52159

Drosophila ------------------------------------------------------------

Canis AGTACTGT-----------------AAATGTATTTTGTCTTCCTTAAGATTTTTT----- 30179

Bos --------------------------------------------------TTTTT----- 5276

Rattus TCATGTATTCTTCAGTTTATTTTTTATCATATCCTAAAGGGTTTGGTTTTGTTTACTTGC 45105

Danio --------------------TTTTTGTTGCAT--TAAAGGGTTCAAG------------- 5471

Mus CCATGTATTCTTTAGTTTCATTTTGATCATGTTCTAAAAGGTTTGGTTGTGTTTACTTAT 34858

Gallus -------------------TTTTTTATGTAAAAATCAAGAATTAAGATGAGA-------- 25750

Anopheles ------------------------------------------------------------

Homo ACAGGTAAGGTGATTTTTTCCCTCTGGCTTACTTCGGATTTTTTTCTTATCCTTGAATTT 52362

Pan ACAGGTAAGGTGATTTTTTCCCTCTGGCTTACTTCGGATTTTTTTCTTATCCTTGAATTT 52219

Drosophila ------------------------------------------------------------

Canis ------------AAATATTTTCTCTAGCTTACGTTAAGGTAAGAATATAATATAAAATAC 30227

Bos ------------A----------------------------------------------- 5277

Rattus AGTGTTGTGGTGTGTTTGAATAAAGATTTATTTGCGATTCCTGCTGTTCTGTCTTGTATT 45165

Danio AATGTAGTGGAG-ACTTGAAT--------------------------------------- 5491

Mus TGTGTTGTTGTGTGTCTGAATACAGATTTTTCTTCAATTCCTGCTGTTCTGTCTTGTACT 34918

Gallus AAATATGTAATGCTTCTGCAGTAG------------------------------------ 25774

Anopheles ------------------------------------------------------------

Homo CTGTAATTACAACGTTTTATGCCCAGATGTAGT----TTTTTGGCATATTTTCAAGCTCA 52418

Pan CTGTAATTACCACGTTTTATGCCCAGATGTAGT----TTTTTGGCATATTTTCAAGCTCA 52275

Drosophila ------------------------------------------------------------

Canis ATAAACATGAAACGTGTTAATCACCTCTTTATG----TTATTGGTAAATCTTCTGGTCAA 30283

Bos -----------------TGATGACCTCATCA--------------AAATC--CTAGTCAG 5304

Rattus TGATTTGTCCTATTGTTTATAGTTTCCAGTGACATT-TTT---CATTTT----------- 45210

Danio ----------------CTAGGGTGTCTA-------T-TTC---TGTTTC----------- 5513

Mus TGATTTGGTCTATTATTTATGGTTTCCACTGAGATT-TTTAATTATTTT----------- 34966

Gallus ------------CTTTTTTTAGTTTTCACTAATGCCATTTCTATGCTTT----------- 25811

Anopheles ------------------------------------------------------------

Homo GAGATTCTTCATCCATGCCCAGCCTACTAATAAGCCCATCAAAGGCATTCTTCATTTCTC 52478

Pan GAGATTCTTCATCCATGCCCAGCCTACTAATAAGCCCATCAAAGGCATTCTTCATTTCTC 52335

Drosophila ------------------------------------------------------------

Canis TGG-----TAAGCTATTTGTAGTTAAGCTGTAGGTTACTCTAAAG--------------- 30323

Bos T----------------TGCAGT------------------------------------- 5311

Rattus --------------------------------ATTCACTTCCATTATTCTCCCT-----C 45233

Danio --------------------------------ATTGTCCTGCA----------------- 5524

Mus --------------------------------ATTTATTTCCATCATCCTCCCT-----C 34989

Gallus --------------------------------TTTTCTTTCCATATCCATC--------- 25830

Anopheles ------------------------------------------------------------

Homo TTACAGTGTTCTGTTTTTTGTTTTTGTTTGTGTTTTATCTCTAGCACTTCCTTTTGGTTC 52538

Pan TTACAGTGTTCTGTTTTTTGTTTTTGTTTGTGTTTTATCTCTAGCACTTCCTTTTGGTTC 52395

Drosophila ------------------------------------------------------------

Canis ----------------------------------TTATATGTAGATTTTCAAT--GATGC 30347

Bos ------------------------------------------------------------

Rattus CTACCACTCATATCAATTTCTTG--TACATGT----------TGTACTTCAGAATTCTTT 45281

Danio --------------------------AAATGT----------TGTGC------------- 5535

Mus CCAGCACCAGTCTCAATTTCTTTGCTAAACTTCTCATTGACATGTACTTCAGAATTCTTT 35049

Gallus --ATGATGGAAAACAAAGAGTTCCTTAGATGTC--------AGCTGCTAGAGACAGCTCT 25880

Anopheles ------------------------------------------------------------

Homo TTAGGATTTTCATCTCTACTTTTTTAACATGTTGTTTAC---TCAGTTCGTTAGGGCCCT 52595

Pan TTAGGATTTTCATCTCTACTTTTTTAACATGTTGTTTAC---TCAGTTCGTTAGGGCCCT 52452

Drosophila ------------------------------------------------------------

Canis AAGGGGGTGGCACCTCTAATGCCA----ACATTGTTCAA---GG-----GTTAATTGTGC 30395

Bos ----------------------------ATGTTGTTCA-------------------TCC 5324

Rattus GAAC---AAGATTTCGACCAGTTTAGCATCT--TTTTATTCGTTCTTAAATGCAGATCTT 45336

Danio --------------CAACCAGCT------------------------------------- 5544

Mus GAAC---AGCATTTCAAACAGTTGGCCATCT--TTTTATTGGTTATTAAATGCTGATCTT 35104

Gallus AATCTTAGTGCTGTCCCCTAGTATTTCATAT--ATTACCTGATTAAAACATAGTGTTTGA 25938

Anopheles ------------------------------------------------------------

Homo TAGCATATTAATCATAGTTGTTTTAGATTCCAAGTTTGATAATTCCAAATCCCTGCTGTA 52655

Pan TAGCATATTAATCATAGTTGTTTTAGATTCCAAGTTTGATAATTCCAAATCCCTGCTGTA 52512

Drosophila ------------------------------------------------------------

Canis TAGC----TAATCTTTGTCACTT---------ACCTTGATAGTTTAGAGACAAAATTAGA 30442

Bos TAG--------------------------------------------------------- 5327

Rattus TTGAAATAACTTT--TT-CATTTTTAATGTTTTGT---------TTGCTTCTGTGTTGTA 45384

Danio ------------------------------------------------------------

Mus CTGAAATAACTTTGTTC-CATTTATAATGTTTTGT---------TTGTTTTTGTGTTCTA 35154

Gallus TGTAATAAACACTGATCACATTAACAGTGTTTTAT---------ATACTGAAATAGTTAA 25989

Anopheles ------------------------------------------------------------

Homo TCTGGTCCTGGTGCTTGTTTTTTACCTTTTATTATGCCCTGTAATTTTTTTCTTGATAGC 52715

Pan TCTGGTCCTGGTGCTTGTTTTTTACCTTTTATTATGCCCTGTAATTTTTTTCTTGATAGC 52572

Drosophila ------------------------------------------------------------

Canis CTTAATTAGTATGTCCCTTATCTACTACTCATT------------TGCCTTCTTGTTCAG 30490

Bos -----------------------------------------------------TGTTCA- 5333

Rattus ATTTGTACACTTGTCCAGATTGATAT---------------------------------- 45410

Danio --------------CCAAATAGG------------------------------------- 5553

Mus ATTTGTACACTTGTCAGTATGGATAT---------------------------------- 35180

Gallus AATGTCACA-----CGAGCTAGAAAG---------------------------------- 26010

Anopheles ------------------------------------------------------------

Homo TTGGACATGATGTACTAGGTAAAAGGAACTGTTGTAAATGAGCATTTAGTAATGTGGTTG 52775

Pan TTGGACATGATGTACTAGGTAAAAGGAACTGTTGTAAATGAGCCTTTAGTAATGTGGTTG 52632

Drosophila ------------------------------------------------------------

Canis TTTCTCATGATTAACAAGATACA------------------------------------- 30513

Bos ------------------------------------------------------------

Rattus -----------------------GTTTTCTAATTTTGTTTGTAA---------------- 45431

Danio ------------------------------------------------------------

Mus -----------------------GTTTTCCAGTTTTATTTGTAA---------------- 35201

Gallus -----------------------GTGTGCATGCTTCTTTAGCAA---------------- 26031

Anopheles ------------------------------------------------------------

Homo TAAGGTGTAGGGAGAGGAGAAGAGTTCTGTAGTCTTATGATTAGGTCAGTCTTTTTAGTG 52835

Pan TAAGGTGTAGGGAGAGGAGAAGAGTTCTGTAGTCTTATGATTAGGTCAGTCTTTTTAGTG 52692

Drosophila ------------------------------------------------------------

Canis --------------------------------TCTCACGGTTAA---------------- 30525

Bos ------------------------------------------------------------

Rattus ------------TTAGCCTTCCGTTGAGTTTTCAATCCTTAGAACTAT------------ 45467

Danio ----------------------GCTG----CTCAATTCT---GGCTA------------- 5571

Mus ------------TTAGCCTTCTGTTGAGTTTTCAATCCTTAACACTAC------------ 35237

Gallus ------------CTTATCCAGCTTGAGAATGTAAGCCCTC--TCTTGT------------ 26065

Anopheles ------------------------------------------------------------

Homo AGCTTATGCCTCTGGACTGTGAACTTCACAAGTGTTTCTCAATCCCACCCCTCCCTCATT 52895

Pan AGCTTATGCCTCTGGACTGTGAACTTCACAAGTGTTTCTCAATCCCACCCCTCCCTCATT 52752

Drosophila ------------------------------------------------------------

Canis ------------CAAAATGTGAACTCTATTGCCATTTGCCATTTACAC------------ 30561

Bos ----------------------------------------------AC------------ 5335

Rattus -------TCAAAGGAGGAAAGAAACCTGTAACACATACAGTAAAACCAAACCATTTTTTA 45520

Danio ---------AAATGAG--------------------------------AATCAT------ 5584

Mus -------TCAAAGGAGGAAAGAAACCTCCAACACATACAATAAAACCAAACAATTTTC-A 35289

Gallus -------TGGGAATTGGTCATCATTTCACAACGTATTTAACATGAGT-AACAATTCTGGC 26117

Anopheles ------------------------------------------------------------

Homo CCCTTAGTTAGAACAAGATAGCTATAATGGCCT----GAAGTTGGGTTATTTCTCTTCCC 52951

Pan CCCTTAGTTAGAACAAGATAGCTATAATGGCCT----GAAGTTGGGTTATTTCTCTTCCC 52808

Drosophila ------------------------------------------------------------

Canis ------GTTAG--TAAGATAATTGTACTAACATTTTGAGAGTTAGGTAAATTTTTTTA-- 30611

Bos ------ATTGG--T---------------------------------------------- 5341

Rattus GAAATAGATTTTAAATTTATTG-------------------------------------- 45542

Danio ------GATTTT------------------------------------------------ 5590

Mus GATATAGACTTTGAATTGATTG-------------------------------------- 35311

Gallus TGCTCTAGGTGAAAATGT------------------------------------------ 26135

Anopheles ------------------------------------------------------------

Homo CCACATCATTTTGGCTTTGCTACAACCCCAGCAGGTTAGGCTCTGGTTAACTAGTTTCTC 53011

Pan CCACATCATTTTGGCTTTGCTACAACCCCAGAAGGTTAGGCTCTGGTTAACTAGTTTCTC 52868

Drosophila ------------------------------------------------------------

Canis ----ATAGTTTTGATTCTGTT--------------------------------------- 30628

Bos -----------TGATTTTCTT--------------------------------------- 5351

Rattus ----ATGCCAGCTTTT--------ATAGCATCATT----------AAAAAGTGTTTAGAA 45580

Danio --------TAGCTTT--------------------------------------------- 5597

Mus ----ATGCCAGCATTT--------ATAGCACCATTGATAA--TTAAAAATATGTTTAGA- 35356

Gallus ----ATGCCCACATTT--------AGAGAAGCTTATGAG------AAATAATCCTTATAA 26177

Anopheles ------------------------------------------------------------

Homo CTGAGGACAAACCTTGTTAAGACTGGAATAGTCTAGTGTACTTGAAAATCATTTCTCTTT 53071

Pan CTGAGGACAAACCTTGTTAAGACCAGAATAGTCTAGTGTACTTGTAAATCATTTCTCTTT 52928

Drosophila ------------------------------------------------------------

Canis -----------CCTTA--------GGAATAGC----------TATGAATTATGGTTTTTT 30659

Bos -----------TCTT--------------------------------------------- 5355

Rattus TAATGATAAAAGAAGTTAAAAAATTTTTTGGTTCAAATT--------------------- 45619

Danio --ATGATAT--------------TTTTTTG------------------------------ 5611

Mus --ATAATGTAAGTAGTCAAAACTTGTTTAGGGTCAAATT--------------------- 35393

Gallus CATTCATAGG--------------CTTTTACACAGGTCA--------------------- 26202

Anopheles ------------------------------------------------------------

Homo GCCTCCCCTGCTGAGGGTTGAGGATTTTTCTCCTATATTTACTGTGAGAAGCTGGTCAAT 53131

Pan GCCTCCCCTGCTGAGGGTTGAGGATTTTTCTCCTATATTTACTGTGAGAAGCCGGTCAAT 52988

Drosophila ------------------------------------------------------------

Canis GGATCCAGT-----------AGACCACTTCCCTTAAATT--------------------- 30687

Bos -------------------------------------TC--------------------- 5357

Rattus -----AGAAATAGTACCTTAATGAAAAAAAGTCTCGGCAGG---------AAAAATTGGG 45665

Danio ----------CAGTA------TGA-------TC--------------------------- 5621

Mus -----AGAAATAGCAGCTTAAGGAAAAAAAAAAGGGGAAAGGGGCAGGAAAAGAAAAGGG 35448

Gallus -----GGAAAAAACACTGCTGCGAAGAGCTTGTGGCCTACGT------------------ 26239

Anopheles ------------------------------------------------------------

Homo TGCCTGGATGTAAAACTTAGAAAATTGTAGGGCTCCCCCTAT------AATTGGGTAACT 53185

Pan TGCCTGGATGTAAAACTTAGAAAATTGTAGGGCTCCCCCTAT------AATTGGGTAACT 53042

Drosophila ------------------------------------------------------------

Canis -------ATGTAA---------------------TCTCGCAT------CATCAGATAGT- 30712

Bos -------ATGTGA---------------------TTTT---------------------- 5367

Rattus AAGCAAATTTAAATGAAAAGAAAATGTAGAAGATTACTAAGGAAAACGGGAATGGAACAA 45725

Danio ------ATTTAAATGA--------TGT--------------------------------- 5634

Mus AAGCAAGTTTAAATGAAAAGAA---GTAGAA---TACTAAGAATAATGGGAATGGAACAA 35502

Gallus --GTAGACTGCAGTGGAGAAATGAAAGAGAAATGTGATGTAAAAGCTGGAAAGGCTGGAA 26297

Anopheles ------------------------------------------------------------

Homo CTGGAGTTTTTAGCTTTCAGAGTTGTCCACACTGAGCCTTCATCAATTTGTCTATTACAC 53245

Pan --GGAGTTTTTAGCTTTCAGAGTTGTCCACACTGAGCCTTCATCAATTTGTCCATTACGC 53100

Drosophila ------------------------------------------------------------

Canis --AGAAGCATAGATCTTAAGAGTTGAATAAAC--------CATAGAGATAGATATTGTAG 30762

Bos -------CATAGTTCTTG------------------------------------------ 5378

Rattus ATGGT----AAGTAATGCAAGGAAACAAAATA----------AAATTAATAGAATAGTAA 45771

Danio ----------------GCACG--------------------------------------- 5639

Mus ATGGTCAATAAGTAAAGAAAGCAAACAAAATAGAAAGCAAACAAATAAATAGAATAGTAA 35562

Gallus CTCTTTCCTTAGATCAGGATACAGCTA--------------------------------- 26324

Anopheles ------------------------------------------------------------

Homo TTCAGGATTTCCTACCCCGTGGAGGTTTCTGCTTGTGTTTTTCATCTCAGATAAATGGTG 53305

Pan TTCAGGATTTCCTACCCCGTGGAGGTTTCTGCTTGTGTTTTTCATCTCAGATAAATGGTG 53160

Drosophila ------------------------------------------------------------

Canis TCCAG--CTTCTTGCTTGATGAAACCATCTC------TTCTTCA---------------- 30798

Bos -------------GCTTGA-----------------------CA---------------- 5386

Rattus ATAAATAATAGTCTTACAAAAAATAAAGTCTAAAGCAATGA---GTAAAAGAAAGTGTAT 45828

Danio ------------------------------------------------------------

Mus GTAAATAATAGTCTTACAAAAAATAAAGTCTAAAACAATAACAAGTAAAAGGAAGTGTAT 35622

Gallus -----TTCTGTTCCCTTGTACAGTAGTGGCTTTGATGGTGT------------------T 26361

Anopheles ------------------------------------------------------------

Homo ATGCTATGTGTTCACCTGTTCTCTGCTCTCACAGGCAGTCA------------------- 53346

Pan ATGCTATGTGTTCACCTGTCCTCTGCTCTCACAGGCAGTCA------------------- 53201

Drosophila ------------------------------------------------------------

Canis -------GTATCTTTGGAACTTCTGCTGGAACAGCCA---A------------------- 30829

Bos -------G---------------------------------------------------- 5387

Rattus TAGAGTAATATCTTCTGCATCTCCTAATATTCCAGACCAGTTATTGAGGCTGGTGCTGAT 45888

Danio -----------CTTTTG-----------GTTTCA-------------------------- 5651

Mus TGGAGTAATTTATTCTGCATCCCCTAATATTCCAGTCCTGTTATTGAGGCTGGTGCTGAT 35682

Gallus GATGGTGCTGCTCTACTTTTTTTATGATCTTCCAATTCTGCCATGGGAAACTTTTTTATT 26421

Anopheles ------------------------------------------------------------

Homo TTTGCCCTGTGACCTCACTTATCCTA---TCTCAG---ATTTGTTTATTTTTAAGTTTGT 53400

Pan TTTGCCCTGTGACCTCACTTATCCTA---TCTCAG---ATTTGTTTATTTTTAAGTTTGT 53255

Drosophila ------------------------------------------------------------

Canis TTAGGAATGTGAATCTACATATTTTAGGTTCACAA---AGTAAGTGAAACATAAG----- 30881

Bos --------GTGATTCT-------------------------------------------- 5395

Rattus TTA-AACTAGTCAAAGCTCAGATGTCTTAGACAATTGT------TTTTGAGTTGAGATTT 45941

Danio --------------------------------------------CTTTCACTTCAGATT- 5666

Mus TTGGAACCAGTCAAAGCTCAGATGTCATAGAAAACTAT------CTTCGGTTTGAGATTG 35736

Gallus CTG-----------TTCTTGGACATTTAGAAGGTCAGG------TAGACGCTTGAAGT-- 26462

Anopheles ------------------------------------------------------------

Homo CATTTTTTACTTGTTGTTAGGATGGAGTGGTGACTTCCAAGCTCTTCATATGTGGAACTG 53460

Pan CATTTTTTACTTGTTGTTAGGATGGAGTGGTGACTTCCAAGCTCTTCATATGTGGAACTG 53315

Drosophila ------------------------------------------------------------

Canis --------ATTTTGCCCTAAGAGAACTTAAAATATTCCATGTTCTTATGACATGGGATTG 30933

Bos ------------------------------------------------------GGATTG 5401

Rattus T-CAGTGTTTTTGAATACCAGTGTCTTTGCTTGCTGATTTTTGCTGT----ATATGGCCT 45996

Danio ----GTGGTTCT---------TGTC----------------------------ATGGCCG 5685

Mus T-CAGTGTTTTTGAATACCAGTGTCTTTGCTAGCTGAACTTTGCTGT----ACAGGACCT 35791

Gallus ---AATGATTTTCTTCCCTTTTGCTCTTACAGATCTCATGATCATAG----AGAAGGAAT 26515

Anopheles ------------------------------------------------------------

Homo G-AGGTAATTCTATTTCAAATTTTTTGAGGGACCTTCATGTTGTTTTCC--ACAGTGCCT 53517

Pan G-AGGTAATTCTATTTCAAATTTTTTGAGGGACCTTCATGTTGTTTTTTTTATAGTGCCT 53374

Drosophila ------------------------------------------------------------

Canis ATAAGCAAGTTTAGTG-ACATGTTTTAGG-----TTCAAGATGT----------ATGTTC 30977

Bos -------------------------------------------T----------ATGCT- 5407

Rattus AGGGATTTTTAATTTTTTTTT----ATTTTCACCTATTTATGTATTCATTTATTCATTCA 46052

Danio ------------------------------------------------------------

Mus AGGGATTTTTACATTTATTTTTTAAATTTTCACCTATTTATTTATGTATTCATTCATTCA 35851

Gallus AGAGGTGTTA-----------------------------------TTGTTGAATAACATA 26540

Anopheles ------------------------------------------------------------

Homo GGCACCATTTTACATTTTCAC-----CAGTGGTGCATAAGGGTTCCAGTTTCTCCATATC 53572

Pan GGCACCATTTTACATTTTCAC-----CAGTGGTGCATAAGGGTTCCAGTTTCTCCATATC 53429

Drosophila ------------------------------------------------------------

Canis AGAATCATTTT---------C-----TTGTAATATAACACAGCTTTGGATATTTCATTTA 31023

Bos ----------------------------------------------GGATATTTTGGCTG 5421

Rattus CTCATTCATTATTTTCTTAAGGGATTTTCCAGCTTTTCTATCTTAGTTGATTTTCCAGCT 46112

Danio -----CCATCATTTT--------------------------------------------- 5695

Mus CTCATTCATTATTTCCTTCAGGGACTTTCCAGCTTTTCTGTCTTAGTTG----------- 35900

Gallus CAC-CTCAGTAATTACTTTAAGACCTTGAGGACACTTC---------------------- 26577

Anopheles ------------------------------------------------------------

Homo TTC-ACCAATACTTATTTTCTGTTTTTTTAATGGTGGCCATCCTAATGGTTTC------- 53624

Pan TTC-ACCAATACTTATTTTCTGTTTTTTTAATGGTGGCCATCCTAATGGTTTC------- 53481

Drosophila ------------------------------------------------------------

Canis T-------AAGTTTATTTTTAAATCCCTTGT----------------------------- 31047

Bos T----------TTTATT------------------------------------------- 5428

Rattus TTTCTATCTTAATTGGTTATTTCCAAGCCACAGGCTG----------TCTCCCAATTCTG 46162

Danio ------------------------------------------------------------

Mus ---------------GCTACTTTCAAGCCACAGGGTG----------TCTCCCAAGTATG 35935

Gallus ----------------CCCTTCTGAAGCCACTG--------------------------- 26594

Anopheles ------------------------------------------------------------

Homo --------------AGATGATGTATCATTGCAGTTTTAATTGACATTTCTCCCTACTGAT 53670

Pan --------------AGATGATGTATCATTGCAGTTTTAATTGACATTTCTCCCTACTGAT 53527

Drosophila ------------------------------------------------------------

Canis ----------------ATGGTAGATAATTGGAG--------------------------- 31064

Bos ------------------------------------------------------------

Rattus CTTTAAAATGAGGGAAATCCAAATAG-ATAGATAGATAGATAGATAGATAGATAGATAGG 46221

Danio ---------GACAGAAAT---AAAAC-ATAAAT--------------------------- 5715

Mus CTTTAAA-TGAGGGAAGTCAAAAAAGCACTGTT--------------------------- 35967

Gallus ---------CACTGAAACTCTAGTAC--TTGAC--------------------------- 26616

Anopheles ------------------------------------------------------------

Homo CAGTGATGGTGAGAATCTTTTCATGGGCTTATTGCCCATTTGTATATATTCTTTGGAAAA 53730

Pan CAGTGATGGTGAGAATCTTTTCATGGGCTTATTGCCCATTTGTATATATTCTTTGGAAAA 53587

Drosophila ------------------------------------------------------------

Canis ----------AAAAAACTTTCTCTGTTCCTAT---------------------------- 31086

Bos ------------------------------------------------------------

Rattus CATTATTTGTTCTTGAAAATTGTTCTCTGTACTTTTAGATCCTGCCTGTGGTAAGCATAC 46281

Danio -------------------------------------------------GGTAATCATAC 5726

Mus -------TGTTCTAGAGAACTGGTCTCTATACTTTTAGATCCTGCCTGTCGTCACCACAT 36020

Gallus -----------------------------CAGGCTGTGTTAATGGCTGCGCACAGCAAGT 26647

Anopheles ------------------------------------------------------------

Homo ATGA-------CTATTCAAGTCCTTTGTCCACTTTTTAACTAGATTTTTTGTTGTTGAAT 53783

Pan ATGA-------CTATTCAAGTCCTTTGTCCACTTTTTAACTAGATTTTTTGTTGTTGAAT 53640

Drosophila ------------------------------------------------------------

Canis -----------------AAGTTCTGTGTTAACTAT------AAATCAAGTATTTATAAAC 31123

Bos ------------------------------------------------------------

Rattus TGCCAGGGGTAT----------------------------CAGACAGCTGCAATC--AGT 46311

Danio TTCC------------------------------------CATGTGGC------------ 5738

Mus TGCAAGGGGTAT----------------------------CAGACAGCTGGAATC--AAT 36050

Gallus GCTGCATAGTAC----------------------------CAGCGGGTCTGAGGC--TTC 26677

Anopheles ------------------------------------------------------------

Homo TGTAGGAGTTATTTATATATTCTGGATATTAACCAAATAACAGATACATGGTATAGAAAT 53843

Pan TGTAGGAGTTATTTATATATTCTGGATATTAACCAAATAACAGATACATGGTATGGAAAT 53700

Drosophila ------------------------------------------------------------

Canis TATTAAAATTGT------------------AATTACATAAAGGGAAGCTGGGATG---AT 31162

Bos ---------------------------------------AGGAGACCCTGGG-------- 5441

Rattus TTCTCCAC--------TAGACCTTACCTTCAGATTTGTCAATTACTGTAGGCAGCAAACC 46363

Danio -------------------ACC-------CAAAT-----GATTGCTTT-----GCAA--- 5759

Mus TTCTCCAC--------TGGACCTTACCTTCAGAGTTGTCAAGTACTGTAGGCAGCAACCC 36102

Gallus AGTTCTAA--------TGTACTTGTTCTATGGAG-----AATCTGTGCGTGCATCAACTT 26724

Anopheles ------------------------------------------------------------

Homo ATTTTCTCCTGTTTTGTAGGTTGCCATTTTACTCCATTTACTGTTTGCTTTGTAGAAATT 53903

Pan ATTTTCTCCTGTTTTGTAGGTTGCCATTTTACTCCATTTACTGTTTGCTTTGTAGAAATT 53760

Drosophila ------------------------------------------------------------

Canis ACTTTAAC--------TAGACTCTCATTTT------CTTAATGTTT-------------- 31194

Bos ---------------------TCCTATTT-----------ACATCT-------------- 5455

Rattus TCATGACAGACAAGCCAA---------TTTTGTAGGTTGAGCTGCCCATGAATATGGATG 46414

Danio --------------------------------TAAGTTGAGC--------ATTAT----- 5774

Mus TCATGA--------------------------CAGACAGAGCC-------AATTTTG-TA 36128

Gallus CTGGAAAAA----------------------GCAACTTCAGTTGTCA--CAATTTCT--- 26757

Anopheles ------------------------------------------------------------

Homo TTTGAGTTTATGTATCCCCAGTTTGTCTATTTTTGCTTTGGTTGCTTGTGCTTTTGGTGA 53963

Pan TTTGAGTTTATGTATCCCCAGTTTGTCTATTTTTGCTTTGGTTGCTTGTGCTTTTAGTGA 53820

Drosophila ------------------------------------------------------------

Canis ------------------------------TTTTTTTTTAGG-----GCAGCCCTGGTGG 31219

Bos ------------------------------TTTTACTTTAG-------------TAGTAA 5472

Rattus G----------------------------------------------------------- 46415

Danio ------------------------------------------------------------

Mus G----------------------------------------------------------- 36129

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCTATTCAAGAAATCATTGCCAAGTCCAATGTCATGAAGCTTTTTCTCCATGTTTTCTTG 54023

Pan TCTATTCAAGAAATCATTGCCAAGTCCAATGTCATGAAG-TTTTTCTCCATGTTTTCTTG 53879

Drosophila ------------------------------------------------------------

Canis C----------------------------------------------------------G 31221

Bos ------------------------------------------------------------

Rattus -----GCTTGATACTTTATTCTCCATGTTGTAGGGTTGGATCCTTGTCACAGAGGTGCT- 46469

Danio -------TTTAGACTTTATTACCC--GTTAT---------------TCACAG-------- 5802

Mus -----GCTTGACACTTTATCCTCCACATTGTAGGGTTTGATCCTTGCCACAGAAGGGCT- 36183

Gallus -----GTTTAATGTCTTGCTCCCCATATTCTAA------------CCTTCAGACATGTA- 26799

Anopheles ------------------------------------------------------------

Homo TAGTAGTTTTATAATTCGATGTTTTAAGTTTAGGTCTGTAATCCAGCTTGAGTTCATCTT 54083

Pan TAGTAGTTTTATAATTCAATGTTTTAAGTTTAGGTCTGTAATCCAGCTTGAGCTCATCTT 53939

Drosophila ------------------------------------------------------------

Canis CAGCGGTTTAG-----CGCCGCCTTCAGCCCAGGG-TGTGATCCTGCA------------ 31263

Bos -------------------------------AAAA-TGT--------------------- 5479

Rattus -------GGTTAATTGACACAGTGCTCTTCAAGCCTTGTCTACTTT-------------- 46508

Danio -----------------------------CAGGATCTGTTCACT---------------- 5817

Mus -------GGTTAATTGACACAGTGCCCTTCAAGCCTTGTCTACTTTGCTT---------- 36226

Gallus -------GAGTA-TTGTTAAATTTCCATTTAAGACCTATATATTA--------------- 26836

Anopheles ------------------------------------------------------------

Homo TGTATATGGTGTGAGATAAGGCTCCAACTTCATTCTTTTGCATGTTAGATTCCAGATTTC 54143

Pan TGTATATGGTGTGAGATAAGGCTCCAACTTCATTCTTTTGCATGTTAGATTCCAGATTTC 53999

Drosophila ------------------------------------------------------------

Canis -------GACCTGGGATCGAGTCCCACATCAGGCTTCCTGCATG---------------- 31300

Bos ------------------------------------------------------------

Rattus ------------------GAGTTTCTCAACTT---------------------------- 46522

Danio ------------------AAATTTGACA-------------------------------- 5827

Mus ------------------GAGTTTCTCAGT------------------------------ 36238

Gallus ------------------GATATTTCCAAAAT---------------------------- 26850

Anopheles ------------------------------------------------------------

Homo CCAATACAGTTTGTTGAAGAACCTCTTTTCCCTATTTCTGTGTTCTCTCTTCTGCTCACT 54203

Pan CCAATACAGTTTGTTGAAGAACCTCTTTTCCCTATTTCTGTGTTCTCTCTTCTGCTCACT 54059

Drosophila ------------------------------------------------------------

Canis ------------------GAGCCTGCTTCTCC--------------------------CT 31316

Bos ------------------------------------------------------------

Rattus --TTTTGCATTCAAGTCTCTACTCCATGTCTAC--------------------------- 46553

Danio ------------------------------------------------------------

Mus -------CAATCAAGTCTCTACTCCATATCTAC--------------------------- 36264

Gallus --GTTAGAGATTTTGTTTCTATTTGATATC------------------------------ 26878

Anopheles ------------------------------------------------------------

Homo TGGTCTGTATATCTGTCTTTATGCCAGCACCATAGTGTTTTGATTACTATAGCTTTGCAA 54263

Pan TGGTCTGTATATCTGTCTTTATGCCAGCACCATAGTGTTTTGATTACTGTAGCTTTGCAA 54119

Drosophila ------------------------------------------------------------

Canis TGGCCTGTATCTCTGCCTCTCTGCC----------------------------------- 31341

Bos ------------------------------------------------------------

Rattus ------------------------------CTTTCTCAGCTGTCTTCC------------ 46571

Danio ------------------------------------TAATTGTC---------------- 5835

Mus ------------------------------CTGACTCAGCTTTCTTCC------------ 36282

Gallus ------------------------------------TAGCTTTCTTA------------- 26889

Anopheles ------------------------------------------------------------

Homo TATCTTTAGAAATCAGGGAATGTGAGGCCTCTAGCTTTGTTTTTTGTCCAGATTGTTACG 54323

Pan TATCTTTAGAAATCAGGGAATGTGAGGCCTCTAGCTTTGTTTTTTGTCCAGATTGTTACG 54179

Drosophila ------------------------------------------------------------

Canis ------------------------------------TCCCTCCCTGTC------------ 31353

Bos ------------------------------------------------------------

Rattus ------------CACCCATAGACTATG-CAAGACTTCCCCCATTTTCCTTACTTGGTGAT 46618

Danio --------------------GGGCACG-TG--------CTCATTCTC------------- 5853

Mus ------------CACCCATAGACTATGGCAAGACTTCACCCCTTTTCCTTATTTGTAATT 36330

Gallus -----------------AAAGAATAAG-------------AATTCTT------------- 26906

Anopheles ------------------------------------------------------------

Homo GCTATTCAGGGTCCTTCAAGATTCTGTATTAATTTTAAGATTTTTTTTTTCTGTTTCTGT 54383

Pan GCTATTCAGGGTCCTTCAAGATTCTGTATTAATTTTAAGATTTTTTTTT-CTATTTCTGT 54238

Drosophila ------------------------------------------------------------

Canis -----------TCGCTCATGAATCAATAAA-----TAAAATATTTTTT------------ 31385

Bos -----------------ATGGGTCAATA-------------------------------- 5490

Rattus TGTTTATGTTTTTCA--------------------------------------------- 46633

Danio ------------------------------------------------------------

Mus GTTTCATGTTTTTCA--------------------------------------------- 36345

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AGAAAATGCCATTGGGATTTTGATAGGGATTGCTTTGAATTTGCAGATTGCTTTGGGTAG 54443

Pan AGAAAATGCCATTGGGATTTTGATAGGGATTGCTTTGAATTTGCAGATTGCTTTGGGTAG 54298

Drosophila ------------------------------------------------------------

Canis -AAAAATGTTATT---TTTTTAATGCTAA------------------------------- 31410

Bos ------------------------------------------------------------

Rattus ---------------ACCCCCGTGATAGTTTGTTCTCAAATAGATGTAGGTCCCT----- 46673

Danio -----------------------------TTGGTCGCAAACAAA---------------- 5868

Mus ---------------ACCCCCAAGATTGTTTGTTTTCAAACAAATGTAGATCCCTTTTCA 36390

Gallus ---------------------------GTTTGTTTTGAAA-------------------- 26919

Anopheles ------------------------------------------------------------

Homo TATTGCCATCTTAACAGTACTAAATCTTCCAATTCATAAACTTGGATGTCTTTCCATTTA 54503

Pan TATTGCCATCTTAACAGTACTAAATCTTCCAATTCATAAACTTGGATGTCTTTCCATTTA 54358

Drosophila ------------------------------------------------------------

Canis ---------------AATACTAAAACTCTTGGC-CATAAAC------------------- 31435

Bos ------------------------------------------------------------

Rattus -GACTAGTTCCTCAGAACTCAGAATGCAGTTATAAACTGGATTTTTCCCTCTCCGGTGCT 46732

Danio --------------------------CAGT-------------------------GTGTT 5877

Mus TGACACCTGACTAGTTCTCCAGAATACAGTTATAAACTGGATTTTTCCCTTTCCAGTGCT 36450

Gallus -----------------------ATACAGTGAAATATGGTGTTCTT--------GGTGCT 26948

Anopheles ------------------------------------------------------------

Homo TTTGTATTGTCTTTAATTTCTTTCAGCATTGTTGTATAATTTTCTTTTTCTTTTTTTTTT 54563

Pan TTTGTATTGTCTTTAATTTCTTTCAGCATTGTTGTATAATTTTCTTTTTTTTTTTTTTTT 54418

Drosophila ------------------------------------------------------------

Canis ----------CTTTGATTTTCATCTGTTGTGCTAAATAATTTTTTTTAAAGATTGTATTT 31485

Bos -----------------------CTGTCGTG---------------------TTGTGTAG 5506

Rattus GACTTAGAATAAGTCAGTGTCATGCCAAAACCTCCAGTT----TTTCATGAG-------- 46780

Danio AACTCG------------------------------------------------------ 5883

Mus GACTTAGAATAAGTCAGTGTCATGACGAAACCTCCAATTAATTCTTTGTGAG-------- 36502

Gallus G----------------------------------------------------------- 26949

Anopheles ------------------------------------------------------------

Homo TTTT-TT---GAGACAGAGTCTCACTCTGTCACCAGGCTGGAGTAGAGTGGCGTGATCTT 54619

Pan TTTT-TTTTTGAGACAGAGTCTCACTCTGTCACCAGGCTGGAGTAGAGTGGTGCAATCTT 54477

Drosophila ------------------------------------------------------------

Canis ATTCATTCATGAGACA-----------------CAGAGAGAGGCAGAGGG---------- 31518

Bos AT---------AGACA-----------------CAGT----------------------- 5517

Rattus ------------------------------------------GATTCTTGCTTGTTCTGT 46798

Danio ---------------------------------------------------------TGT 5886

Mus ------------------------------------------TACTCTTGCTTGTTCTGT 36520

Gallus -------------------------------------------------------CATGT 26954

Anopheles ------------------------------------------------------------

Homo GGCTCACTGCACCTCTGCCTCCCAAATTCAAGTGACAACTCCTGCCTCAGCCTCCCGAGT 54679

Pan GGCTCACTGCACCTCTGCCTCCCAAATTCAAGTGACAACTCCTGCCTCAGCCTCCCGAGT 54537

Drosophila ------------------------------------------------------------

Canis -----------------------AGAAGCAGAGGGAGAAGCCTGATTCAG---------- 31545

Bos ------------------------------------------------------------

Rattus GATCAAGACTGA------GTACTTTTTAGTCCCTCTTGTCTTACCTTATAGATGAGATAT 46852

Danio GAT--------------------------------------------------------- 5889

Mus GATCAAGACTATTGCATTGTTTTAGTCAGTCCCATCTGTTTTACCTTATGGATGAGATAT 36580

Gallus AGC--------------------------------------------------------- 26957

Anopheles ------------------------------------------------------------

Homo GGCTGGGATTACAGGCGCGCGCCACCAAGCCCAGCTAATTTATTTTGTATTTTTAGTAGA 54739

Pan GGCTGGGATTACAGGCACGCGCCACCAAGCCCAGCTAATTTATTTTGTATTTTTAGTAGA 54597

Drosophila ------------------------------------------------------------

Canis GGACTGGATTCCAGG------------ATCCCAG-------------------------- 31567

Bos ------------------------------------------------------------

Rattus CCCTTATCACTACCAGTTTAGTTTGGCTGAAGCCATTTGCTGCTTTTCATTTTTGCTGCA 46912

Danio ------------------------------------------------------------

Mus CCCTTATCACCACCA------CTTGGCTGGAGCCACTTGCTGCTTTTCCTTTTTGCTACA 36634

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GACAGGGTTTCACCATGTTGGCCAGGATGGTCTCAATCTCTTGACCTCGTGATCAGCCCA 54799

Pan GACAGGATTTCACCATGTTGGCCAGGATGGTCTCAATCTCTTGACCTCATGATCAGCCCA 54657

Drosophila ------------------------------------------------------------

Canis -------------------GATCAGGA------------CCTGAGCCAAAGGCAAATGCT 31596

Bos ------------------------------------------------------------

Rattus GT---CTTTTCTCTGTTTCTCAGTTGTT------------------GCAGTATCACTTTT 46951

Danio ---------------------------------------------------------TTT 5892

Mus TAGTATTTTTCTCTGTTTCTCAGTTGT---------------------AGTATCTCTTTT 36673

Gallus --------------------------------------------------TCTTTCTGTC 26967

Anopheles ------------------------------------------------------------

Homo CCTTGGCCTCCCAAACTGCTGGGGTTACAGGCGTGAGCCACCACGTCCGGCCTATGTTGT 54859

Pan CCTTGGCCTCCCAAACTGCTGGGGTTACAGGCGTGAGCCACCACGTCCGGCCTATGTTGT 54717

Drosophila ------------------------------------------------------------

Canis C------------AACCACTGGG---------------CAACCCAGGCGCTCTGTGCTAA 31629

Bos ------------------------------------------------------------

Rattus GTGATTTCCAATATTCTTCATCTCT--TAGAATTTGAATTTACCCTTTGATAATCCTCTG 47009

Danio GTGGCTGCAAATA-----CATC-------------------------------------- 5909

Mus GTGATTTCCAATATTCTTCATCTCTCTTAGAATTTGAATTTATCCTTTGATA---CTCTG 36730

Gallus CTAATCAGCAGTAGCTTTCAGGTGT--------------------TTTATTTACCATTTG 27007

Anopheles ------------------------------------------------------------

Homo TTAATTTTCAATGTACATGTCTTTCATTTGCTTGGTGAAAATATTCCCTAAGTATTTTTT 54919

Pan TTAATTTTCAATGTACATGTCTTTCATTTGCTTGGTGAAAATATTCCCTAAGTATTTTTT 54777

Drosophila ------------------------------------------------------------

Canis AAAAATTTAAGCACATATAACATTGAA--------------------CAAGTTTTTTCCT 31669

Bos -------------------------------------------------AGTTACTTCCA 5528

Rattus GCTGTTTTCATTTACTT---ATCATGTTAGCAGCCTATAGCCCT---------------- 47050

Danio --------------------ATTACATTAAGA---------------------------- 5921

Mus GAAGTTTTCATTCACTTT--ATCACATTAGCACCTTGTAGTCTT---------------- 36772

Gallus CATGTTTCTGTAAACGT---GTGGCTTTAGTAACTGAC---------------------- 27042

Anopheles ------------------------------------------------------------

Homo ACTCTTTGATTTCATTTTAAATGGGTTTAAAAAATTAATTTCCTTTTTGGATTCTTCATT 54979

Pan ACTCTTTGATTTCATTTTAAATGGGTTTAAAAAATTAATTTCCTTTTTGGATTCTTCATT 54837

Drosophila ------------------------------------------------------------

Canis CCTCTTTTTTTTTTTTTTAAA----CCTAAGAAA-------------------------- 31699

Bos GCTCTTT----------------------------------------------------- 5535

Rattus -------------------GCATCTTATTCCAAATGTCCCTTTATATTTTTATCTTTTTT 47091

Danio --------------------CAT--------AAAT-------TACATTTTT--------- 5937

Mus -------------------GCATCTTATTCCAAATGTTCCTGTAT-CTTTTATCTTTTTC 36812

Gallus --------------------CATTT------AGATGTTTTTTTGTGTGTATA-------- 27068

Anopheles ------------------------------------------------------------

Homo TTTAGTATTTAGAAATGCAACTCTTTTCTTAATATTGGTTTTTATATCCTGTAACTTTAC 55039

Pan TTTAGTATTTAGAAATGCAACTCTTTTCTTAATGTTGGTTTTTATATCCTGTAACTTTAC 54897

Drosophila ------------------------------------------------------------

Canis ------------------AGCATATTTTTAAACAATGATTTTGATACGTGGT-------- 31733

Bos ------------------------------------------------------------

Rattus TTATCTGATAG---CTATGACTGGAT-TTGTGCTTTACTATTTAGAGGTGGTGAGAGTAG 47147

Danio --------------------------------------------GAGG------------ 5941

Mus TTATCTGATAG---CTATGCCTAGATATTGTACTTCATCCATTAGAGGTGGTAAGAGTAA 36869

Gallus -----------------------------GTACTAGGCACATTGAAGAA----------- 27088

Anopheles ------------------------------------------------------------

Homo TGAATTCCTTTATTCTAACGGTTTTTTTTCTTTTTGGTAGGCTAGAGTTTTCAACATAAA 55099

Pan TGAATTCCTTTATTCTAACGGTTTTTTTTCTTTTTGGTAGGCTAGAGTTTTCAACATAAA 54957

Drosophila ------------------------------------------------------------

Canis --------------------GCTGTTCCTTATCATAGTATGTTGGG-------------- 31759

Bos --------------------GCTGTT---------------------------------- 5541

Rattus ATATTTCTCCTTCTCTT-----------------CCCCTTCCTCTTTTT-AAAATTTATC 47189

Danio --------------------------------------------------GAAATATACC 5951

Mus ATATTTCTCCTCCTCCA-----------------TTTCTTCTTCCTCTTCCTCCTCCTTT 36912

Gallus -----------------------------------------------TTACAACTATATC 27101

Anopheles ------------------------------------------------------------

Homo AGATCATGTCATTTGCTAACAGAAGTAATTTTACTTCTTACTTTTCTCATTTAATACCTT 55159

Pan AGATCATGTCATTTGCTAACAGAAGTAATTTTACTTCTTACTTTTCTCATTTAATACCTT 55017

Drosophila ------------------------------------------------------------

Canis ---------------------------------------------------CAGTATTTA 31768

Bos ------------------------------------------------------------

Rattus TTATGTGTATATATGCTTTGCCTGCATATAT-------------------GTATGCGCCA 47230

Danio TTATATATACA---------------------------------------GTATGTGACG 5972

Mus TTATGTTTATCTGTGGTTTGCTGGGATATATC-----------------TCTGTGCACCA 36955

Gallus TCTGTATTACTCA--------------AAATA-----------------CATGCTTGCCA 27130

Anopheles ------------------------------------------------------------

Homo TCATTTCTTTTTCTTGCCCAGTTGCTAACTCTGGCAGGATGTCTAACAGTATGTTGAATA 55219

Pan TCATTTCTTTTTCTTGCCCAATTGCTAACTCTGGCAGGACGTCTAATAGTATGTTGAATA 55077

Drosophila ------------------------------------------------------------

Canis TCAAACATTT--------CAGTAGCTAA----------------------AAGTTTTATA 31798

Bos --------------------------AG----------------------AAGT------ 5547

Rattus CATGTAGC-----TG------------------GTGCCCATGGAGACCAGATAAGTGCAT 47267

Danio CTTTTAAC-----TA------------------G-------------------------- 5983

Mus CATGTAGCATGGTCG------------------GTGCCCATGGAGACCAGATGAGTGTGT 36997

Gallus TGTGTTAC-----TG------------------TGGGAGAAAGGGGAGAATCTGGCAAAT 27167

Anopheles ------------------------------------------------------------

Homo GAAGTGGTGAATGTGTGCATTCTTGTTCCATTTGTGATCTTAGAGGGAAAACTTTCAGTT 55279

Pan GAAGTGGTGAATGTGTGCATTCTTGTTCCATTTGTGATCTTAGAGGGAAAACTTTCAGTT 55137

Drosophila ------------------------------------------------------------

Canis TACACAGTGAATCT------CCATTTTCTACACTTCATCTTA--------ATATCCAAGT 31844

Bos --CACAGTGGAT------------------------------------------------ 5557

Rattus -----------AACTCCCCCAG------------------------GTGTTACAACTGAC 47292

Danio ---------------------G------------------------GTTATGCAATTAAT 5998

Mus -----------AACTCCTCCAG------------------------GTGTCACAGCTGAC 37022

Gallus -----------AGCTGTTTAAGA-----------------------GCCATATACTTCAC 27193

Anopheles ------------------------------------------------------------

Homo TTTCATCATTGAATAACATTAGCTGTGGTCTTTCTATATATGGCCTTCATTATGTTGAAG 55339

Pan TTTCATCATTGAATAACATTAGCTGTGGTCTTTCTATATATGGCCTTCATTATGTTGAAG 55197

Drosophila ------------------------------------------------------------

Canis TT----------ATTACTTTAG------------------------------TGCTTGAC 31864

Bos ----------------------------------------------------TATTTCAC 5565

Rattus TGCATACCAATTTGTTG----GTGTTGAGAGTCAAACCTGGATTCCCTGGACAAAAAATC 47348

Danio TGAA-ATCAGATCGC-------------------AACCTCGATT---------------- 6022

Mus TGCA--CCAGTTTGTTG----GTGTGGAGAATCAAATCTGGATTCCTTGGAAGAGGAGGA 37076

Gallus GAAGCTGAGGTTATTCA----GCATTGAGAGCTCATCTTTAATCACTTTTTTGTCAGTAG 27249

Anopheles ------------------------------------------------------------

Homo TAATTTCCATATCTTTCTAGCGAATTGAGCGTTTTTGTTTTTGTTTTTTTGAGACAGAAT 55399

Pan TAATTTCCATATCTTTCTAGCGAATTGAGTGTTTTTGTTTTTGTTTTTTTGAGACAGAAT 55257

Drosophila ------------------------------------------------------------

Canis TAATTTGCCTTGCCTCATGATCTGTTGAGC---------------TTTTTATGTGAGAGC 31909

Bos TAAC---------------------------------------------------AGA-- 5572

Rattus ATTCCTAT--TAAA---------------------------------------------- 47360

Danio ----------TGAA---------------------------------------------- 6026

Mus ATCAGTGCTCTTAA---------------------------------------------- 37090

Gallus TTCAATTAACCAAG---------------------------------------------- 27263

Anopheles ------------------------------------------------------------

Homo CTTGCTCTTGTCACCCAGGCTGGAGTGCAATGATGCTATCTCACCTCACTGCCAGCTCCG 55459

Pan CTTGCTCTTGTCACCCAGGCTGGAGTGCAATGACGCTATCTCAGCTCACTGCCAGCTCCG 55317

Drosophila ------------------------------------------------------------

Canis TGTACTAATCTTAATCA----------------------CTGTGCTTATTGT-------- 31939

Bos ---------------------------------------------TTATT---------- 5577

Rattus ----------------------------------------------------CTGCTAAG 47368

Danio ----------------------------------------------------ATGC---- 6030

Mus ----------------------------------------------------CTACTGAG 37098

Gallus ----------------------------------------------------TAACA--- 27268

Anopheles ------------------------------------------------------------

Homo CCTCCCGGGTTCTCAAGTGATTGTCCTGCCTCAGCCTCCCGAGTAGCTGGAATTACAGGC 55519

Pan CCTCCCGGGTTCTCAAGTGATTGTCCTGCCTCAGCCTCCCGAGTAGCTGGAATTACAGGC 55377

Drosophila ------------------------------------------------------------

Canis ------------TTGAATG---------------------------------CTACAGGA 31954

Bos ----------------------------------------------------CCATA--- 5582

Rattus ACAT------------GAAAGCCTATT--------------------------------- 47383

Danio ------------------------------------------------------------

Mus ATATCTCTATCACTGGGAGTGGTTATTCATGTTCTCAAATGAGTCTGTCTGAA------- 37151

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GCCCACCACCATGCCCGATTAGTTTTTGTATTTTTAGTAGAGACAGGGTTTCACTGTGTT 55579

Pan GCCCACCACCACGCCCGATTAGTTTTTGTATTTTTAGTAGAGACAGGGTTTCACTGTGTT 55437

Drosophila ------------------------------------------------------------

Canis AGC-------------GAGCAGCTGCAAAGCATCTAATAGA------------------- 31982

Bos -------------------------CATAGCATCAAACA--------------------- 5596

Rattus ------TTCTTCTTCATAAGATTTCTTTTAAGTAATGAGT-------------------- 47417

Danio ------------------------------AGCGATAATC-------------------- 6040

Mus -AGCCTTTTGGCTTCACAAGATTTCTTTTAAGTAATGGGA-------------------- 37190

Gallus ---------CTTTTCGTA----CTCTTTTAAATAACAAAC-------------------- 27295

Anopheles ------------------------------------------------------------

Homo GGCCAGGCTGGTCTCACACTCCTGACCTCAGGTGATCCACCCACCTTGCCCTTCTAAAGT 55639

Pan GGCCAGGCTGGTCTCACACTCCTGACCTCAGGTGATCCACCCACCTTGCCCTTCTAAAGT 55497

Drosophila ------------------------------------------------------------

Canis ---------------ACGCTACTACCACCAGTTAACTGA--------------------- 32006

Bos ------------------------TCATCA---AATTGG--------------------- 5608

Rattus --TGTTAGCAAGGATGTGTGTTCTGCTTTGTCAAAGTGTTTTATGCATTGGTTTTGTCTG 47475

Danio --TAATCGCAAGAGGCTGCG---------------------------------------- 6058

Mus --TTTTAGCAAGGACATGTGTTCT--TTTTCAAATGTGTTTTGTGCATTGGTTTTGACTG 37246

Gallus --TAATATCAGATAACTGTGATCAT----------------------CTGGAATTTTGTA 27331

Anopheles ------------------------------------------------------------

Homo GCTGGGATTACAGGCATGAGCCACCCTGTCTGGCCTTTTTTTAAATCCTAAAAGGGTGTT 55699

Pan GCTGGGATTACAGGCATGAGCCACCCTGTCTGGCCTTTTTTTAAATCCTAAAAGGGTGTT 55557

Drosophila ------------------------------------------------------------

Canis ----GGGCTGTGGAAATGAGG---CCTGCACGAATGAGTTTTG----------------T 32043

Bos ----GAATTG---------------CTGC------------------------------- 5618

Rattus TATTTAGATTTAATATATGTATGTGTATTTATGT---TATATATA--------------- 47517

Danio --------------ATATGAAC-----TATATAT---TAT-------------------- 6076

Mus TATTTAGATTTAATATGTGTATATGTATATGTGTGTGTATATATATATATATATATATAT 37306

Gallus TATTAAAAGAGAAAATTTTAAGGGATTTATATCC---TATTGGTA--------------- 27373

Anopheles ------------------------------------------------------------

Homo GATTTTTGTCAAATGCTTCTTCTGAGTCAGTTGAGATTATTGGTTTTTGTCCTAAGAATG 55759

Pan GATTTTTGTCAAATGCTTCTTCTGAGTCAGTTGAGATTATTGGTTTTTGTCCTAAGAATG 55617

Drosophila ------------------------------------------------------------

Canis GCTTCCTGTCCAACTTTTCTTCG--------------TATGGAT---------AACAATG 32080

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ATTTATATATATATATATATGCA----------------TATATGCATATGCATGCTATA 37350

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CAGTG--TATTAAAGTGATTTTTTTGTATGTTGAACCATCCTTGGATTTTATGAATAAAT 55817

Pan CAGTG--TATTAAAGTGATTTTTTTGTATGTTGAACCATCCTTGGATTTTATGAATAAAT 55675

Drosophila ------------------------------------------------------------

Canis CAGCAGCTATTAAAGC-----------------------CCTCGAGCTTTAT----AAGA 32113

Bos ------------------------------------------------------------

Rattus -GTGTGTGGGTGCCTGTGGCA--TTAAATGCCCTGAAACTGGAGGAACTGGCAGTTTT-- 47572

Danio -----------------------TTAAATTCCCC-------------------------- 6087

Mus TGTGTGTGGGTGCCTGTGGCA--TTTAATGCTCTTAAGCTGGAGGAACAGGCAGTTTT-- 37406

Gallus ----------------TAGTA--CTTATTGATAGCA------------------------ 27391

Anopheles ------------------------------------------------------------

Homo TCCAGTTGAGAATTTATGAAA--TATAATCTTTTTAATGCATTGTTGAATTCTGTTTCTT 55875

Pan TCCAGTTGAGAATTTATGAAAAATATAATCTTTTTAATGCATTGTTGAATTCTGTTTCTT 55735

Drosophila ------------------------------------------------------------

Canis TTAATGCAAAACTCTGTGAT---CCTCATCCCTCCAAGAAAGGAGCAAGTTCAGCTT--- 32167

Bos ------------------------------------------------------------

Rattus ---------ATGATCCTCCTGACATCATGATAGGAACTGAACTTGGTTCCTCTGAAAAAA 47623

Danio ------------------------------------------------------------

Mus ---------GTGAGCCACCTGACATCATGCTAGGAACTGAACTCTGTTCCTCTGAAAAAG 37457

Gallus ------------------------------------------------TTACTAAATAAA 27403

Anopheles ------------------------------------------------------------

Homo GGTATTTTGTTGATTTTTTTTGCATCAGTATTTATTAGGGATTCTTTTTTCTTGTAAATT 55935

Pan GGTATTTTGTTGATTTTTTTTGCATCAGTATTTATTAGGGATTCTTTTTTCTTGTAAATT 55795

Drosophila ------------------------------------------------------------

Canis ---ACCTTGAAAACTCG------AAAGGTGCCCCTAACAACTCCTGCTCTGACATAAAAA 32218

Bos ------------------------------------------------------TAAAAG 5624

Rattus CAGCTAGTGCTTTTGACCAGTGAGCTATCACTCTAGCCTCTGGTATTGATTAATTTTTAG 47683

Danio CACCTAG----------------------------------------------------- 6094

Mus CAGCTAGTGCTTTTGACTAGTGAGCCATCACTCTAGTCTCC--TATCAGGTATCTGCTGT 37515

Gallus TGCCTGGATCATTTG------------------------------TCATGTAGCTTCCCT 27433

Anopheles ------------------------------------------------------------

Homo TGTCTGATTTCGATATCTAAGTAATGCTTACCTCATAAAATGATTTTGAAAGTGTTCTGT 55995

Pan TGTCTGATTTCGATATCTAAGTAATGCTTACCTCAGAAAATGATTTTGAAAGTGCTCTGT 55855

Drosophila ------------------------------------------------------------

Canis TGAACAAGAAGGAAGGACAAGGAG---------CAAGAGATGATTTTAGAGGTAAGATGT 32269

Bos TGG--------------------------------------GATT--------------- 5631

Rattus TCTTATTTTGTTAATACAATTCGTGAAATGGACTAATTTTTATCTTGAACTCTTCACCAG 47743

Danio ----------------------------------------------------------AG 6096

Mus TTGTATGGCAGTGGTACTA-----------------------------ACTCTTTCCAAA 37546

Gallus TTCAGTGGCAGCTATACC------------------------------------------ 27451

Anopheles ------------------------------------------------------------

Homo CCTCTAGTTTTTTCAAAGAGTTTGAGAA------------------GGGTTGTTAGTTTT 56037

Pan CCTCTAGTTTTTTCAAAGAGTTTGAGAA------------------GGGTTGTTAGTTTT 55897

Drosophila ------------------------------------------------------------

Canis TCTATTTTTTTTT-------------------------------------------TTTT 32286

Bos ------------------------------------------------------------

Rattus CAAATACCATGTGAGATTTTTGACTGATAAATGTATTATTGAGATTGTTATTTAATTTGT 47803

Danio CAAATG---TGTGA---------------------------------------------- 6107

Mus CTAATACAGGACAGATTTCC--------------ATTTTCAAAATTCTTACTTAGGAAAT 37592

Gallus TCAGTACTATGCAT---------------------------------------------- 27465

Anopheles ------------------------------------------------------------

Homo TAAATGTTTGGTAGAGTTTTCAGTGAAGCCCTGGCGTTGTTGGACAGTTACTGATTCAAT 56097

Pan TAAATGTTTGGTAGAGTTTTCAGTGAAGCCCTGGCGTTGTTGGACAGTTACTGATTCAAT 55957

Drosophila ------------------------------------------------------------

Canis AAGACGTTCTAT----TTTTAACTGAG------------------AATTTTGGATTGAAT 32324

Bos -----------------------------------------------------GTTGAAC 5638

Rattus TGTTTACATTTATTTTTTTTAGTAAATCATTAGTAGGTACTTTATTTGTTCCATGCTTCT 47863

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTCTAA------------------------------------------------------ 56103

Pan CTCTAA------------------------------------------------------ 55963

Drosophila ------------------------------------------------------------

Canis C----------------------------------------------------------- 32325

Bos T----------------------------------------------------------- 5639

Rattus TTTTCCCAGACAAGATGTCTAT----AGCCTGTGCTGGCTCTGAATTCTTTTTTTTTTTT 47919

Danio ------------------CTGC----CGTCTGTG-------------------------- 6119

Mus ---------ATACAAGTTCTAA----AACTAGCATTCACTACAA---------------- 37623

Gallus ----------CGGAGAGTTGGT----TACCTGTA-------------------------- 27485

Anopheles ------------------------------------------------------------

Homo -------TAGTTATAGGTCCATTCAGAAGTTGTATGTATTTGTGGCTCAGTCTTGGTGGG 56156

Pan -------TAGTTATAGGTCCATTCAGAAGTTGTATGTATTTGTGGCTCAATCTTGGTGGG 56016

Drosophila ------------------------------------------------------------

Canis -------TGATTGTAAATTTAAATAAAA--TGTATGAGGTTTTTG--------------- 32361

Bos -------AAATGGTAGAT---------A--TGTATG------------------------ 5657

Rattus TTTTTTATTTCTCTCTGAATCAAGCTCCTGTGTGCTCAGATTTCTACTGTGTTAGGCCAT 47979

Danio -----------------------------------------------TGTGACAGTCTA- 6131

Mus ---------TCAGCCAATATTCACCTTCTGTTTACAGAAA-----GAAGAGTCAACCTAT 37669

Gallus -------------------------------------------------AATCTAGTTCT 27496

Anopheles ------------------------------------------------------------

Homo TTTGATGTGTCTATCCGTTCTCAAAGGTTATCAAATTTTTTT-GGGTCATAGTTGTTCAT 56215

Pan TTTGATGTGTCTATCCGTTCTCAAAGGTTATCAAATTTGTT--GGGTCATAGTTGTTCAT 56074

Drosophila ------------------------------------------------------------

Canis TTTGTTTTGTCTAATTGT-----------GTGACATT------AGGACAAGATAGTATAG 32404

Bos -TAATCTTGTT----------------------------------GGCAAGAT------- 5675

Rattus AGAAGACTATTAGCACTTGATCATTGGGTTGTAAAGATAA-------AGCATTTTTAGTA 48032

Danio --------ACTAGC------CAATTGGGT----------G-------AGCACGCTT---- 6156

Mus GG-----TTTTAGGAAAAGATCTTTGTTT----AAAAAAT-------AATATTCTTTGAA 37713

Gallus GTTCTACTTTCAGCCTTG---CTTTGCATC-------TAA-------ACTGCTCTTT--- 27536

Anopheles ------------------------------------------------------------

Homo ATTAGTCTTTTAAGGTCCTATTTATTT-CTGTGGCAGCAGTTGTTGTATCGCCTTTCTAA 56274

Pan ACTAGTCTTTTAAGGTCCTATTTATTT-CTGTGGCAGCAGTTGTTGTATCGCCTTTCTAA 56133

Drosophila ------------------------------------------------------------

Canis TGGTGTTTATTATCATTATATTTATTTATTGTGGTAAAGG-------ACAGAACTTATAA 32457

Bos ------------------------------------------------------------

Rattus TTTATCCATCCATCTATCAATCCATCTATCTATCTTGCCTTGTCAAAGAAGTGTAGACCG 48092

Danio ------------------------------------------------------------

Mus AGT-----TTTATATATTTATACA------------------------------------ 37732

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTCCAGTTGTTGCTGTTTGTGTCTATTCTCTTCATTTCTT------------------- 56315

Pan TTTCCAGTTGTTGCTGTTTGTGTCTATTCTCTTCATTTCTT------------------- 56174

Drosophila ------------------------------------------------------------

Canis TG---------------------------------------------------------- 32459

Bos ------------------------------------------------------------

Rattus ACAGGAGCCGGATGTAGATCGTTCCTGAGAGACACAGCCAGAATACAGCAAATACAGAGG 48152

Danio ------------------TCGTTC-----------AGCC--------------------- 6166

Mus -----------ATATATATTGGTGGTG--------TGCC--------------------- 37752

Gallus --------------TTTTTTATT------------------------------------- 27545

Anopheles ------------------------------------------------------------

Homo -------AATCTAAGAATTTGCCAGTTTTGTTGATCTTTTCAATAAA------------- 56355

Pan -------AATCTAAGAATTTGCCAATTTTGTTGATCTTTTCAATGAA------------- 56214

Drosophila ------------------------------------------------------------

Canis -------GAACTAATAACTTAATGGT-------ATCTT---------------------- 32483

Bos ------------------------------------------------------------

Rattus CGAATGCCAGCAGCAAACCACTGAAGTGAGAATAGGACCCCTGTTGAAGGAATCAGAGAA 48212

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AGAACTGGACGAGCTTGAAGGGGCTCGGGACCCCATATGTACAACAATGCCAAGCAAC-- 48270

Danio ------------------------------------------------------CAAT-- 6170

Mus -----------------------TCTACTACACTATGTTTCCAGCTCCACTAGTCAATTT 37789

Gallus ----------------------------------------------------ACCAGT-- 27551

Anopheles ------------------------------------------------------------

Homo -----------------------ACAGCTACTCCTAATTTTGTTGATTTTTTTTCTATTG 56392

Pan -----------------------ACAGCTACTCCTAATTTTGTTGATTTTTTTTCTATTG 56251

Drosophila ------------------------------------------------------------

Canis -----------------------ATGGTATCTTATTGTTCTAATGGTCTCTAATTAGAAG 32520

Bos ----------------------------------------------TCTCCA-------- 5681

Rattus CAGAGCTTCCAGGGACTAAGCCACTACCTAAAGACTATACATGGACTGACCCTGGACTCT 48330

Danio CAGAATT----------------------------------------------------- 6177

Mus CTAAATTTGTAAATGTTTACTTACTTTCT------------------------------- 37818

Gallus TGAGATT----------------------------------------------------- 27558

Anopheles ------------------------------------------------------------

Homo CAAAAATTTTCTATTTTTCTCTATTTTATTTTAGCTGT---------------------- 56430

Pan CAAAAATTTTCTATTTTTCTCTATTTTATTTTAGCTGT---------------------- 56289

Drosophila ------------------------------------------------------------

Canis CAGA-------------------TTATATTCCAA-------------------------- 32535

Bos -------------------------------CAG-------------------------- 5684

Rattus GACCTCATAGGTAGCAATGAATATCCTAGTAAGAGCACCAGTGGAAGGGAAAGTCCTGGG 48390

Danio ----------------------------------GCAC---------------------- 6181

Mus -----------------------------TCTAACCATGA-------------------- 37829

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -------------------------------AATTTATTT-------------------- 56439

Pan -------------------------------AATTTATT--------------------- 56297

Drosophila ------------------------------------------------------------

Canis -------------------------------AAGTTGCT--------------------- 32543

Bos -------------------------------AAATTGT---------------------- 5691

Rattus TCCTGCTAAGACTGAACCCCCAGTGAACTGGTCTATGGGGGGAGGGCGGCAATGGGGGGA 48450

Danio -------------------------AACTGAACTATG----------------------- 6193

Mus -------------------------AACTGGGC-AGG----------------------- 37840

Gallus ---------------------------GTGTCCACTG----------------------- 27568

Anopheles ------------------------------------------------------------

Homo --TTATTTTTTTTATTTTTTGGTAAGTTTGAGTCTCATTTGTTCTTCA------------ 56485

Pan -----TTTTTTTTATTTTTTGGTAAGTTTGAGTCTCATTTGTTCTTCA------------ 56340

Drosophila ------------------------------------------------------------

Canis -------TTGTTAATGGATTGGAACTTTTGAACATT------------------------ 32572

Bos ---------------------GACATTTTGCAC--------------------------- 5703

Rattus GGGTTGGGAGGGGAAAACCCATAAGGAAGTGGGGGGGGATGTTTGCCCGGAAACCGGGAA 48510

Danio ------------------------------------------------------CGGGAA 6199

Mus ------------------------------------------------------TGAAAA 37846

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------TTTCCTAATTCCATAAGA 56503

Pan ------------------------------------------TTTCCTAGTTCCATAAGA 56358

Drosophila ------------------------------------------------------------

Canis --------------------------------------------------TTCCACTAAG 32582

Bos --------------------------------------------------TCCCACCA-- 5711

Rattus AGGGAATAACACTCGAAATGTATATAAGAAATACTCAAGTTAATAATAAAAAAAAAA--- 48567

Danio AAAAAA--------------------------------------AACAAAAAAAAAC--- 6218

Mus ACAAACAAACA---------------------------------AACAAAAAAAAAACCC 37873

Gallus -------------------------------------------TAACACTAGAAGGT--- 27582

Anopheles ------------------------------------------------------------

Homo TGTAAAGTTAATTTGTTGATTTAAGGTTTTTCTTCCTTTCTAACTGTGAAATATGACACT 56563

Pan TGTAAAGTTAATTTGTTGATTTAAGGTTTTTCTTCCTTTCTAACTGTGAAATATGACACT 56418

Drosophila ------------------------------------------------------------

Canis AAGAATGTGTATTAAGTG-------GTAATCCCCTAAATTAGACCACAAAATCTAAC--- 32632

Bos ------GTATAT------------------------------------------------ 5717

Rattus ---AGAAAGAAACTTGCCTTGTTTTATATATAGTGGCCTTTCACGTGGTTTCTGGTACTA 48624

Danio ---AAACAGGAAATCGC-------------------------------------AAACAA 6238

Mus CAAAAACAGTGGTTTATTCATTTTAAAAGATAAATAATTCT------ATGTGAAAATTTA 37927

Gallus --AAAGCTGATATCTGTGTGT---------------------------------AAACAA 27607

Anopheles ------------------------------------------------------------

Homo GTAAAACAGATTTTCATTTTAC-AGATGAA---------------TTATGTAAATATTTA 56607

Pan GTAAAACAGATTTTCATTTTAC-AGATGAA---------------TTATGTAAATATTTA 56462

Drosophila ------------------------------------------------------------

Canis ------TAAATTATCAAATAACTGGGCTGA---------------ATATGTAAAA--TGA 32669

Bos ---------------------------------------------ACATGCATA------ 5726

Rattus ATT-----GTCATATTTGTCCTAT-----------CAGCCTTGTGATATGTGATTTGATA 48668

Danio GTT-----G-----------------------------------GAT---------GATG 6249

Mus ATTCCACAGTTCTATTTTTACAAC-----------TAGTACTTTGTTGTAAAGATGAATA 37976

Gallus GAT--------------------------------------------------------- 27610

Anopheles ------------------------------------------------------------

Homo GTTCTACAATTTTACTTTTTTTTTTATCATATATCACGCATTCTGGATATTGAGACTATA 56667

Pan GTTCTACAATTTTACTTTTTTTTA-ATCATATATCACGCATTCTGGATATTGAGACTATA 56521

Drosophila ------------------------------------------------------------

Canis GTTGTGAAACCCCA-----------------------GCGTTAATGAGGGTGAAA----G 32702

Bos ------------------------------------------------------------

Rattus ---GCACTTCAG---TAGATCCTATCTTTTCTTTACTTATTTTTCAAAGATTTAT-TTAT 48721

Danio ---GCA------------------------------------------------------ 6252

Mus AAAGCATTTTTAGTATCCATCCATCCACCCATCTATCTGTCTTTAAGAAATTTTCCTTAT 38036

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAAATGAAAAAAACAGTTCTTTTCTTTTCTTTTTTTTTTTT---GAGACAGAGTCTCGCT 56724

Pan AAAATGAAAAAAACAGTTCTTTTCTTTTTTTTTTTTTTTTTTTTGAGACAGAGTCTCGCT 56581

Drosophila ------------------------------------------------------------

Canis AAGCAGAAAAAAGTGGTGGCAGTCCTTTCCATTTCCAAGAGC--AAAGCATAATTTTGTA 32760

Bos --------------------------TCTCATTTCC------------TACAATTTT--- 5745

Rattus TTTATGTATGTGAGTTTACTATATGCTGTCTTCAGACACGCCAGAAAGGAGCATCGGA-- 48779

Danio -----------------ACTGCAA-----CTTCAGA-------------AGCA------- 6270

Mus TTTATA-------------TATAATTGACTTTCAAATG---------------------- 38061

Gallus ------------------CTACCTTTTCTTTTCAGAGG---------------------- 27630

Anopheles ------------------------------------------------------------

Homo -CTTTTGCCCAGGCCACAGTGCAGTGGCTCTGTCTCGGCTCACTGCAAGCTCCGCCTCCC 56783

Pan -CTTTTGCCCAGGCCACAGTGCAGTGGCGCTGTCTCGGCTCACTGCAAGCTCCGCCTCCT 56640

Drosophila ------------------------------------------------------------

Canis GCCATCACTTGAGAAATAATTCAGTTTTCTTTTCAATACTCATTCCATATTCTGC----- 32815

Bos -CC-------------CAACCCAGTGTGTTCTTCAGT----------------------- 5768

Rattus ---------------TCCTGTTACAGATGGTTGTGAGCC--------------------- 48803

Danio -------------------GTAATAGACA------------------------------- 6280

Mus -------------------GTTCCTGATACTAAT-------------------------- 38076

Gallus ------------------ACCCATAAATCAAATC-------------------------- 27646

Anopheles ------------------------------------------------------------

Homo GGGTTCATGCCATTCTTCTGCATCAGCCTCCCAAGTAGCTGGGACTATAGGCGCCCACCA 56843

Pan GGGTTCATGCCATTCTTCTGCATCAGCCTCCCAAGTAGCTGGGACTATAGGCGCCCACCA 56700

Drosophila ------------------------------------------------------------

Canis ----------------------TCAGCTTC------------------------------ 32823

Bos ----------------------TCAGCT-------------------------------- 5774

Rattus -------------ACCATGTGGTTGCTGGGAATTGAACTCAGGACC-----------TCT 48839

Danio ------------------------------AATTAATATCAAA----------------- 6293

Mus ----------------------TGGGTCATATTTGTACTTTCAGTC-----------TTG 38103

Gallus -----------------------GTGTGTTAAATACATTTGCATTT-----------GTC 27672

Anopheles ------------------------------------------------------------

Homo CGGCGCCCAGCTAATTTTTTTTTGTATTTTTAGTAGGGACGTAGTTTCACCATGTTAGCC 56903

Pan CGGCGCCCAGCTAATTTTTTTTTGTATTTTTAGTAGGGACGTAGTTTCACCATGTTAGCC 56760

Drosophila ------------------------------------------------------------

Canis -------------------TTCTAGACATTTGGCACACTCATACT------------GCC 32852

Bos ---------------------------GTTTG---------------------------- 5779

Rattus GGAAG-------------------AGCAGT-CAGTGCTCCTAACCACTGAGCCATCT--- 48876

Danio -GAAA-------------------AACAGTACAGTGGT---------------------- 6311

Mus TAATA-------------------CATGATTTGATGACACT------------------- 38125

Gallus AATAT-------------------GAGAGTCCTGCATT---------------------- 27691

Anopheles ------------------------------------------------------------

Homo AGGATGGTCTCGATCTCCTGACCTCATGATCCGCCTGCCTCGGCCTCCCAAAGTGCTGGG 56963

Pan AGGATGGTCTCGATCTGCTGACCTCATGATCTGCCTGCCTCGGCCTCCCAAAGTGCTGGG 56820

Drosophila ------------------------------------------------------------

Canis AAGAA------------------TCATCACCTACCAATGGCAGTCTTC------------ 32882

Bos -----------------------------CCTGTTAGTTG-AG----------------- 5792

Rattus ----------CTCCAGCCCCCAATAGGTCCTATCTTATACTGATTTTAACTGTGTTATGA 48926

Danio ---------------------AATA------------------------------TGGGA 6320

Mus -------------------TCAATAGACCCTACCTTATACTGGTTTTAACTGTATTATGA 38166

Gallus -------------------TAAAGAAATC--------------------------TCCTG 27706

Anopheles ------------------------------------------------------------

Homo ATTAGAGGCGTGGCGTGAGCCACTGCACCCGGCCATAAAACAGTAATTGAAGGTTAACCT 57023

Pan ATTACAGGCGTGGCGTGAGCCACCGCACCCGGCCATAAAACAGTAATTGAAGGTTAACCT 56880

Drosophila ------------------------------------------------------------

Canis ------------------ACCCAAACACTTGTTTTCTAAATGAT-------------CCT 32911

Bos -------------------------------------AAATG------------------ 5797

Rattus ATATTTCTGG-------------TCTTTTTGAGAT-CACATTGTTCACT-----CTTGAC 48967

Danio ATATCTTAG-----------------TTTCAAAGT-CACA-----------------GAC 6345

Mus ATATCTCTGG-------------TGTTTGTGAGAT-CACATTTTTTACT-----CTTGAC 38207

Gallus ATGTTCCCTC-------------TGATTCAGAAAT-CTTGTGTTTCAGTG----CCTGAC 27748

Anopheles ------------------------------------------------------------

Homo ATATTTCAAACAACTGAAAATACTGATTTGTTCATATTTATTTTTTCATGAAAATCGTCT 57083

Pan ATATTTCAAACAATTGAAAATACTGATTTGTTCATATTTATTTTTTCATGAAAATCGTCT 56940

Drosophila ------------------------------------------------------------

Canis GTATTCCAAA-----------ATTGTTTTAAAAATATATATGTTTTTA------------ 32948

Bos GCATTGTGAC-----------ATAG-----AAAATGT----------------------- 5818

Rattus ACTTTCCTACATTAAAAACAATTTTGTGGCAGGTTATAATATTTGTTTTTCTGATTCCTC 49027

Danio ACC------------AAACAA--------------------------------------- 6354

Mus AAGTTTCTACATTAAAAATAACTT-GGGGCAAGTTGTGAAATTTGGTTTACTGATTCCTC 38266

Gallus TAATCTCTGCCTTGCTGATGCTTT------------------------------------ 27772

Anopheles ------------------------------------------------------------

Homo TGTTCTATATTTAATAGGTTTTTGTTCGGTTCATGGTACTAATGAGTTCACA-------- 57135

Pan TGTTCTATATTTAATAGGTTTTTGTTCGGTTCATGGTACTAATGAGTTCACA-------- 56992

Drosophila ------------------------------------------------------------

Canis -GATCTTCAAATCCAAGGTTTCCTTTCCTTAAGTGAAGATAATC---------------- 32991

Bos -------------CACAATTTCT---------GTGGAGA--------------------- 5835

Rattus CACACAGAGTTCATAATTACTTTAAACTCAAGGTCTTTCTGCCTCAG---------ATGC 49078

Danio ------------------------AAC-----------------CAG---------GTAA 6364

Mus CACATAAAGTTCATAAT------AAACTCAAGATCTTCCTGCCTTAGTCTAGTAT-ATGC 38319

Gallus -----------------------GAAT----GAGCTTTGTATGTGAAA--------GCTC 27797

Anopheles ------------------------------------------------------------

Homo ------------ATTGTAGGTTTAGTCTTGAAATAATCTAAATTCACTTCATCCCATTGT 57183

Pan ------------ATTGTAGGTTTAGTCTTGAAATAATCTAAATTCACTTCATCCCATTGT 57040

Drosophila ------------------------------------------------------------

Canis ------------ATTG-----TTAGTAACAAGGTAATTGAATTTCTAAATAAC------T 33028

Bos ------------AT-------TTGGCAATATT-TAGCAGAATATTTAA------------ 5863

Rattus TATGATTATAAGCATATGCCACCATTCCTTGTAGGATTAGTGATTTT-ATAA-------- 49129

Danio T---------------------------TTGTAAGA-----GATGTT-ACAG-------- 6383

Mus TACTATTATAAGCATAAGCCACCATTTCTTGGAGGAGTAGTGATTTTTATAA-------- 38371

Gallus TACTAATCCTTGTA-------------CTTACTGTTTGAATGTTTGCTACAG-------- 27836

Anopheles ------------------------------------------------------------

Homo AACAGACCCTACATCATACTGAATATAGTTGTGTCACAGATGTCTCTTACAGTCTATTTC 57243

Pan AACAGACCCTACATCATACTGAATATAGTTGTGTCACAGATGTCTCTTACAGTCTATTTC 57100

Drosophila ------------------------------------------------------------

Canis GACCGGGCTCAGCTCAT--CAGAGGTAATTGTACTTTAAAAG------------------ 33068

Bos -------CTCGGGCCAT--T---------------------------------------- 5874

Rattus -----------------------------------------AGGTACATTCTTTATAAAA 49148

Danio -----------------------------------------A---ACG------ATGAAA 6393

Mus -----------------------------------------AGGTACATCCTTTATAAAA 38390

Gallus -----------------------------------------GAAGCGAGCAGCTGCAAAG 27855

Anopheles ------------------------------------------------------------

Homo TACAAGGCCTAGAACTATTTAGGATACCGTTGCTCACTCTTACAAATTTTAACATTAAAA 57303

Pan TACAAGGCCTAGAACTATTTAGGATACCGTTGCTCACTCTTACAAATTTTAACATTAAAA 57160

Drosophila ------------------------------------------------------------

Canis -----------------------------------------AGAAAGCTTTTTGTTTAAG 33087

Bos -----------------------------------------------TTTTTTGTC---- 5883

Rattus CCCTTTATAAAATATTGAGACATT------TACCTATGAAAAA----------------- 49185

Danio -----TACAAAA-------------------ACC-----AGAA----------------- 6407

Mus CCCCTTACAAAATAATGAGACATT------TACCTATGAAAGA----------------- 38427

Gallus CATCTAATAGAGCGCTA------C------TACCACCAGTTAA----------------- 27886

Anopheles ------------------------------------------------------------

Homo ATAACTTTGAGATGGAATGGAGTTTTGCAACGTCTCAGAACAAAGAGACTCCACTTACGA 57363

Pan ATAACTTTGAGATGGAATGGAGTTTTGCAACATCTCAGAACAAAGAGACTCCACTTACGA 57220

Drosophila ------------------------------------------------------------

Canis GCATGTATAAGTTGGAG-----------AACACCTCTAAA-------------------- 33116

Bos ---------AGCTG---------------------------------------------- 5888

Rattus -----CATGAAGCAGTACTTATTAG-CCTATGCATGGATTAATTGAGTCTTAGGCTATTT 49239

Danio -----CCTAAAAAAGCAC--------------CACAGGCT-------------GCTATAT 6435

Mus -----CACTAAGCAGTGCTTACTAG-ATTATGCATGGGTTAATTGAGTCTTGGGCTGTAT 38481

Gallus -----CTGAGGGCTGTGGAAATGAA-GCC-TGCACGAATGAAT--------------TTT 27925

Anopheles ------------------------------------------------------------

Homo GAAATTACTAAGCAGTGGTTCCTAGCTTTATAGACTAATTATATAAGCCTTCAGTTGTTT 57423

Pan GAAATTACTAAGCAGTGGTTCCTAGCCTTATAGACTAATTATATAAGCCTTCAGTTGTTT 57280

Drosophila ------------------------------------------------------------

Canis -----------------GTTTTCAGTAGCATGATTTGAATGTAGG----TTTAATTGGTT 33155

Bos ------------------------------------------------------------

Rattus ATGTTTCTTACCTATTTTGTCAAATCTCCATGTTTTTATACTGCTTATTTTTTT------ 49293

Danio GAG----------------------------------GAGCGACTTGCT----------- 6450

Mus ATGTTTCTTACCTCTTTTGTCCAATCTT--TGTTTTTATTCTGCTTATTTTTTT------ 38533

Gallus GTGCTTCCT----------------------------GTCCAACTTTTCTCCGT------ 27951

Anopheles ------------------------------------------------------------

Homo CTATTTTATATCTGTTTTTTAGATTCCTCACATGTTCATTCTGCTTTACCTTCTGTATAA 57483

Pan CTACTTTATATCTGTTTTTTAGATTCCTCACATGTTCATTCTGCTTTACCTTCTGTATAA 57340

Drosophila ------------------------------------------------------------

Canis ATA----------------TGGA--------------ATTATGTTATACCTT-------- 33177

Bos -------------------------------------------------CTT-------- 5891

Rattus -AAAAAAGACACTTTGA---ATAAGTCATGTTCTTTGTTATCTCTTTAATTTTTCTACTT 49349

Danio --AAAAAGTCAACT------ACAAGT---------------------------------- 6468

Mus -AAAAAAGATACTTTGA---ATAAGTCATATTGTTAGTTATCTCTTTCATGTTTCT---- 38585

Gallus -ATGGATAACAATGC-----AGCAGCCAT------------------------------- 27974

Anopheles ------------------------------------------------------------

Homo TATAAAGGTCACTCTA--CTTACAGTCACATTTTCCTTTTAATCTTTCCGTTTTTATTTT 57541

Pan TATAAAGGTCACTCTA--CTTACAGTCACATTTTCCTTTTAATCTTTCCGTTTTTATTTT 57398

Drosophila ------------------------------------------------------------

Canis --------TCACTCTAATTTCACAGTAAAGGTGTTTTCATAAC----------------- 33212

Bos --------TCATCCC---TTTACAGCCAGAG----------------------------- 5911

Rattus AT---------------------------------------------------------- 49351

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TT---------------------------------------------------------- 57543

Pan TTNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 57458

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 57518

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTT 57578

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -------------------------------------------GTTTCTTGTTTTTATGG 49368

Danio --------------------------------------------------------AGGG 6472

Mus -------------------------------------------GTTTCTTGTTTTCATGG 38602

Gallus -------------------------------------------------------TAAGG 27979

Anopheles ------------------------------------------------------------

Homo ---------------------------------------------------------ATT 57546

Pan TTAAGGTCCTCTACTTACAGTCACATTTTCCTTTTAATCTTTCCGTTTTTATTTTTTATT 57638

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TAGCCATTTCATTGTTTTTGATTCCCATGCTGAACTACTTATATGAAAATTCTTTATTCT 49428

Danio ----------------------------------------GTGTCAAAATTAATTGTTTC 6492

Mus CAGCTATTTCACTGTTTTTGATTCTCATGCTGAACT----ATGTGGGAATTCTTTATTCT 38658

Gallus C-----CCTCGAGCTTTATAAGATTAATGCAAAACT----CTGTGA----TCCTCATCCC 28026

Anopheles ------------------------------------------------------------

Homo CTTTGCTTTGTTCACCATTAGTTTTTATATTGCA-------TCTCACAGTTCATGTTTCT 57599

Pan CTTTGCTTTGTTCACCATTAGTTTTTATATTGCA-------TCTCACAGTTCATATTTCT 57691

Drosophila ------------------------------------------------------------

Canis -------TTGATAACAACT-----TTATACTG---------TTTCAAAATGTATGATTCT 33251

Bos ---------GCTAA---------------------------TTTCAAG------------ 5923

Rattus TTTAGTATAT----------------------AATCTCCTT------------------- 49447

Danio TTCGGTGCA----------------------------CCAC------------------- 6505

Mus TCTAGTGTAT----------------------AATCTCCTT------------------- 38677

Gallus TCCAAGAAAG----------------------GAACGAGCT------------------- 28045

Anopheles ------------------------------------------------------------

Homo TTTTTGTCATTTCTGATTCTAATTGTAATTCTAATCTTACTTGTTTGGCGTTCACTGTCA 57659

Pan TTTT-GTCATTTCTGATTCTAATTGTAATTCTAATCTTACTTGTTTGATGTTCACTGTCA 57750

Drosophila ------------------------------------------------------------

Canis GTTATATGATTT--------------------AATCTCAC-------------ACTG--- 33275

Bos --------------------------------------------------------G--- 5924

Rattus -----------------GATGTTATCTGTATACAGTTATAATTATCTTACAACTTTATTA 49490

Danio -----------------GATG-----------CAGATGCATTCAATTTGG-----TATTG 6532

Mus -----------------GATGCTATCTATATATAGTTATGAATATCTTATAACTTTATCA 38720

Gallus -----------------CAGCTTACCTA---------GAAAACAACTCCA------AGGG 28073

Anopheles ------------------------------------------------------------

Homo CATCTTCACTTTCTGGCAGCTGTTTCTATGGCTTCATCTTCTTAGTGCTTGTATTCATTG 57719

Pan CATCTTCACTTTCTGGCAGCTGTTTCTATGGCTTCATCTTCTTAGTGCTTGTATTCATTG 57810

Drosophila ------------------------------------------------------------

Canis ------------------GATAAGTCTGTGG-------ATGTTTGTCATTATGTATAATA 33310

Bos ------------------GATACTTCTGT------------------------------- 5935

Rattus GTTTTATTATAATTTACTTTCTATTTCTAAGTATTGAGGTATCTAGAAATTAATTTAGGA 49550

Danio GTTCTGTAGTAATC------------------------ATAACCAG-------------- 6554

Mus TTTTTATTATGATTTACTTACTATTCCTAAGTATTCAACTATCCCGAAATTAACTTAGGA 38780

Gallus TGCCCATAACAATTCCTGCACTGACAGAAA------AATGAATAAGAAGGAAATGCAAGG 28127

Anopheles ------------------------------------------------------------

Homo CTTATATTCCAGTTGTCTTGTAAATTCAT-TTTTTTAGTGAACTAA---GCCAGACACGG 57775

Pan CTTATATTCCAGTTGTCTTGTAAATTCAT-TTTTTTAGTGAACTAA---GCCAGACACGG 57866

Drosophila ------------------------------------------------------------

Canis GGGAAGTTGCAGTTGACTCCATTATACATATTTTCCAGCAAGT------GTGTACCACAG 33364

Bos -------------------------------TTCCCAG---------------------- 5942

Rattus AGCAGCAAATAATGT---------------TATTAGTGCTA--------CTGAGAACA-- 49585

Danio --------------T---------------TATT-GTG-TA--------CTGA------- 6568

Mus CCCAGCAAATAATGT---------------TATTAGTGCTA--------CTGAGAACA-- 38815

Gallus CCCAAGAGATGACTT---------------TAAAGGTAAGA---------TGATACTT-- 28161

Anopheles ------------------------------------------------------------

Homo AAAGACAGATATCACATGTTCTCACTGATATGTGGGAACTAAAAAAACATTGAACACAAA 57835

Pan AAAGACAAATATCACATGTTCTCACTGATATGTGGGAACTAAAAAAATATTGAACACAAA 57926

Drosophila ------------------------------------------------------------

Canis AGTAACAGTTAATGTAGA---------ATGTGCTGGTGCAA--------TTGAATGCA-- 33405

Bos ----------------------------------GGTGC--------------------- 5947

Rattus -CTGAAAATTATTTTTCCTTTTATTATCATTTGCG-------------GAAAACATCA-- 49629

Danio ------------------------CGTCATTTA--------------------------- 6577

Mus -CTGAAAATTATTTCTC--TTTATTGTCATTTGTG-------------GAAAACATCAAT 38859

Gallus -TGGAA---------------------TCCTTATA-------------AAATAGAACA-- 28184

Anopheles ------------------------------------------------------------

Homo TTTTACAGCTGACACACATATGCCTGCCACCTAGATTCTGCCATTAATACTTACATTGCT 57895

Pan TTTTACAGCTGACACACATATGCCTGCCACCTAGATTCTGCCATTAATACTTACATTGCT 57986

Drosophila ------------------------------------------------------------

Canis -------------------------GCCACCTATG-------GGGAATTATAGTACAGGG 33433

Bos ------------------------------------------------------------

Rattus --GTTGTTAATTAATTCTTTCATATGTTACATCCTGACTGCATTTTCTTCTCTTTGCACT 49687

Danio -----------------TCTCATATG-------------------------CTTTG---- 6591

Mus TAGTTATTAATTAATTCTTTCATATAGTTTATCCTGTCTGCATTTTCTTCTCCCTGCACT 38919

Gallus ---------------CATTTAATATGCTCAAGTACAAACCAGCAGGTTTCAGTGTGGGGG 28229

Anopheles ------------------------------------------------------------

Homo TTATCGTATAACCATCCTTGTATCCATCAATCCATCTTAAT-TTTTATGCCTTTCAAA-G 57953

Pan TTATCGTATAACCATCCTTGTATCCATCAATCCATCTTAAT-TGTTATGCCTTTCAAA-G 58044

Drosophila ------------------------------------------------------------

Canis TAGATGGACACATGTTTTTGCCTCTGT-GCTTCATCATAG------GTGCTTATTGAGTA 33486

Bos --------------CTCCTGCCCCTGC-CAGGCATGAT--------GT-CTTTTTGAG-- 5981

Rattus CCTCTCAGTCCCTTCTTCCTACCTCCCCTCA---------ACCTACAGATCCATTACCCT 49738

Danio ------AGACCCTGCT-------------------------------------------- 6601

Mus CCTCTCAGTTCTTTCCTCCTCCCTTCCCTCA---------TGCTTCAGATCCACTACCCT 38970

Gallus TGTTCTGCTGTATTCTTAA----------------------------------------- 28248

Anopheles ------------------------------------------------------------

Homo TTAATTGCTAACATTAGTACACATCCCTCTAGGTGAAACCATTTTTAAACTGATTGCTGT 58013

Pan TTAATTGCTAACATTAGTACACATCCCTCTAGGTGAAACCATTTTTAAACTGATTGCTGT 58104

Drosophila ------------------------------------------------------------

Canis GTTATTACTAATCTTTGC-----TTCCT------------GTTTTTGC-----------T 33518

Bos ---ATTGCCATTTTTTG------------------------------------------- 5995

Rattus CCTCTTTCCCTTCATTTAA-AGCAGGCT-CCCATGGATATCAATCAA----ACCTGGCAT 49792

Danio --------------------------------ATG------------------------T 6605

Mus CTTCTTTCCCGTCATTAAAGAGCAGGCTTCCCATGAATATCAACCAA----ACCTGGCAT 39026

Gallus --------------------------------GTAAAATACAAT-------GTTCAGCCT 28269

Anopheles ------------------------------------------------------------

Homo CAAGTTGTCTAGAGTAAACTCTGATCTTCCAAGTATGACTTATTCCATAGGACTTCTGTT 58073

Pan CAAGTTGTCTAGAGTAAACTCTGATCTTCCAAGTATGACTTATTCCATAGGACTTCTGTT 58164

Drosophila ------------------------------------------------------------

Canis CAAGTCT----GTGTAATTTAGCAGCTCCT---TATACTTTCTTCCA----------ATA 33561

Bos -------------------------------------------TCCA----------AGA 6002

Rattus AACAACAAGTTTCAATAAGATTAGGCACCTAT-----CCTCCCATAAAGGCTAAACAAGG 49847

Danio AGCGGTAGCTTACTAT-------------------------------------------- 6621

Mus AACAACAAGTTTCAATAAGATTAGGCACACACATAACCTTCCCATTGAGGGTGGACAAGG 39086

Gallus TCGAATATTTTACTACA------------------------------------------- 28286

Anopheles ------------------------------------------------------------

Homo TGTAGCACTGTCCCATTAATTCAATCATAGAAATAAATAATTGGAAAGTATTGTCTGTTT 58133

Pan TGTAGCACTGTCCCATTAATTCAATCATAGAAATAAATAATTGGAAAGTATTGTCTGTTT 58224

Drosophila ------------------------------------------------------------

Canis TGCTACTCTGTCCTCCTACTCCC------------------------------------- 33584

Bos TGCTGTCCTGTTCCC--------------------------------------------- 6017

Rattus CAAGCCATTTAGGATGAGAAGGTTCTCAGAAGCAGGCAAGAGTGTCAGAGGC--ATCCCT 49905

Danio ------------GGTGAGG---------GAGGCAAGTGCGAGTATTTAAAAC--GCTCC- 6657

Mus CAAGCCATT-GGGAGGATAAAGTTCTCAAAAGCAGGCAGGAGAGTCGGAGAC--ATCCCT 39143

Gallus ------------GATTGTG------TGAAATATCGGGATGAATGCTGAACGCTGATTCC- 28327

Anopheles ------------------------------------------------------------

Homo TAAATGGATAAGTATTTTCATGTGTCTGACTTTAGAGGACTTTTACTAGAAGGTCTCACT 58193

Pan TAAATGGATAAGTATTTTCATGTGTCTGACTTTAGAGGACTTTTACTAGAAGGTCTCACT 58284

Drosophila ------------------------------------------------------------

Canis ---------------------------------------TTTTTCCTACAACTTTCTACT 33605

Bos ------------------------------------------------------------

Rattus TACTTCTGCTGAT--AGTTGTCCTATAAGGATACCAAGCTACAAAAGTTTAACGTACAAG 49963

Danio ------------------------------------AACTAC------TTAA------AA 6669

Mus TACTTTCACTGCT--AATTGTCACACAAGGACATCAAGCTATACAAAACTATAACATATG 39201

Gallus ------------------------------------AAATATGGATCTTCACTGCATCTC 28351

Anopheles ------------------------------------------------------------

Homo TGACCTTCATTGCTGACTAAATAAGAAAAGTTTGTTTTATTTTAAAAATCAACACAT--- 58250

Pan TGACCTTCATTGCTGACTAAATAAGAAAAGTTTGTTTTATTTTAAAAATCAACACAT--- 58341

Drosophila ------------------------------------------------------------

Canis TACTAT----------------------AGTATTTTTCCTATTAGGAATTAACAAATGCA 33643

Bos ----------------------------AGTGCTCTT----------------------- 6026

Rattus CCGAAGATCTTTGTCAGACTCATTCAGGCTCCCTGATTTTTGCTTTAGTCTCTGTTAACC 50023

Danio ACAAAGA-------------------------------------------------AAC- 6679

Mus CAGAAGACCCAGGTCAGACT----------CCCCAATTGTTGCTTCAGTCTCTGTTAACC 39251

Gallus CAAAATTCATCTGTC------------------------------------------TTC 28369

Anopheles ------------------------------------------------------------

Homo TATAACATACTTTGTTTTTTGAGTAATAA---GAAAAGTCAATGGAATGTGAAGAAATTA 58307

Pan TATAACATACTTTGTTTTTTGAGTAATAA---GAAAAGTCAATGGAATGTGAAGAAATTA 58398

Drosophila ------------------------------------------------------------

Canis TTAAGTACACTTGTACTTTTGATTGTTA----------------------------ATTA 33675

Bos --------ACCTGCCCTTTTGG-------------------------------------- 6040

Rattus CCT-ATGAGCTCAACTGAGTTGATTCTGTGGGCTTTGTTGTTTTGGTGTCCTTGACCCAT 50082

Danio -----TGTGCACAATT-------------------------------------------- 6690

Mus CCTTATGAGCCCTGCTGAGTTGATTCTGTGGGCTATGTTTTTGTGGTGTCCTT------- 39304

Gallus TTAGATGAGTTCATTCATTTGTGTTCTGAAATTACTGCAAATGTGGAGATTTT------- 28422

Anopheles ------------------------------------------------------------

Homo TAGCAAGTAAGCTGTTGTTCCTCTTCTAGGAATTTTGATTATGAACAGCTGATAAGGTAT 58367

Pan TAGCAAGTAAGCTGTTGTTCCTCTTCTAGGAATTTTGATCATGAACAGCTGATAAGGTAT 58458

Drosophila ------------------------------------------------------------

Canis TA----------------------TTTGTTAATTCTGATTACAAAG-------------- 33699

Bos ---------------------------GGTGACCCT-----CAG---------------- 6052

Rattus CTGGCTCCTACAGTCTTACTTCCCTCTTCAGCAGGACTCTTCAGGCTCTCAGGGTTTGAC 50142

Danio ------------------------------------CTCTGCATGC-----GTGTTT-AC 6708

Mus -TGGCTCCC---------TTCCCCTCTTCAGCAGGACTCTTCAAG-------GGTTTGGC 39347

Gallus -------------------------------------TTTTTAAGTGCA-GTTGTATGCC 28444

Anopheles ------------------------------------------------------------

Homo ------------TACTAAGGGATCTCATCAGGGAAATTCCTTTCTTTCCTTCTTTTTCTT 58415

Pan ------------TACTAAGGTATCTCATCAGGGAAATTCCTTTCTTTCCTTCTTTTTCTT 58506

Drosophila ------------------------------------------------------------

Canis -------------------------------------------------TTCTATATGTA 33710

Bos --------------------------------------------------CCCATGT-TG 6061

Rattus TG-GGGTCTTTGCATCTGCTCCTATCAGTCTCTGTAGAATCCTTTTAATGG---CCTTGC 50198

Danio TG-GA--------------------CAGTCTTT--------------------------- 6720

Mus TGTGGGTCCCTGCATCTGCTTCTATCAGTTTCCGTAGAATCCGTTTTAA-------TGGC 39400

Gallus TGTATTAGTTTGA--TTACTTCAACCAGTTTTGTAA--------------------TTGC 28482

Anopheles ------------------------------------------------------------

Homo TTGCATCCTCTCCCTTTCCTCACTTTCTTTTCCCCTTTTTCCCTTTTCCCCTCTCCTCTT 58475

Pan TTGCATCCTCTCCCTTTCCTCACTTTCTTTTCCCCTTTT-CCCTTTTCCCCTCTCCTCTT 58565

Drosophila ------------------------------------------------------------

Canis TTAAGTAGCCTGCC---CCAAACTCTGTTTTTGCATAAA--------------------A 33747

Bos TT-------CTGC------ATACCCCACTTTTCCACATA--------------------G 6088

Rattus TTCTTAGAAAGCAATAAACAAGTGGGAACTATCGTTTATAGAGGAACACTGT-------- 50250

Danio ----------------------------------------------CACTGA-------- 6726

Mus TTCTTAGAAAGTAATAAAGAAGTGGAAACTATTATTTAAAGAGGAACACTTTTACTGGTA 39460

Gallus TCTGTAGTAAATGAGATGTAAG-------------------AGTTGCACTTC-------- 28515

Anopheles ------------------------------------------------------------

Homo CTTTTCTTTAATAGTACTTGGG----------------GAAAGGTATACCTTT------- 58512

Pan CTTTTCTTTAATAGTACTTGGG----------------GAAAGGTATACCTTT------- 58602

Drosophila ------------------------------------------------------------

Canis ATTTTCTTAAGTATAAA------------------------------ATTTTA------- 33770

Bos CTCTTCCTGG-------------------------------------ACTCTG------- 6104

Rattus -----CACTTGATTCTTATTATGAACTAAATAAGAAAGGCATAATTTTATTTAAGAAATC 50305

Danio -----CACTT-------------------ACAGCAGAGAC-------------------- 6742

Mus GGATTCACTTGATTCTTAT---AAACTAAATAAAAAAGGCATATTTTTATTTAAGGACTC 39517

Gallus ------AAATAATTTCAGTTTCTGAGTTAAGAAAAATAACA------------------- 28550

Anopheles ------------------------------------------------------------

Homo -----TATTTTACGGATTTGCTCAGGGTAAAGAGAGAGTTA-------AGAGGCCAAATG 58560

Pan -----TATTTTACGTATTTGCTCAGGGTAAAGAGAGAGTTT-------AGAGGCCAAATG 58650

Drosophila ------------------------------------------------------------

Canis -----TAGACTAAGTGTATTTTCAGGAGCATGTATACATT------------GTAAAATA 33813

Bos ---------CTA-GTGTGGGCTCAGG----TGTATA----------------------TG 6128

Rattus AATATATTGTATTTGGATTTGCAAGAAAAGTCAGTTGAATGTGA-TAGACAAAAGTAACT 50364

Danio ------------------------------CCGTTTCACTGTTA-TGGAGAAA-----CT 6766

Mus ACTATATTGTACTTTGATTTCCACGAA--GTCAGTGGAATATGAATAGGCAAAAGTAACT 39575

Gallus -----------------------------GGTGAACAAAAATGATACAACAAA------T 28575

Anopheles ------------------------------------------------------------

Homo ATTAGATGGCAGGGTCACTGGAGGGCAGAGATAAATAATAGATCCTAAACTAAGGGTTGG 58620

Pan ATTAGATGGCAGGGTCACTGGAGGGCAGAGATAAATAATAGATCCTAAATTAAGGGTTGG 58710

Drosophila ------------------------------------------------------------

Canis CACAGATA-------CACC-----------ATACAGAAATGTTTCTTCATTCAG------ 33849

Bos AACAG--------------------------------------TTTTGAT---------- 6140

Rattus GGTACCTCCTCTTCGTAGAGTT-------T-GGTTATGAATATCAAGAAAGGGATTCACT 50416

Danio G-----------------------------------------------AAGGGAAACAC- 6778

Mus GCTACCTCCTTTTTGTAGAGTT-------TTGGTTATGAATATCAGGAAACGGATTCACT 39628

Gallus GATTTGCTTGTTCAGTTGACTT-------TTTTTTCTTTGAAGTGGAAAGAGGGCTAATA 28628

Anopheles ------------------------------------------------------------

Homo CAAACATTTTCTGTAAAGGGCAGGTGGTATTTGTTTTAGGTTTTGCAGGCCTAAAGTACT 58680

Pan CAACCATTTTCTGTAAAGGGCAGGTGGTATTTGTTTTAGGTTTTGCAGGCCTAAAGTACT 58770

Drosophila ------------------------------------------------------------

Canis ----CATTTTCTCAGTAGAACA------------TCTAAACATTGTG-------AATGTT 33886

Bos --------------GTAGAACA------------T------------------------- 6149

Rattus TCATTTCCCGATTTTA-------------TTTTCCTCT--TTTTCTT-TTATGCTCCTTT 50460

Danio --ATT-----------------------------CTCT--TTCTCTCGCTGTGGACCTTT 6805

Mus TCATTTCCTGA----A-------------CTTTACTTTGGTTTTTCTTTTATGTTCCTTC 39671

Gallus AAACCTTGAGA-------------------CTGTCTTTCGTAGATTTGTTTTGGCTATTC 28669

Anopheles ------------------------------------------------------------

Homo CAACTCTGCCATTGTAGTATGAAAAACAGCCATAAACTATATAGTATATTGTATTAGTCC 58740

Pan CAACTCTGCCATTGTAGTATGAAAAACAGCCATAAACTATATAGTATATTGTATTAGTCC 58830

Drosophila ------------------------------------------------------------

Canis TGTGTCTCTTATTATA---------------ATGGTTTTTAAAGTAATTTATGTCTGTTC 33931

Bos ------------------------------------------------------------

Rattus CT-TTTCCCCAGCCTCTTTTTGTTAAAGT---AATACTTAAGAAGAA--AACCTTA---- 50510

Danio -------------------------------------------------AACCT------ 6810

Mus CTACTTCCCCACTCCCTTTTTGTTAAAGT---ACTAAGTAGGAAGAAAGAACCTTACTCT 39728

Gallus ATGGTTT-------------------------------TAGAACATACCATTCTCA---- 28694

Anopheles ------------------------------------------------------------

Homo TTTTTCACGCTGCTGATAAAGACGTACCTGAGACTGGGAAAAAAAAAAGAAGTTTAATTG 58800

Pan TTTTTCACGCTGCTGATAAAGACATACCTGCGACTGGGAAAAAAAAA-GAAGTTTAATTG 58889

Drosophila ------------------------------------------------------------

Canis -----------------------------------------------AGCATTTTAAGTG 33944

Bos -----------------------------------------------AACACTT------ 6156

Rattus -TTCATCTTCTGAGCGCAAAGTGAAAA--TAAGGAGGCCAGATAATTAGATGAAAGTTTC 50567

Danio ------------------------------------------------------------

Mus ATTCATCTTCTGAGGACAAAGAGAGAAAGTAAGGAGGCCAGATGATTGGTTGAAAGTTTC 39788

Gallus ------------------------------------------TGATTGTACCAAAGTTAA 28712

Anopheles ------------------------------------------------------------

Homo GACTTACACTTCCACATGGCTGGGAAGGCTTCAGAATCATGGCGAAAGGTGAAAGACACT 58860

Pan GACTTACACTTCCACATGGCTGGGAAGGCTTCAGAATCATGGCGAAAGGTGAAAGGCACT 58949

Drosophila ------------------------------------------------------------

Canis AA---ACAC---CAAATAG------------------------GAAAAGT-ATGGGCACA 33973

Bos ---------------ATAG------------------------GAAGAGA-A-------- 6168

Rattus ACTGGCATGT------------ACAAGGAATTCATTTTAAGTTGACAAAATATT------ 50609

Danio GCTGTCATG---------------AGGTAGTTCCCTTTC--------------------- 6834

Mus ACTGGCATGC------------ACAGGGAATTCATTTTAAGGTGACAAAGCATT------ 39830

Gallus CCTTTAGTGT------------G-AAGCTGTGTTTTTACTGAATGCTAAACCTT------ 28753

Anopheles ------------------------------------------------------------

Homo TCTTGCATGGCAGTGACAAGAGAAAATGAGAAGGATGCAAAAGCGGAAACCCCTGATAAA 58920

Pan TCTTGCATGGCAGTGACAAGAGAAAATGAGAAGGATGCAAAAGCGGAAACCCCTGATAAA 59009

Drosophila ------------------------------------------------------------

Canis TTTTATAT--------------AGAATTAGTAGAATGT-----CAGAAACACTTGA---- 34010

Bos -----------------------GAATT-------------------------------- 6173

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ACCATCAGATCTCGTGAGACTTACTACCACAAGAACAGCATGTGGGAAACTGCCCCCATG 58980

Pan ACCATCAGATCTCGTGAGACTTACTACCACAAGAACAGCATGTGGGAAACTGCCCCCATG 59069

Drosophila ------------------------------------------------------------

Canis ----------------AGGCATTCT-------GAACAGCGCATCAACAA----------- 34036

Bos ------------------------------------------------------------

Rattus ----------------------TTACTTTTGGCTAGATCCAATATGATAGAGTCCACACC 50647

Danio -------------------------CTCTTGGCTG---------TAACAGCG-------- 6852

Mus ----------------------TTACTTTTGGCTAGATACATTATGATAGAGAACATACA 39868

Gallus ----------------------CCAATTATGACTACTAGACAGATTATTTATTTGCAAAT 28791

Anopheles ------------------------------------------------------------

Homo ATTCAGATTATCTCCCAGGGGGTCACTCCTACAACACATGAGAATTATGGGAGTACAATT 59040

Pan ATTCAGATTATCTCCCAGGGGGTCACTCCTACAACACATGAGAATTATGGGAGTACAATT 59129

Drosophila ------------------------------------------------------------

Canis ----AGGGTATCT----GGGTGTTGCTGTCCTTTGAGATAGG--TCATATTACTGCATTA 34086

Bos ----------------------TTGCT-----------TAG------TATT--TTCATTA 6192

Rattus GAAAA-------------------------------------------------TTTATA 50658

Danio ------------------------------------------------------------

Mus GGAAA-------------------------------------------------TATACA 39879

Gallus CAAGG-------------------------------------------------GATGAG 28802

Anopheles ------------------------------------------------------------

Homo CAAGATGAGATTTGGGTGGGGACACAGAGCCAAAGCATTATCATATATAGTATATTTATA 59100

Pan CAAGATGAGATTTGGGTGGGGACACAGAGCCAAAGCATTATCATATATAGTATATTTATA 59189

Drosophila ------------------------------------------------------------

Canis AAAAA---------------------------------------ACCCACTTTGTTAATA 34107

Bos TAAAA---------------------------------------AC------TGATAGTA 6207

Rattus A-TACTTGAAATTTACTATGTTACATAAGAAATTATGGACATAAAAATTTAAG-TTTTAT 50716

Danio A-TACTTC---------------------------TGGATACAAACAT--AAGCTTTTGT 6882

Mus AGTACTTGAAATTTACCATGTTACATTAGAAATTATGGACATAGACATTTAAG-TTTTAT 39938

Gallus GGCACTAGAGAG----------------------AAGGAGACTACAATGTAAGCTGGCAT 28840

Anopheles ------------------------------------------------------------

Homo AATCAATGAACTTGGGTATGTTCCAGTACACTTGATGGATACTGGAACTTGAA-TTTCTT 59159

Pan AATCAATGAACTTGGGTATGTTCCAGTACACTTGATGGATACTGAAACTTGAA-TTTCTT 59248

Drosophila ------------------------------------------------------------

Canis AGTTTATGA---------------------TTTGATG-ATTTAGGAAGCAGAG-TGTTTT 34144

Bos ACCCTA----------------------------------------------A-TGTTTT 6220

Rattus GCAGTTTTCACACATGAAACAAAATAT---TTTTTAATGATTT----------AAGAATA 50763

Danio GCAG-------------------------------------------------------- 6886

Mus GCAATTTTCACACATGAAACAAAATATAATTTTTTAATGATTT----------AAGACTA 39988

Gallus CTTGATTGTTGCCTAAAAATAAGCATT--------------------------------- 28867

Anopheles ------------------------------------------------------------

Homo ATAATTTTCACGTTACAAACTATTATTATTTTTCAAACTTTTTCCAGCCATTTAAAAATG 59219

Pan ATAATTTTCACATCACAAACTATTATTCTTTTTCAAACTTTTTCCAGCCATTTAAAAATG 59308

Drosophila ------------------------------------------------------------

Canis ATGTTTTT----TTAAAAATC----TTCTTTTTAAAATTTTTTT--------TAAAAAGA 34188

Bos AAGTTCT----------------------------AATTTTTT----------------- 6235

Rattus CAAAATATTCTAAACTTCAACTGTAAAACAT--------AGTAGATTTGGCATATGAGCT 50815

Danio ------------------------------------------------------------

Mus TAAAATATTCTAAACTTCAACTGTAAAAAA---------AGTAGATTTGACACATGAGGT 40039

Gallus --------------------CAAAAAAAAGA--------AATCCACCTACCAAATGAAAA 28899

Anopheles ------------------------------------------------------------

Homo TAAAATATTCTAAGCTTGAGAGACATAAACAGGTGGTGGACTCGATTTGACTTACGAGCT 59279

Pan TAAAATATTCTAAGCTTGAGAGACATAAACAGGTGGTGGACTCGATTTGACTTACGAGCT 59368

Drosophila ------------------------------------------------------------

Canis TT---TTTTATTGATTTGAGAGAAAGAG------------------------CACAAGC- 34220

Bos --------------------AGAAAGAA------------------------C-CAA--- 6247

Rattus ATAATTTAGTGAC---TTTTATGTTATGGATTAACAT---TGGGAGGTTATCAAAAGCTA 50869

Danio -------AGTGAG---TTTT---------------------------------------- 6896

Mus ATGATTTAGTGACCAGTCCTATGT-ATGGATTAGCAT---TGGAAGGTTATCAAAAGCTA 40095

Gallus AAATTTAAGCAAA----------------------------------------------- 28912

Anopheles ------------------------------------------------------------

Homo ATGATTTGGTGACCCATATGGTACAAGGATTTCCCTTGCGCAGGAACTATACCAAAAAGT 59339

Pan ATGATTTGGTGACCCATATGGTACAAGGATTTCCCTTGCGCAGGAACTATGCCAAAAAGT 59428

Drosophila ------------------------------------------------------------

Canis ----------------------ACAGGG-------------AGGGGC-AGAGGAAGAAGC 34244

Bos -----------------------------------------AGGGAC-AGCTGAA----- 6260

Rattus TATTATTTGTATATATGTTTCCAAGTTTAGAGGCTTTTTACATGTCCTGAATGAATCTGT 50929

Danio -----------------------------------CTTCAC----------TGCATCT-- 6909

Mus --TTATTAGTATGTATGTTTCCAACTTTAGAGGCCTTTTACATGTCCTTAATGAATTTAT 40153

Gallus ----------------------------------------------------GAATGTGA 28920

Anopheles ------------------------------------------------------------

Homo CGTTATTAGTGTATACTTTTCCAACGTAGAGGCCCTTTTATGTGCTCTA---AATTTTGT 59396

Pan CGTTATTAGTGTATACTTTTCCAACGTAGAGGCCCTGTTACGTGCTCTA---AATTTTGT 59485

Drosophila ------------------------------------------------------------

Canis -----------------------------AGGCTCTGATATGGGACTCA---GTCCCAGG 34272

Bos ---------------------------------TTTGTCTTG------------------ 6269

Rattus ATGCCCTGAATTTGGCATTCAAGTGTATATCATATATAATGGAGAAAAGAATAGTTTATT 50989

Danio ----------------------------ATCATA-------------------------- 6915

Mus ATGCCCTGCATTTGGCATTCAATGG--TATCATTTATAATG-AGAAAAGAATAGCTTATT 40210

Gallus A---------------------------ACTGTTTACAGCAAAG---------------- 28937

Anopheles ------------------------------------------------------------

Homo ATGCCTTTTAC-----------------ATATCCTAAATTAGATAGTGATGCAGATGAGG 59439

Pan ATGCCTTTTAC-----------------ATACCCTAAATTAGATAGTGATACAGATGAGG 59528

Drosophila ------------------------------------------------------------

Canis ACCCTAAGATC-----------------ATGACCTGAGCCGAAGGCAGATGC-------- 34307

Bos ----------------------------ATGACC-------------------------- 6275

Rattus ATCACTAACATGGTTGATTAATCATATTATTTAACCAACCATATTAACCTATT-AATTAA 51048

Danio ---------------GATCAGT-------------------------------------- 6922

Mus ATT---------GTTAATTAATCATATT-------CAATCATATTAACCAATTTAATTAA 40254

Gallus ---------------AATTAGA-------------------------------------- 28944

Anopheles ------------------------------------------------------------

Homo TCAGATAAATTAAGGTGTCATTGGAGTGAGGAAAAAAGAAGAATGCTTAATATAGTTGAT 59499

Pan TCAGATAAATTAAGGTGTCATTGGAGTGAGGAAAAAAGAAGAATGCTTAATATAGTTGAT 59588

Drosophila ------------------------------------------------------------

Canis -----------------TTAACCGACTGAGCCACCCAGAC--ATCCATAGTGT------- 34341

Bos ------------------------ACTG-------------------------------- 6279

Rattus CTTA-TATTAATCAACCCATATTAACCAAGTTAGTCAACTTAATATGGTTGATTCTATGA 51107

Danio ------------------------------------------------------------

Mus CTTAATATTAATAAACGCACATTAATCAAATTAGTCAACTTAATATGGTTGAT------- 40307

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCCACCATTAACTTGGAGGTTCTGGC---------------------------------- 59525

Pan TCCACCATTAACTTGGAGGTTCTGGC---------------------------------- 59614

Drosophila ------------------------------------------------------------

Canis ------------------GTTTTG------------------------------------ 34347

Bos ---------------------CTG------------------------------------ 6282

Rattus GTATTTTGGAGGTTTTATTATGACCTCTGTTTACTTAATAT--TATTATTACTATTATTA 51165

Danio ------------------TGTGATCGCTG------------------------------- 6933

Mus ------------------TATGACCTCTGTTTATTTAATTTAATATAATTATTAGTATTA 40349

Gallus -------------------AAGACCTGTAG-----------------------------A 28956

Anopheles ------------------------------------------------------------

Homo ----------------ATGGCTTCCTTTAGTCCTGTC-----------------TCATCA 59552

Pan ----------------ATGGCTTCCTTTAGTCCTGTC-----------------TCATCA 59641

Drosophila ------------------------------------------------------------

Canis ----------------------TCCTTTAGTTACTTA-----------------TAGTAG 34368

Bos ----------------------GTCT---GCTACTT------------------TAGGAT 6299

Rattus GTG-GGCTGCTATTTG----TAACTAGGTGCAAAGAAGCTAGTCAGTTACAAGCATTTAC 51220

Danio ------CTGCCGTTTA----T----------------------CAGT------------- 6948

Mus GTG-GGCTACTACTTG----TAACTTGGTGCAAAAAAGCTGGTCAGTTTCAAACATTTTC 40404

Gallus GTC-AGCAATGAAATA----TAACTCTGTTCTAAGAAAC--------------------- 28990

Anopheles ------------------------------------------------------------

Homo GTGTAGCTGCTATTT--GTTAAACTTGGCACAGAAAGGCAGATCAAATATAGAGGGCTAC 59610

Pan GTGTAGCTGCTATTT--GTTAAACTTGGCACAGAAAGGCAGATCAAATATAGAGGGCTAC 59699

Drosophila ------------------------------------------------------------

Canis GTATATATTCTATTTTGGTTACATTTTAGGGAACAAGGGA-------------------- 34408

Bos CTGCGTCCTCTATT-------------------CAAGGG--------------------- 6319

Rattus TCTGCTATCTCTCCTTTAGTAG-TACTAAACTTTCAAAT------------------TTT 51261

Danio ---GTTATTCATCTGTGAACAG-CGCCAGAC---CA----------------------TT 6979

Mus TCTGCTGTCTCCCCTTTAGTAA-TGCTAAAATTTCAAAT------------------TTT 40445

Gallus -CTGAGGTGCTCCAGTGAATAC-TAACACTATTTTCATC------------------TTT 29030

Anopheles ------------------------------------------------------------

Homo TTTCAGATCCTCCTCTTAATAGTTATTAAAAGCTCAAGTTTAGTAGCTGAGTTCAAATCT 59670

Pan TTTCAGATCCTCCTCTTAATAGTTATTAAAAGCTCAAGTTTAATAGCTGAGTTCAAATCT 59759

Drosophila ------------------------------------------------------------

Canis TTTTTCATTGTTTTGTAAGAAGGTGTTATAATTT-----------------------TTT 34445

Bos -----CACC--------------TGTTG--GTCT-----------------------GCC 6335

Rattus GGAGTCAAGCCTAGATTTTAGTTTTGTCACACGTGTGGCTTCATATGTCATTCCTCTGAG 51321

Danio AGAGCCAA------------------TCGCA---------------GCCCTTTCT----- 7001

Mus GGAATTAAGCCTAGA-----------TTTTA------------------ATTTTTC--AG 40474

Gallus --AGCTGATGTGAGG-----------ATGTG-------------------TCCCCACATT 29058

Anopheles ------------------------------------------------------------

Homo CTTATTAGATGTATGA---------CTTATG----------------TAATTTCTCTGAG 59705

Pan CTTATTAGATGTATGA---------CTTATG----------------TAATTTCTCTGAG 59794

Drosophila ------------------------------------------------------------

Canis CCAATTAAAATAATGG---------GAAAT------------------AAGCTCCCAG-- 34476

Bos TCAA----------GG---------GCA--------------------------CCTG-- 6348

Rattus ATTTAGTGGAATGTGAGTTCTCTTGGCCAAGTCATATACGTGTGCAAATGATAGAAATTG 51381

Danio ATTAAGTG-------------CGTGACCA-GTCATAG--GGGTGCAA--GAAAGAACTCC 7043

Mus ATTTAGTGCAATG-GAGTTCTCTTGACCAAGTCATATACTCATGCAAATGATAGAAATTA 40533

Gallus ATTTAAGA-------------TCTGAGTAAGCAA-----AGATGCAAACGGTAGGGAGGG 29100

Anopheles ------------------------------------------------------------

Homo CATCAGCAGAATGAAGGTTTATAGTGCTAACTCATACACTTGTGAGGGTGATAGTAACAA 59765

Pan CATCAGCAGAATGAAGGTTTATAGTGCTAACTCATACACTTGTGAGGGTGATAATAACGA 59854

Drosophila ------------------------------------------------------------

Canis --TTAGCAG----------------------TTTCACACTTTTCAGAAAGA-------GA 34505

Bos --TTGG--------------------------TCTGC-CTCTTCAGA------------- 6366

Rattus CAGCAATTGCAATCGTGTCTGACA-TTTACCAATAGGGCTTAGTATTTAACAAGTAATAT 51440

Danio TAGCGA-------------------------------GCTCAGAA---AGCGAGCAGGAT 7069

Mus TAGCAATTGCAATAGCATCTGATA-CTTACCATTAGGGCCTAGCATGTAGCAGGTAATAC 40592

Gallus GAAAAG-------------------------GGAGCCAGTTAGTGTTAGACTGGCAAGAG 29135

Anopheles ------------------------------------------------------------

Homo TTACAACAATAATAGTAGTAGCTAACACTTTCATAGTGCTTAGTATGTGCCAGGCAATGT 59825

Pan TTACAACAATAATAGTAGTAGCTAACACTTTCATAGTGCTTAGTATGTGCCAGGCAATGT 59914

Drosophila ------------------------------------------------------------

Canis TTAC------------------------------------TAATATTTAGCAGAAGATG- 34528

Bos ---------------------------------------------TGTAGT----GATG- 6376

Rattus TTTTTTCTTAAGCAGGTATACTATTCCATTAATTATTTTAGAATTTC---------ATAT 51491

Danio ATTTAT----------------ATTTGTTTATTTGCTATAAATGCTC---------ATG- 7103

Mus ATACT-----------------ATTCCATTAATTG----AGGATTTC---------ATAT 40622

Gallus ACATGTTGGGT---------TTGTTTTGCGGCTTGTCTCTTAGTCTT---------GTGT 29177

Anopheles ------------------------------------------------------------

Homo TCTAAGCACTTTATATATATTAACACATTTAATTTTCTCACAATTGGTAATGTGAAGAAG 59885

Pan TCTAAGCACTTTATATATATTAACACATTTAATTTTCTCACAACTGGTAATGTGAAGAAG 59974

Drosophila ------------------------------------------------------------

Canis -----------------------CCTATATGATTTCCCCACTATCTG------AAAGTAG 34559

Bos -----------------------CATTTAGGCTTT-----------------------AG 6390

Rattus ATGA-------------------------------------------TACAATGCATTTT 51508

Danio -----------------------------------------------------ACGTTCT 7110

Mus ATGA-------------------------------------------TACAATGCATTTT 40639

Gallus ATT--------------------------------------------TGAATGGAGATGT 29193

Anopheles ------------------------------------------------------------

Homo AATAATACTCTCACCATGATAATGCTCGTAGATACTACCATTTAAATTACGAGGAAACTT 59945

Pan AATAATACTCTCACCATGATAATGCTCATAGATACTACCATTTAAATTACGAGGAAACTT 60034

Drosophila ------------------------------------------------------------

Canis AGCA------------------------------------------TTCCAAAGAAACTT 34577

Bos AACA------------------------------------------CTCCTGAGGA---- 6404

Rattus GTTCATCTTCACCTCCTGTTTTTCTTCCTACCTCTTCCAAAATCTACCGAAATAGTCTAA 51568

Danio GTGCAT------------------------------------------------------ 7116

Mus GCTCATCTTCACCTCCTATTTTT-TTCCTACCTCTTCCAAAATTTACTGAAATAGTCTAA 40698

Gallus GCACATACAGGATTTTCGTTTGTTTACCTCCCC--------------------------- 29226

Anopheles ------------------------------------------------------------

Homo ACGTCCAGAAAGATCAAGTAATTCATTCAGGGTCACATAGTTAATTAAGAGGTAGAGCCA 60005

Pan ACGTCCAGAAAGATCAAGTAATTCATTCAGGGTCACATAGTTAATTAAGAGGTAGAGCCA 60094

Drosophila ------------------------------------------------------------

Canis TCGT------GAGCCAAG------------------ATGGCAAATAAAGTGAAAAAGCAA 34613

Bos --GT------GAG----------------------------------------------- 6409

Rattus GCAC-------------------------------------------TTGTAATTCTTAA 51585

Danio --AC-------------------------------------------TTG-AGTTTTTAA 7130

Mus ACAC-------------------------------------------TTGTAATTCTTAA 40715

Gallus ---C-------------------------------------------CTACCATCTCT-- 29238

Anopheles ------------------------------------------------------------

Homo TTAT-GTGAACTTGGGCATCTGGCCTCAGAATGCGAGCTCTTAACTGTTAAGGTTTATTC 60064

Pan TTAT-GTGAACTTGGGCATCTGGCCTCAGAATGCGAGCTCTTAACTGTTAAGGTTTATTC 60153

Drosophila ------------------------------------------------------------

Canis TTACCATTAATTT-----------CTGTGAAAACAA---------TTTTGAGGTTCCCTT 34653

Bos -------------------------------------------------GAGGTTTTTT- 6419

Rattus ATCATGAGAATT-----------------------------------------CTGAAAT 51604

Danio A----------------------------------------------------------- 7131

Mus ATCATTTGAATT-----------------------------------------CTGAAAT 40734

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CCCTCTAAAGTGGGAATGTCTATAAAATGCATAGCACATAGGTCCTCAACAAATTAGAGA 60124

Pan CCCTCTAAAGTGGGAATGTCTATAAAATGCATAGCACATAGGTCCTCAACTAATTAGAGA 60213

Drosophila ------------------------------------------------------------

Canis ATCT-------------------------------------------------------A 34658

Bos ------------------------------------------------------------

Rattus ATACCACCATCCTAAGGATGAGGAAGCTGAGACACAGAAAGG--CTAAGTAAGTAGTTCG 51662

Danio ------------------------------GGTACAG----------------------- 7138

Mus ATACTGGCATCCTAAGGATGAGGAAGCTGAGACACAGAAAGAGACTAAATAAGTAGTTAA 40794

Gallus --------------------------CTGCAACATAGGTAAG------------------ 29254

Anopheles ------------------------------------------------------------

Homo GAAATTAACTTTGCAGAATATAGTGGTTCCATTTCCTCAAGA------------AACTTG 60172

Pan GAAATTAACTTTGCAGAATATAGTGGTTCCATTTCCTCAAGA------------AACTTG 60261

Drosophila ------------------------------------------------------------

Canis AAAAATATCCTCTCAGGCT------GTTCTGATACCTTAGGA------------CAC--- 34697

Bos -------------------------GTCCTGACA-------------------------- 6428

Rattus CTCAGTTACAGATCCTGTTCATGAACCTGAACAATCTGGCCCCA---------------- 51706

Danio -----------------TTTATAAATCTGA-----CTG---------------------- 7154

Mus CTCAGATACAGAAACTGTTCATGAACCCAAACAATCTGGCCTCAAAATTGTGAATTTCTA 40854

Gallus -------------------TAAGAATCTTTGCAATCCATCCAAA---------------- 29279

Anopheles ------------------------------------------------------------

Homo GTCTGCCTTTGTGGTACCAGATAGATGCATAAATGTGAGGTTCACGTTATGATTCTTCAG 60232

Pan GTCTGCCTTTGTGGTACCAGATAGATGCATAAATGTGAGGTTCACGTTATGATTCTTCAG 60321

Drosophila ------------------------------------------------------------

Canis ATCTTGCT-----------AATGGATGTACAAAATTGAGATAAACA-------------- 34732

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus CCTGTTACAGACTGAGTCTTCTTATAAAGTGCTTAGCATATCCATTTTCAATAAATTACC 40914

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATTTTTTTCCCAGTTGCACATTAGTTATGAGATTTTTTT--CCATAGAATTCTTCAGTAT 60290

Pan ATTTTTTTCCCAGTTGCACATTAGTTATGATATTTTTTTTTCCATAGAATTCTTCAGTAT 60381

Drosophila ------------------------------------------------------------

Canis ----------CAGATGCCTA----------------------CATAG------------- 34747

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus GATATCTTAAGTATAGTGATATAATTTATTCAGGAGTTTCTATACTGTACCCAGATAGTA 40974

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TACTCATGTTAAAAAA-TAATTATTTTGAAATGAATCACCTTCTGCAAAACAATATAGTC 60349

Pan TACTCATGTTAAAAAAATAATTATTTTGAAATGAATCACCTTCTGCAAAACAATATAGTC 60441

Drosophila ------------------------------------------------------------

Canis --------TTGAAAG----------TTGTGGTGACTTA--------AAGCTGAGATATTG 34781

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus CACATGGTTGTTAAGTTTAGATTGGAATTTTTTGGAAGATTTTGTTTTCTAATTATATAT 41034

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAAATGACTTAGACTCTGAAGCTGAAAGACTCCTGGACTCCTATTCTTG---TCTTGGTT 60406

Pan AAAATGACTTAGACTCTGAAGCTGAAAGACTCCTGGACTCCTATTCTTG---TCTTGGTT 60498

Drosophila ------------------------------------------------------------

Canis AGTGTAATTC-----CTGGG---GAAGGAGCTCGGCAGTGCCACTCTTGCTCCTCGGGGT 34833

Bos -----------------------GAGGG------------------------CTCTGGGT 6441

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TACTTAGGTCTTTTTTTCCCCCTTAAAACTTTTTAGGACTGCTGGTATTAAGAATTAATT 41094

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTGTACTTTCTTTGAGATCTT----------------GGTTTCGTGATTTGACTCCAGTT 60450

Pan CTGTACTTTCTTTGAGATCTT----------------GGTTTCGTGATTTGACTCCAGTT 60542

Drosophila ------------------------------------------------------------

Canis ATATGCTGCCTCTGTAAT--------------------GGCTTGCTGTATAACA--AATA 34871

Bos ---TACTGCAT----------------------------GCTTGCT-------------- 6456

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus CTTCTGAAATTATAATCTGTAAAACAGTGATTGGAAATAAATTGAATTCTGAAGCTGAAA 41154

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTATTTCTCTCTTTGGCTGTGGACTGAAGATAATCCTCAATGTCATGGTATTCAAATGAG 60510

Pan CTATTTCTCTCTTTGGCTGTGGACTGAAGATAATCCTCAATGTCATGGTATTCAAATGAG 60602

Drosophila ------------------------------------------------------------

Canis CTAAATGTTTTTTTGCTTTTTAACT--------TTCTTAGTAT----------AAGTGAA 34913

Bos -------TTTCCTTGCC------------------------------------------- 6466

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ATTGTCCTGACTTCTTTAATGGACATAGCATAAGATCAATTATAAGATTTGATCTTTTCA 41214

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATAACCCATGTCAAAGTGCCCCGCAGTGTGTGTAATAAGTTATCAGGCATCCAGCAAATA 60570

Pan ATAACCCATGTCAAAGTGCCCCGCAGTGTGTGTAATATGTTATCAGGCATCCAGCAAATA 60662

Drosophila ------------------------------------------------------------

Canis GTAGCCT---------------------CATGGGAACTGTCAAAAAGCAAC--------- 34943

Bos --AGCC------------------------------------------------------ 6470

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus GGTCTTTCTCTTTTACTAGCTGTAGACAGAAGATAATCTTCAAGTTCAAGTTTCATATGA 41274

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTAGTTTCTTGCTCACCTCCCTATTACATAAAATAACTTTAAAATTAGAACTGAAGGGAC 60630

Pan CTAGTTTCTTGCCCACCTCCCTATTACATAAAATAACTTTAAAATTAGAACTGAAGGGAC 60722

Drosophila ------------------------------------------------------------

Canis ----------GTATACCTATATATCTAATAGAACAAACCTAAAA---------------- 34977

Bos ------------------------------------ACCCAAAA---------------- 6478

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TAATCAGAGTACCTGACAATGTACTGAGTTTATTATTTGGCATGTAGAGAGTGCTAGCTA 41334

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCATAAAGCTGGGAAAACTGAGGCCCAGACAATTGTTTC------------------CCT 60672

Pan TCATAAAGCTGGGAAAACTGAGGCCCAGACAATTGTTTC------------------CCT 60764

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus GACAAATTATAAGGACATAAGGTGGTAAAATGAGGCCTAGAAAATTAGTTCATTCAACTA 41394

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AGGATCCTACAGCTGCTTAGGGACAGAAGGATGACACTTAATGCAGATCTTCTGATTTTT 60732

Pan AGGATCCTACAGCTGCTTAGGGATAGAAGGATGACACTTAATGCAGATCTTCTGATTTTT 60824

Drosophila ------------------------------------------------------------

Canis ---------------------------AGATTAACTCTTTAT------------------ 34992

Bos ---------------------------AGG------------------------------ 6481

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ATTACATTGAGCTGACTTTTGGATGGTCTCATTTCTCCCTTCAGTATTGAGAGTTCTTTA 41454

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CAGTCTCGTTCTGTTTGTGCTGATCACTCTCCTCCTATGTAGTATATAAAGAAGTACTAT 60792

Pan CAGTCTCGTTCTGTTTGTGCTGATCACTCTCCTCCTATGTAGTATATAAAGAAGTACTAT 60884

Drosophila ------------------------------------------------------------

Canis ----------------------------------------------TAAAGAGTTAAAAC 35006

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TCACATAAAGAAGTAGTGTGTGTATGTGTGTGTGTGTGTGTATGGGTTGGGGGGGCGGCC 41514

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTATCTGACAAGTTTTGGGGAGGTTATTTTAGTATAAAAGCTCACATTAAAAATATCTAT 60852

Pan GTATCTGACAAGTTTTGGGGAGGTTATTTTAGTATAAAAGCTCACATTAAAAATATCTAT 60944

Drosophila ------------------------------------------------------------

Canis CCATAAAAGAAACT------AGGTATTGACAGTCTGATAGTAGGGGCCAAAGAT---CAG 35057

Bos ------AATAACCT------AG-------------------------------------- 6491

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TAGTACTCTTAGAAAACTAGTGTTTTGAACTTTGAAATTAACGCTTAAAAATCCTGGATA 41574

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTGGTATTTTGACTTTTGTAATTTT-----------------TTTAAAAATCAGAGACA 60895

Pan TTTGGTATTTTGACTTTTGTAATTTT-----------------TTTAAAAATCAGAGACA 60987

Drosophila ------------------------------------------------------------

Canis ATTCACATTGTG------------------------------------------------ 35069

Bos ------------------------------------------------------------

Rattus ---------------------TTCAGATCATATAGATGAAGTT--GAAACTT-------- 51735

Danio ------------------------------------------------------------

Mus TAAACATAAACATTGGCTCTATTTAAATCACGTAGATGAAGTTTTAAAACTT-------- 41626

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATTTAGTAAATCTCGGGGCCATTCAAATCATGTATATGAAGTTTTATAACTGCTATTGTT 60955

Pan ATTTAGTAAATCCCGGGGCCATTCAAATCATGTATATGAAGTTTTAAAACTGCTATTGTT 61047

Drosophila ------------------------------------------------------------

Canis ---TGGTAAAATTTGGTATTTTTCTGGT--------TGAACTTTTACAGCTG-------- 35110

Bos ------------------------------------------------------------

Rattus CCCTACTGACACTTAGAAATTTTTATTGTTTAAGTA----------CATAGTAATAGAAA 51785

Danio -------------------TTTGTATT--------------------------------- 7162

Mus CCGTACTGATACTTAGAAATTTTTAGTGTTTAGGTA----------CATACTTACAGAAA 41676

Gallus --------------GGCAGCCTGTTGTCT------------------------------- 29294

Anopheles ------------------------------------------------------------

Homo TTCCCCTTATAGTTATTAATTTTTAATATGCAAGTAGCATCCTTACTATGGAAAGAATAA 61015

Pan TTCCCCTTATAGTTATTAATTTTTAATATGCAAGTAGCATCCTTACTATGGAAAGAATAA 61107

Drosophila ------------------------------------------------------------

Canis TTCATTTTATGATCACTTGAATGTAATACT-------CTCTTTTACTGTGGAACAAATAT 35163

Bos --------------------------------------------ACTGTGG--------- 6498

Rattus ATAAAGTAGTTAGGATGAAAAGCATGCAAGAATTAACTTAATTATTTAGAAAAATATTTA 51845

Danio --AAAG------------------------------------------------------ 7166

Mus A-AACGTAGCTAGGAAGAATT---------AACTCAGTCAATTATTTAGAAAAATAGTTA 41726

Gallus --AAAGCAGT-------------------------------------------------- 29302

Anopheles ------------------------------------------------------------

Homo ATAAGAAATCAAAAGATGGAAGAAGTTTTAAAACTCACTTAATCACATCATCCAGAGAAA 61075

Pan ATAAGAAATCAAAAGATGGAAGAAGTTTTAAAACTCATTTAATCACATCATCCAGAGAAA 61167

Drosophila ------------------------------------------------------------

Canis ACAAAGAGGTAGAAATTGTAGTAAG-----AAATT-------TTATATGTTGTACAGTAC 35211

Bos ----------------TGTGGT-------------------------------------- 6504

Rattus ATATTTTGA---------------AACAGAATCATACTACATTTATAACTTGGTCACTGG 51890

Danio ------------------------GACAAAATTGTACTACA------------------- 7183

Mus ATATTTCGA---------------AACA--TTCATCCTACATTTATAACTTGATCACTAG 41769

Gallus ------------------------GACTCAAACTTTATGCATT----------------- 29321

Anopheles ------------------------------------------------------------

Homo ATGCTATTAATGCTTTGAAATAACAATGGGTTCATCCTACACCTGCTACTTTTTAACTGA 61135

Pan ATGCTATTAATGCTTTGAAATAACAATGGGTTCATCCTACACCTGCTACTTTTTAACTGA 61227

Drosophila ------------------------------------------------------------

Canis ATG-TAT------------------ATGAGTCCATTTGTCAC-------------AATGA 35239

Bos ------------------------------------------------------------

Rattus CTTGTGTTA-----------------------AGGAAATAATAGGA---AGGCTGTTGGT 51924

Danio ----------------------------------AATATGATA----------------T 7193

Mus CTTTTGTTA-----------------------AGGAAGTAACAAAATTAAAGTAGTTGGT 41806

Gallus --------------------------------GTAAAATCATGAA--------------T 29335

Anopheles ------------------------------------------------------------

Homo CTTTTGTCAGTTAGTGATATATCAGGAAGACTAGGCAGTTCTTTGTCGAATTCAAATCTT 61195

Pan CTTTTGTCAGTTAGTGATATATCAGGAAGACTAGGCAGTTCTTTGTCGAATTCAAATCTT 61287

Drosophila ------------------------------------------------------------

Canis AGATTG--AATTACCTACATGT------GTCTAAATTATCCTCTGCCTAATTTATTTGTT 35291

Bos ------------------------------------------------------------

Rattus AAT---------------------------------------------TATTTTACTTGG 51939

Danio AAT---------------------------------------------TAT--------- 7199

Mus AAT---------------------------------------------TATTTTATTTGG 41821

Gallus ACT---------------------------------------------GACCTGTCTTTG 29350

Anopheles ------------------------------------------------------------

Homo GATAGTTTTTATTTTATTGTGTGACCTATTATCAGTTCATTTAAGTAATCTTTTATTAGA 61255

Pan GATAGTTTTTATTTTATTGTGTGACCTATTATCAGTTCATTTAAGTAATCTTTTATTAGA 61347

Drosophila ------------------------------------------------------------

Canis GACATGTC--------------GGTCTGCTGCT---------------TCCTTTATTAAA 35322

Bos ----------------------------CTGTT---------------TCCTTC------ 6515

Rattus TACATGCTGTCAGTATATTGAAGCAGATTGCTATTGTTAG---GCATGGT-AGTTTCTAT 51995

Danio ------------------------------------------------------------

Mus TGCATGCTGTCAGTATATTGAAGCGGTTTGCTGTTGTTAA---GCATGCTGAGTTTCCAT 41878

Gallus TAGTTG------------------------------------------------------ 29356

Anopheles ------------------------------------------------------------

Homo CATGTTTTTTTCAGATATAGAAACAATGCATTTTTGTAAAATTGTCAAATTATTTTCCAC 61315

Pan CATGTTTTTTTCAGATATAGAAACAATGCATTTTTGTAAAATTGTCAAATTATTTTCCAC 61407

Drosophila ------------------------------------------------------------

Canis GGGAT-------AGATTAAGA---------CCTTTGTCAG--TATTATATTATATTTGAC 35364

Bos ------------------------------------------------------------

Rattus AAATAA------------------------------------------------------ 52001

Danio ------------------------------------------------------------

Mus AAATAA------------------------------------------------------ 41884

Gallus ---TAT------------------------------------------------------ 29359

Anopheles ------------------------------------------------------------

Homo AAGTAGGATCTCATTCACACGGTATTCGTGTTTTTAAGACTTTCGATACATGTTCACTGT 61375

Pan AAGTAGGATCTCATTCACACGGTATTCGTGTTTTTAAGACTTTCGATACATGTTCACTGT 61467

Drosophila ------------------------------------------------------------

Canis CAATATAATCTC------------------------------------------------ 35376

Bos ------------------------------------------------------------

Rattus --------------------------------------------------------TAAG 52005

Danio ------------------------------------------------------------

Mus --------------------------------------------------------TAGG 41888

Gallus --------------------------------------------------------GGAC 29363

Anopheles ------------------------------------------------------------

Homo TTTCCTCCAGAAAGGAAATACCTACTTACATTTTCACCAGGGAAGTCACTGTAGTTTGGG 61435

Pan TTTCCTCCAGAAAGGAAATACCTACTTACATTTTCACCAGGGAAGTCACTGTAGTTTGGG 61527

Drosophila ------------------------------------------------------------

Canis -------CACAAAATTAATA-------------------------------------GAC 35392

Bos --------------CTAATG-------------------------------------GAG 6524

Rattus GAAATATATCTTCCTTTTGATGACCT-----------------------------TTTCC 52036

Danio -AAACATATTT------------------------------------------------- 7209

Mus GAAATAAGTCTTCCTTTTGATGAATT-----------------------------TTTCT 41919

Gallus AGAGTAATCTAGCACTCTGGTTATTT-----------------------------TTTTT 29394

Anopheles ------------------------------------------------------------

Homo AGAACATGACATTATCTCCCTTTCTTTACTGAAGGGTAGCAATATATATTTTAAATTTTC 61495

Pan AGAACATGACATTATCTCCCTTTCTTTACTGAAGGGTAGCAATATATGTTTTAAATTTTC 61587

Drosophila ------------------------------------------------------------

Canis AAAATATATCATTTGTTCTCTTTCCT-------ATAAAGTAACATA---TCCAAATAGTT 35442

Bos AGA----------TGTGCT----------------------------------------- 6533

Rattus TATATGTGGCATATCTTACTTCCAT-GATACATTTTAAACTTTATT-------------- 52081

Danio ---------------------------GTACATTTTAA-------T-------------- 7221

Mus CATAAGTGGTATCTCTAACTTC-GT-GATACATTTTAAACTTCATC-------------- 41963

Gallus T-----------------------T-AAGGCCCTTCAA------CA-------------- 29410

Anopheles ------------------------------------------------------------

Homo TAGATTCTGCATTTCCATTTTATTTTTACATGTTTTCACTTTCATATTTTGCATAGTGCT 61555

Pan TAGATTCTGCATTTCCATTTTATTTTTACATGTTTTCACTTTCATATTTTGCATAGTGCT 61647

Drosophila ------------------------------------------------------------

Canis TA--TTCAAAACCTAGAAACTATTT-GGGGTGCTC-CACTTTTATTTCTTACA------- 35491

Bos --------------------------GGCATGTTC-CA-----------TGCT------- 6548

Rattus ------------ACATTTATTT----TCTGTAGATATATGTGACTGGGCATAAGTTTTGG 52125

Danio ------------ACA--------------------------------------------- 7224

Mus ------------ACATTTATTTATTTTCTGTAGATACATGTGACTGGGCATATGTTTTGG 42011

Gallus ------------ACAGTT------------------------------------------ 29416

Anopheles ------------------------------------------------------------

Homo AAATCTGTGATAACAGTTTTTAATTTTCAGGTGGGGTTTATAGCTTCATAGATAGCAAAA 61615

Pan AAATCTGTGATAACAGTTTTTAATTTTCAGGTGGGGTTTATAGCTTCATAGATAGCAAAA 61707

Drosophila ------------------------------------------------------------

Canis -------------CAATTT----------GATAGTGTTTTTATTGACCTATATAGTACTA 35528

Bos -------------CAGTTT---------------------------CCTGT--------- 6559

Rattus TGTGTTTAGAGGTCAGAGGACAACTTGTGGTAATTAGTTCTCTCCTTTCCCCAAGTGGGA 52185

Danio ------------------------------------------------------------

Mus TGTGTTTAGAGTTCAGAGGACAACTTGTGGTAATTAGTTCTCTCCTTTCACCAAGTTGGA 42071

Gallus ------------TCAGAGAA---------------------------------------- 29424

Anopheles ------------------------------------------------------------

Homo TGTCTTTAAGTCATGTTTATGCAATTTTTACATGTGCTTTGTGGGTTTTCTTTTTTCTCT 61675

Pan TGTCTTTAAGTCATGTTTATGCAATTTTTACATGTGCTTTGTGGGTTTTCTTTTTTCTCT 61767

Drosophila ------------------------------------------------------------

Canis CCTTATGGAAAAATGGTCTTGAAATATTAGTAAATACT------GTTTTATATTTTTTA- 35581

Bos ------------------------------------------------TGTATTTTTTT- 6570

Rattus TCCAGGGATCAAACTTGAGTCATCAGGCTT--------TACACTATGAGTGGTAAATATA 52237

Danio ------------------------------------------------------------

Mus TACAGGGATCAAACTTGAGTCATCAGGCTTGGCCTTTGTACACTATGCATGGTAAATATA 42131

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTTTGCATGCAGTGAGTGGTAAATTTGCATGGAACATTTGAAAAATAAGCACCAGAATGA 61735

Pan GTTTGCATGCAGTGAGTGGTAAATTTGCATGGAACATTTGAAAAATAAGCACCAGAATGA 61827

Drosophila ------------------------------------------------------------

Canis -----------------------------------ATTTGAAAGACAA---------TAT 35597

Bos -----------------------------------AGTTG-------------------- 6575

Rattus TAGGGAATATTTCTAAATATAAGTACCTT------------------------------- 52266

Danio ------------------------------------------------------------

Mus CAGGGAATATTTCTAAATATAAGTATCTGAATGAGTTAGGATCGTATGACATACCATTCT 42191

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATTG-AATGTGTGTGAATTATCACTTTTTGTCACCTACCTGGACAGAGAGTGAAAGTTCT 61794

Pan ATTG-AATGTGTGTGAATTATCACTTTTTGTCACCTACCTGGACAGAGAGTGAAAGTTCT 61886

Drosophila ------------------------------------------------------------

Canis TTTGTAATTTGTAGAGATATGCATGCTTT------TGCTTAGATAA-------------- 35637

Bos --------------------------TTT------TCTCTAGAT---------------- 6587

Rattus ---TCATGCAAAGAATGAC------------TCTAAAGTCACTTATCAGTGCT-TATTTG 52310

Danio ------------------------------------------------------------

Mus TTGTCATACAAAGAATGACA-------TAGTCCTAAAGTCACTTATCAGTGCCATATTTG 42244

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCTGTTGAGACAAAATTGGATCTCGTGTGTTTCTTCACTTACTTGCTGCCTTGTTAATTG 61854

Pan TCTGTTGAGACAAAACTGGATCTCGTGTGTTTCTTCACTTACTTGCTGCCTTGTTAATTG 61946

Drosophila ------------------------------------------------------------

Canis --TTTGAAGATGATACTA---------TCTTTTTTCACATATCTGCTGATTAGCAGATTC 35686

Bos -----------------------------------------------GGCTGGGAGGTTT 6600

Rattus TTTATCTC----------------------TAGTGCCATTAGCCTCTTAGTTCTA----- 52343

Danio ------------------------------------------------------------

Mus TTTATCTC----------------------TAGTGCCATTAGTCACTTAGTTCTA----- 42277

Gallus ------------------------------------------------AGCTTTA----- 29431

Anopheles ------------------------------------------------------------

Homo TTGAGTTTCTCATGATTAGCAAGATGTAAACTCTGGCATTGGTCATCTAGTCCTACATGT 61914

Pan TTGAGTTTCTCATGATTAGCAAGATGTAAACTCTGCCATTGGTCATCTAGTCCTACATGT 62006

Drosophila ------------------------------------------------------------

Canis TTTTGTTG--------TACTACAATATGAGTTAATCAATT------TTGCCCCTATTTAT 35732

Bos TT-----------------------AAGAACTAA-------------------------- 6611

Rattus -------------------TCTAAAATTATGGCATGAAGTTTTAGAATGGAATTAGGTGA 52384

Danio ------------------------------------------------------------

Mus -------------------TCTAAAATAATGACATGAAGTTTTAGAATGAAATTAGATAG 42318

Gallus -------------------TTCAAAGTTAAGG---------------------------- 29444

Anopheles ------------------------------------------------------------

Homo TAGATAATTCTGTGAATGTTTTGAAAATCAGC--TGAACTATTTTTCTTATAATT--TTG 61970

Pan TAGATAATTCTGTGAATGTTTTGAAAATTAGC--TGAACTATTTTTCTTATAATT--TTG 62062

Drosophila ------------------------------------------------------------

Canis CAGGAAA----ATAAACACTTAGAAATTCATCAGTGGACTTCCATTTAGGTAACTGGCCA 35788

Bos -AGG-----------------------------GTGGG---------------------- 6619

Rattus ATTCTTTCTACTTGCAGGTCCAATGCTTG-----TATAGATCCAAAAAAATTGCTTTGAA 52439

Danio ----------------------------------------------AGAATTGCTGTG-- 7236

Mus ATTCTTTCTACTTGCAGTTCCCATGCTTG-----TATAGAACCAAACGGATTCCTTAGAA 42373

Gallus --------------------------------------AAGCCTAGGAAAAGGATATGCA 29466

Anopheles ------------------------------------------------------------

Homo ATTCTTTGTAGTTGTTATTTCCATGCTTGTGAATTTGGGACCAAAAGGAATGGCTATGAC 62030

Pan ATTCTTTGTAGTTGTTATTTCCATGCTTGTGAATTTGGGACCAAAAGGAATGGCTATGAC 62122

Drosophila ------------------------------------------------------------

Canis ACCTGTGCTATATGCCATCACC------------CAGGTATAAATGAGGATTGGAAT-AC 35835

Bos ---------------------------------------------GAGGAT--------- 6625

Rattus TTATACTACTGTGGACCAAATATTCAATTCTACTTAAATTTTG-CAGTAATCTCAAAGAA 52498

Danio --------CTGTG----------------------------------------CAGAAAA 7248

Mus TGACATTATTATGGGCCAGATATACATTTCAACTTAAATTTTG-TGGTAATCTCCAAGAA 42432

Gallus GCTTGCTTTTATGCTTGACACAGA-------GTTGGAAGTTTC-AAATAATTTAGAAGAA 29518

Anopheles ------------------------------------------------------------

Homo TTATGTTTCTTTGGATCCAGTAGTTTATTCTACTGAAATTATGGTAATTTTATCAGTTAG 62090

Pan TTATGTTTCTTTGGATCCAGTAGTTTATTCTACTGAAATTATGGTAATTTTATCAGTTAG 62182

Drosophila ------------------------------------------------------------

Canis TGATGTT----TAGTTTTTATAGTTTCT---------ATTATGATGGCAT-GTCAG--AG 35879

Bos -------------------------------------ATTA-----GAAT-GTCAG--GG 6640

Rattus TAGAATTTTAGA--------------TTTAGA---TTATGTAGAACAATTACTTGTTTGG 52541

Danio T----------------------------------------------------------- 7249

Mus TAGAATTTTAGAGTCAAATTATAGAATTTAGG---TTATGTAGAACAACTTCTTGTTTGG 42489

Gallus CTGCCTCTTGGA------------------------------------------------ 29530

Anopheles ------------------------------------------------------------

Homo TAGAAGCATAGACTCTTTAGTGTTGAATATA------ATGTCATCTAACTTCTTACATGG 62144

Pan TAGAAGCATAGACTCTTTAGTGTTGAATATAGAGATAATGTCATCTAACTTCTTACATGG 62242

Drosophila ------------------------------------------------------------

Canis AAGAGG--------------TGGTGAATAGA------------------TTTGGAGTTAG 35907

Bos AAGAG------------------------------------------------------- 6645

Rattus TAAAATAATTTATTTCTTAAATTGTATTGGTTACTTTA---CATGAAAAATATCTTAATC 52598

Danio ----------------TTAAATTGTTT---------------ATGGAAAACAT---AGTC 7275

Mus TAAAATAATTCATTCCTTTAATTGTATTGGTTACTTTG---CATGAAAAATATGTTAATC 42546

Gallus -----------ATTATTTTAGTTAATTT---TTTTTTC---CACACAGAAGGTGGTGACG 29573

Anopheles ------------------------------------------------------------

Homo TCACATAATT-CCTCCCTCAGTTTTGGTAGCTCTCCTGAAACAGCCATAATAGGACATTA 62203

Pan TCACATAATT-CCTCCCTCAGTTTTGGTAGCTCTCCTGAAACAGCCATAATAGGACATTG 62301

Drosophila ------------------------------------------------------------

Canis CCA----------------GCCTACAGTGTCTATCC-------------AGATGACACTG 35938

Bos -------------------------------------------------AAATGGCA--- 6653

Rattus AAATGTTAATTTTCATGGATAAGGTTGATGAA----------TATGAGTTTCCCCTAATA 52648

Danio -----------------GATGCGATTGA-------------------------------- 7286

Mus AAATGTTAATTTTAATGTTTAAAGTTGATGAAGTAAGATGAATATGAGTTTCCCCTGATG 42606

Gallus CAC------------TGGAACAGGTTGCC------------------------------- 29590

Anopheles ------------------------------------------------------------

Homo ATCTGTGTACTTTAAGTTGACAGAGTAAAAGGAATATAAGATTTCACGTGATGGAACTTA 62263

Pan ATCTGTGTACTTTAAGTTGACAGAGTAAAAGGAATATAAGATTTCACGTGATGGAACTTA 62361

Drosophila ------------------------------------------------------------

Canis -----------------TAGAGAGTTGGAAGGAAGACCAGAGTTT------------TCA 35969

Bos --------------------AGACTTTGAAGAGCGCCAAGAATTC------------TAA 6681

Rattus AAAA-------CTTTATCTTTCCTAGGATAAGAACT-AATGAAGAGGGTTAGTGACAAGT 52700

Danio ---A-------CT------------------GAACT-GATG------------------- 7298

Mus GAAGTTTAAACCTTTATCTTTCCTATGACAAGGATTTAATGAAGA----TAGTGACAAGT 42662

Gallus ----------------------------CAAGAAGGTTGTGGA----------------- 29605

Anopheles ------------------------------------------------------------

Homo AAATATT----------CCATCTTGTGACGTGGAACTAATGAGGAGGTTTAGTGACAAGT 62313

Pan AAATATT----------CCATCTTGTGACGTGGAACTAATGAGGAGGTTTAGTGACAAGT 62411

Drosophila ------------------------------------------------------------

Canis TAAGATC----------CCCTTTTA-GATACAGAATGA----------TTGATAATTAAT 36008

Bos TAAAGC-------------------------------------------TGCTAATCTAT 6698

Rattus ATGGG-TTCAAGGTCATATGCCTTAGTGCTTCTCTCTC---------------------- 52737

Danio ------------------------------------------------------------

Mus ATGGG-CTCAAGGTTGTATGCCTTGGTGCTTCTCTCTC---------------------- 42699

Gallus --------------------------TGCCCCATCCCT---------------------- 29617

Anopheles ------------------------------------------------------------

Homo TTTAGATTTAAGATTCTACACTTTGGAGCCTCTTTTTCTTTTTCTTTTTGGTTTTTGTTT 62373

Pan TTTAGATTTAAGATTGTACACTTTGGAGCCTCTTTTTCTTTTTCTTTTTGGTTTTTGTTT 62471

Drosophila ------------------------------------------------------------

Canis TCTAA----------------TTTGGAGTT------------------------------ 36022

Bos ---------------------------GTT------------------------------ 6701

Rattus --------------------GGCATAATACG----------------------------- 52748

Danio ---------------------GCATGATATC----------------------------- 7308

Mus --------------------GGTATAATATG----------------------------- 42710

Gallus --------------------GGAGGCATTCA----------------------------- 29628

Anopheles ------------------------------------------------------------

Homo GTTTGTTTGTTT----TTGAGACAAAGTCTAGCTCTGTTGCCCAGGCTGGAGTGCAGTGG 62429

Pan GTTTGTTTGTTTGTTTTTGAGACAAAGTCTAGCTCTGTTGCCCAGGCTGGAGTGCAGTGG 62531

Drosophila ------------------------------------------------------------

Canis -------------------AGAAATAATCT------------------------CAGTAG 36039

Bos -------------------AGAAATAATGG------------------------CA---- 6714

Rattus ---AGATTTAGATAGTTA----------------ATTTGTGAAGCACT------------ 52777

Danio ---GAATTTAACTG---A----------------ATCGATGG------------------ 7328

Mus ---AAATT-AGATAGTTT----------------ATTTATAAAGCACT------------ 42738

Gallus ---AGGCCAGGCTGG-----------------------ATGTGGCTCT------------ 29650

Anopheles ------------------------------------------------------------

Homo TGCAATTTCAGCTTATGGCAGCCTTGACTCTCAGGCTCAAGTGATCCTCAGCCTCCCAAG 62489

Pan TGCAATTTCAGCTTATGGCAGCCTTGACTCTCAGGCTCAAGTGATCCTCAGCCTCCCAAG 62591

Drosophila ------------------------------------------------------------

Canis AA-AATTTAAGTTGATGT----------------ATTCACATGA---------------- 36066

Bos ------------------------------------TTGCA------------------- 6719

Rattus --------------------GTTAAATCTCCCATGATTATTAATTGAGGGAAAAAATAAA 52817

Danio -------------------------------CATGATAATTATT---------------A 7342

Mus --------------------TTTAAATATCTCATGATTACTTACTGAGTAAAAAATTTTA 42778

Gallus --------------------GCGCAGCCTGGTCTGGTGGTTGGCGACCCTGAATATAGCA 29690

Anopheles ------------------------------------------------------------

Homo TAGCTGGGACTACAGGTGCATGCCACCACACTTGGCTAATTTTTTTTAAAAAAGTTTGTA 62549

Pan TAGCTGGGACTACAGGTGCATGCCACCACACTTGGCTAATTTTTTTAAAAAAAGTTTGTA 62651

Drosophila ------------------------------------------------------------

Canis ------------------------ACCAAACTAGTATAATTCAGGACACAAAACCTTTGG 36102

Bos ------------------------------------------------------------

Rattus --CTCTAGAAATTTGATATTAACCAGAAGTCAAGTATTTGGAACT------ATGAATTAG 52869

Danio --CT------------------------------------GAACC------ATGAG---- 7354

Mus ATCTCTAGAAGTTTGATATTAACTGGAAATCAAGTATTTGAAACTGTTAAAATGAATTAG 42838

Gallus -------------------------------GGGGGGTTGAAACT----CGATGA----- 29710

Anopheles ------------------------------------------------------------

Homo GAGAGTAGCCTCACTATGTTGCCCAGGCTGGTGTTGACCTCCTGGGCTCAAGTAGTCGGC 62609

Pan GAGAGTAGCCTCACTATGTTGCCCAGGCTGGTGTTGACCTCCTGGGCTCAAGTAGTCGGC 62711

Drosophila ------------------------------------------------------------

Canis GGTACTA----------------------------------------TCTAGCAGT---- 36118

Bos ------------------------------------------------CCAGCAG----- 6726

Rattus TGATTTTTATATATAATGAAAAGGAAAGTTGCTATGCAGATGTAATAGTAAACTTACTGT 52929

Danio ------------------------------ACCATGGAGGT------------------- 7365

Mus TGATTTT-ATAT-TAGTGAAAAGGGAAACTGCCATGGAGATGTAGCAGTGAAGTT--TGT 42894

Gallus ----------------------------TCGTTGTGGTCCTTT----------------- 29725

Anopheles ------------------------------------------------------------

Homo CTGCCTCAGCCTCCCACAGTTATGGGATTGATTACAGTCATGATCTGCCTCACTCAGGCT 62669

Pan CTGCCTCAGCCTCCCACAGTTATGGGATTGATTACAGTCATGATCTGCCTCACTCAGGCT 62771

Drosophila ------------------------------------------------------------

Canis -----------------------------GAATGTAGACATC-TTTGTATCCGTTGAGAT 36148

Bos -----------------------------AAATACCAACATT-TTTGTA----------- 6745

Rattus TTTTATTGTTTTTGTTGTTCTGGTATACAGTTTAAGGGTCATACACCATCA-CCTTAGCT 52988

Danio ------------------------------------------------TCA-C------- 7369

Mus TTTTGTTGTTTT-------CTGCTAAATAGTT-AAGGGTCCTATACCATCAACTTAAGCT 42946

Gallus ------------------------------------------------TCAACCCAGGCC 29737

Anopheles ------------------------------------------------------------

Homo GCAGCCGCTTTCTTT-----------------------CAGTGTAACACTATCTTTGGAT 62706

Pan GCAGCCACTTTCTTT-----------------------CAGTGTAACACTATCTTTGGAT 62808

Drosophila ------------------------------------------------------------

Canis ACAGAGCTTT------------------------------------CATGGTTTTTGAAT 36172

Bos --AGAG------------------------------------------------------ 6749

Rattus TATCTTTTTTTAAGCCAA---AGAAAAGTCTACCATGTTAAAATAATTTTGTAAGCTGAC 53045

Danio -ATCT------------------------------------------------------- 7373

Mus TATCTTTTTTTAAACCAA---AGAAAAGCCTGCCATATTAAAATTATCTTATAAGCTGAC 43003

Gallus ATTCT------------------------------------------------------- 29742

Anopheles ------------------------------------------------------------

Homo ATTCCACTTACAAATTTATTTTTAAGTCTCCCATGTTGTTGATAATTGGGAAAAATAGTT 62766

Pan ATTCCACTTACAAATTTATTTTTAAGTCTCCCATGTTGTTGATAATTGGGAAAAATAGTT 62868

Drosophila ------------------------------------------------------------

Canis TATCTTTCCCCAGAT----CATTCATTCTTCCC-----TTAGCTATTAGAACAGGTAAT- 36222

Bos ------------------------------------------------------------

Rattus ATA-CTTATTATGGTTTTTT---------------------------------------A 53065

Danio ------------------------------------------------------------

Mus ATAGTTTATCACAGTTTTTTT--------------------------------------A 43025

Gallus ----------ATGATTCTTTT--------------------------------------C 29754

Anopheles ------------------------------------------------------------

Homo TTTATTCCAGATAGATATTCTGTGTTAACTATAAGTCAAATGTTTACAAGCTGTTAAAAA 62826

Pan TTTATTCCAGATAGATATTCTGTGTTAACTGTAAGTCAAATGTTTACAAGCTGTTAAAAA 62928

Drosophila ------------------------------------------------------------

Canis ----------ATAGTTGGTTTGT---------------------------------AAAG 36239

Bos ------------------------------------------------------------

Rattus GAAAGTGTTTATTTCACTAATTAACACTTTGAGAGGTAATAGTCAATTTCCAGTTTGTAC 53125

Danio GAAGGTGTTCAT------------------------------------------------ 7385

Mus GAAAATGTTTATTATTTTA-CTAACACTTTGGGAGGTAGTAGTGAATTTCCAGTTTCTAC 43084

Gallus TGAAATGATAAATGCTAGAATTA------------------------------------- 29777

Anopheles ------------------------------------------------------------

Homo TGAAATACTGATTATGTAAAAGAAAACCGGATTGATGCTTTAAATAGACTCATTTTCCTA 62886

Pan TGAAATACTGATTATGTAAAAGAAAACCGGATTGATGCTTTAAATAGACTCATTTTCCTA 62988

Drosophila ------------------------------------------------------------

Canis TGAAA-GTCGATTATCTAA----------------TGTTTAAAGGA----TATTTTCACG 36278

Bos ------------------------------------------------------------

Rattus ATCTAAATA---------GTTTATTGCTGTATTGCTTAGCTAACTTTTGTCTTATCTGTT 53176

Danio ------------------------------------------------------------

Mus ATCTAAATATTT-----AGTTTATTGCTTTATTGCTTAGCTAACTTTTGCCTTATCTGTT 43139

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATGCTAATTTTTAAAATGATAGAATCCTACAACTCTTAGCTGTAAACCTTGTGATTTTTC 62946

Pan ATGCTAACTTTTAAAATGATAGAATCCTACAACTCTTAGCTGTAAACCTTGTGATTTTTC 63048

Drosophila ------------------------------------------------------------

Canis TCATTTATTT-------AATGAAGTTGTTTGGCTGTCAGGTCGGAATATTTTTATTTCT- 36330

Bos ---------------------AAATTGT-----------------ATACT---------- 6761

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AGCTGTTGTACTAAACAACTTAAGCACATATACCATCAGACAAGCCCCCCTCCCCCCTTT 63006

Pan ANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 63108

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAAACCAAAGGAATGTATACTCTGTTAATACAGTCAGTAAGCATTGACATTCTTTATCAT 63066

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 63168

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AATATCCTAGAAAATATTTATTAACTATTTCACTAGTCAGGAGTTGTGGTAAATAGTGCA 63126

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 63228

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCTCCATTTTCTACTTCTCATCTTCATACACAGGTTAATCACTTCAGTGCTTGACTAACT 63186

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 63288

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TT---------------------------------------------------------- 63188

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 63348

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 63408

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 63468

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 63528

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 63588

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 63648

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus --------------------------------------GGGCTTTGTTTCTGAGCTATAC 53198

Danio ---------------------------------------------GTTCCTGAGC----- 7395

Mus --------------------------------------GGGCTTTGTTTCTGAGCTATAC 43161

Gallus -------------------------------------------TTATCTCTTAGG----- 29789

Anopheles ------------------------------------------------------------

Homo -------------------TGCCTTGATGATATGTTGAGCTTTGTACTTGAGAGCTGTAC 63229

Pan NNNNNNNNNNNNNNNNNNNTGCCTTGATGATATGTTGAGCTTTGTACTTGAGAGCTGTAC 63708

Drosophila ------------------------------------------------------------

Canis -------------------------------------GTATTTTCATTTGAAA--TACAG 36351

Bos -------------------------------------------------GGAA--TAC-- 6768

Rattus TAATCACTGTGCTTATTGTTTGAATGTCTGGTACAGGAAGCGAGCAGCTGCAAAGCATCT 53258

Danio ----------------------AATGT-----------------------------ATCT 7404

Mus TAATAAATGTGCTTATTGTTTGAATGTCTGGTACAGGAAGCGAGCAGCTGCAAAGCATCT 43221

Gallus ----------------------------------------------------AAAGGTTT 29797

Anopheles ------------------------------------------------------------

Homo TAATCACTGTGCTTATTGTTTGAATGTTTGGTACAGGAAGCGAGCAGCTGCAAAGCATCT 63289

Pan TAATCACTGTGCTTATTGTTTGAATGTTTGGTACAGGAAGCGAGCAGCTGCAAAGCATCT 63768

Drosophila ------------------------------------------------------------

Canis CCATTTATGTTCTTGTTA---------------------------------AAACAATTT 36378

Bos ------------------------------------------------------------

Rattus AATAGAGCGCTACTACCATCAGTTAACTGAGGGCTGTGGAAATGAGGCCTGCACGAATGA 53318

Danio AA---------------------------------------------------------- 7406

Mus AATAGAACGCTACTACCATCAGTTAACTGAGGGCTGTGGAAATGAGGCCTGCACGAATGA 43281

Gallus ATTTGGAGACTGCTGTCAGTATCTCACTGATGGCT------------------------- 29832

Anopheles ------------------------------------------------------------

Homo AATAGAACGCTACTACCACCAGTTAACTGAGGGCTGTGGAAATGAAGCCTGCACGAATGA 63349

Pan AATAGAACGCTACTACCACCAGTTAACTGAGGGCTGTGGAAATGAAGCCTGCACGAATGA 63828

Drosophila ------------------------------------------------------------

Canis ATTA---------TATCCCCAGTTACCTGATATTCATGCAAGTCATAAGAGAAAAAATAA 36429

Bos ------------------------------------------------------------

Rattus GTTCTGTGCTTCCTGTCCAACTTTTCTTCGTATGGATAACAATGCAGCAGCTATTAAAGC 53378

Danio -------------------------------------AACAATGTG-------------- 7415

Mus GTTTTGTGCTTCCTGTCCAACTTTTCTTCGTATGGATAACAATGCAGCAGCTATTAAAGC 43341

Gallus --------------------------------TAGATGACATTCTGAAAAGAGGAAG--- 29857

Anopheles ------------------------------------------------------------

Homo GTTTTGTGCTTCCTGTCCAACTTTTCTTCGTATGGATAATAATGCAGCAGCTATTAAAGC 63409

Pan GTTTTGTGCTTCCTGTCCAACTTTTCTTCGTATGGATAATAATGCAGCAGCTATTAAAGC 63888

Drosophila ------------------------------------------------------------

Canis GTGTTCAGGTATGTTTCTCAGTTTC----------------------------------- 36454

Bos ------------------------------------------------------------

Rattus TCTTGAGCTTTATAAAATTAATGCAAAACTCTGTGATCCTCATCCCTCCAAGAAAGGAGC 53438

Danio ------------------------AAGACT-TGTGCTCCT-------------------- 7430

Mus CCTTGAGCTTTATAAAATTAATGCAAAACTCTGTGATCCTCATCCCTCCAAGAAAGGAGC 43401

Gallus ------------TAGAAAGCAAGGAAAATAATGAATTTGTTTT----------------- 29888

Anopheles ------------------------------------------------------------

Homo CCTCGAGCTTTATAAGATTAATGCAAAACTCTGTGATCCTCATCCCTCCAAGAAAGGAGC 63469

Pan CCTCGAGCTTTATAAGATTAATGCAAAACTCTGTGATCCTCATCCCTCCAAGAAAGGAGC 63948

Drosophila ------------------------------------------------------------

Canis ----------------AGTAAGGTGAAATTTTGCGATTATT------------------- 36479

Bos ------------------TAGGGT------------------------------------ 6774

Rattus AAGCTCAGCTTACCTTGAGAACTCAAAAGGTGCATCTAACAAC------TCAGAGATAAA 53492

Danio ------------------------------------------------------------

Mus AAGCTCAGCTTACCTTGAGAACTCAAAAGGTGCATCTAACAAC------TCAGAGATAAA 43455

Gallus ---------------------------------------------------------AAA 29891

Anopheles ------------------------------------------------------------

Homo AAGCTCAGCTTACCTTGAGAACTCGAAAGGTGCCCCCAACAACTCCTGCTCTGAGATAAA 63529

Pan AAGCTCAGCTTACCTTGAGAACTCGAAAGGTGCCCCCAACAACTCCTGCTCTGAGATAAA 64008

Drosophila ------------------------------------------------------------

Canis --------TTTACCTTA--------------------------------TCTCAGATTAT 36499

Bos ------------------------------------------------------------

Rattus AATGAACAAGAAGGAAG---------AGTTTAAAGGTAAGAGACTATATTT-AAATTCAA 53542

Danio ------------------------------------------------------------

Mus AATGAACAAGAAGGAAGGAAAA---GATTTTAAAGGTAAGAGATTATATTT-CAATTCAA 43511

Gallus AACAAACAAATATGGATT---------------------AGAAATGCAGTC-AAATATAA 29929

Anopheles ------------------------------------------------------------

Homo AATGAACAAGAAAGGCGCTAGAATTGATTTTAAAGGTAAGATGTTTTATTTTCAATTGAG 63589

Pan AATGAACAAGAAAGGCGCTAGAATTGATTTTAAAGGTAAGATGTTTTATTTTCAATTGAG 64068

Drosophila ------------------------------------------------------------

Canis AAA--------------------------TGAAGGATGTGTTTTTTTGTTTTTCTTTTAG 36533

Bos ------------------------------------------------------------

Rattus AATGGTTAATTGAAAGCTATTTCAGA---------------------------GATTTAA 53575

Danio ------------------------------------------------------------

Mus AATGGTTAATTGAAAGCTATATCAGATTTAAATGTGGAGGGGGTTGTTTATTTGTTTTGA 43571

Gallus AA----------AGAACTATTTCAAA---------------------------------- 29945

Anopheles ------------------------------------------------------------

Homo AATTGTTGCCTGAAAACCATGTGGGA---------------------------GATTTAA 63622

Pan AATTGTTGCCTGAAAACCATGTGGGA---------------------------GATTTAA 64101

Drosophila ------------------------------------------------------------

Canis AGT----------AGATCATGAGAG--------------------------------TGA 36551

Bos ---------------ATCA----------------------------------------- 6778

Rattus ATTTGTGGTTTT---------------------------TGGGTTTTTGCGTTTTT-ATA 53607

Danio ------------------------------------------GTCTTTACGCTTCT-CT- 7446

Mus TTTTGTTTTTTTGTTTGTTGTTGTTATTTTGTTTTTATTTTTGTTTTTGCTTTTTTTATC 43631

Gallus --------------------------------------------GATTGTGTTATAATTA 29961

Anopheles ------------------------------------------------------------

Homo ATGTATTAGTTT---------------------------TTATTTGTTTTTTCTTCTGTG 63655

Pan ATGTATGAGTTT---------------------------TTATTTGTTTTTTCTTCTGTG 64134

Drosophila ------------------------------------------------------------

Canis GTACATTAGAGC---------------------------TAAGCTATTTTTAATTTT--- 36581

Bos -------AAAAC---------------------------TA------------------- 6785

Rattus ACCTGAAGATATCATAGTATAGTA------AAGCCACTGTTTTT----AAGTGTGGTAAA 53657

Danio -CCTGA---------------------------------CCTTC----AA---------- 7458

Mus ACCTTAAGTTATCGCACTATAATATAGTAAAAGTCACCTTTTCTGGTAAACTGTGGTAAA 43691

Gallus GCCTGGAAATAT--------------------------GTCTTC----AGCTCTGAT--- 29988

Anopheles ------------------------------------------------------------

Homo ACATAAAGACATTTTGATATCGTA-------GAACCAATTTTTT-----ATTGTGGTAAC 63703

Pan ACATAAAGACATTTTGATATCGTA-------GAACCAATTTTTT-----ATTGTGGTAAC 64182

Drosophila ------------------------------------------------------------

Canis -----AAAATGTTTTTTTTCC-----------------TTTTTT-----TTT-------- 36606

Bos ------------------------------------------------------------

Rattus G-ACAGGTATTTAGTTACTTTATATTTTATTCTTATATTT-ACTGATACAGAAGTTGTCA 53715

Danio ------------------------------------------------------------

Mus GGACTGGTATTTAGTTTGTTTACATTTTATTCTTATATTTTACTGATTCATTAGTTGTCA 43751

Gallus ----------------------------------------TGCCAGTACATTGAGT---- 30004

Anopheles ------------------------------------------------------------

Homo GGACAGGAATA-----------------ATAACTACATTTTACAGGTCTAATCATTGCTA 63746

Pan GGACAGGAATA-----------------ATAACTACATTTTACAGGTCTAATCATTGCTA 64225

Drosophila ------------------------------------------------------------

Canis -------------------------------------TTTTTTAAGTTGGATTCATGCTA 36629

Bos ------------------------------------------------------------

Rattus G----AAGCAGATTATACTCTAAAAATTAATATGATAATGA-TTGAACTCAATTTGTAAT 53770

Danio ----------------------------AATATAAT--TGG-CTGAATCC---TTGTGAT 7484

Mus GTCAGAAGCAAGTTATACTCTAAAAATTAATATGATGATGAGTTGAACTCAGTTTGTAAT 43811

Gallus --------------------TGGGAACAGAAAGGATGGTGG-------ACAGGCAGTGAT 30037

Anopheles ------------------------------------------------------------

Homo ATTAGAAGCAGATCATATGCCAAAAGTTCATTTGTTAATAGATTGATTTGAACTTTTTAA 63806

Pan ATTAGAAGCAGATCATATGCCAAAAGTTCATTTGTTAATAGATTGATTTGAACTTTTTAA 64285

Drosophila ------------------------------------------------------------

Canis AGTACCAG--------------GAAGTTCATT-------------ATTTGAGGTGTTGAA 36662

Bos ------------------------------------------------------------

Rattus GATT--GTATTGTAGCTAATATCTTATTAGGTCATAAAAATCTACTACATGTATTGCATT 53828

Danio G---------------------CTTA-------ATTAAGATC------------------ 7498

Mus GATTT-ATATTGTAGCTAATACCTTATTAGGTCACAAAAATCTACTATGTACATTGCATT 43870

Gallus GACACAGTCATAACAGGGCTTCCTTAAGAGATAATAAAAAGATGATTAATAAGTTTT--- 30094

Anopheles ------------------------------------------------------------

Homo AATTC----TTAGGAAAAATGTATTAAGTGGTAGTGAATCTCCAAAACTAGGCCACAACA 63862

Pan AATTC----TTAGGAAAAATGTATTAAGTGGTAGTTAATCTCCAAAACTAGGCCACAACA 64341

Drosophila ------------------------------------------------------------

Canis ----T----CTATGAGTTGTCAATTGTGTGATG-----TCTCCAGCCATGGAGATTTACT 36709

Bos -------------GAATTGT-AACTGTGTG------------------------------ 6801

Rattus TGCAGTAAATACCTGGTATCAGGTCCAGAACTACAGGGGCTGTGGTAAAAGA-------- 53880

Danio -----------------------------------------GTG---------------- 7501

Mus TGCCGTGAATACCTAGTATCGGCTCTAGAACTCCAGGGACTGTGGTAAAAG--------- 43921

Gallus --------------------------------------GCTGATGAGGGAGT-------- 30108

Anopheles ------------------------------------------------------------

Homo TCTATTTAAGTTATAGAATAACTGGACTAAGTATCTGGCATGAGTTCTGGAACCTCAGGA 63922

Pan TCTATTTAAGTTATAGAATAACTGGACTAAGTATCTGGCATGAGTTCTGGAACCTCAGGA 64401

Drosophila ------------------------------------------------------------

Canis ACTCTTTGAGTTGGAATCTTCTTTTTTTTAAGATCTTATTTATTTATTC----------- 36758

Bos ------------------------------------------------------------

Rattus -----AGGAGAAATACAAATATAAGGTATAAGGTAGTCTTTGTTTTCCTTTTTT------ 53929

Danio -------------------TGTAAGGTAGAA----------------------------- 7513

Mus -------GAGAAATACAAATATAAAGTGTAAAGTAGTCTTTTTTTTTTTTTCTTTTCTTT 43974

Gallus -----TTGCCAACCATATATATAAATCACAGA-CAGTCTTTTTCATGGTC---------- 30152

Anopheles ------------------------------------------------------------

Homo TGATGTGATGAAAGAAGCAGAAAGAGGAAACAGTGGGTTTTTTCCATTTTT--------- 63973

Pan TGATGTGATGAAAGAAGCAGAAAGAGGAAACAGTGGGTTTTTTCCATTTTT--------- 64452

Drosophila ------------------------------------------------------------

Canis -------ATGAGAGAGAGAGGCAGAGA-----------------CATACGC--------- 36785

Bos ------------------------------------------------------------

Rattus -----AGAAAGCAGGGTAAAATTTTGCAATAGTTATCTGAATAATATATTTTTTTCCTTC 53984

Danio ------------------------------------------------------------

Mus TTTTAAGAAAGCAGGGTAAAATTTTGCAATAGTTATCTGAAAATTACATTTTTT-CCTTC 44033

Gallus -----AAAAAG------------------------------------------------- 30158

Anopheles ------------------------------------------------------------

Homo ------GAAGGCAAGACAAAATTTTGTGATAGTTATGTGAGAATTCTACGTTTCCTTCAG 64027

Pan ------GAAGGCAAGACAAAATTTTGTGATAGTTATGTGAGAATTCTACGTTTCCTTCAG 64506

Drosophila ------------------------------------------------------------

Canis ------AGAGGGAGAACCAGGCTC---------TCTGTGGGAAGCCT------------G 36818

Bos -------------------------------------TAGGAAGTGT------------G 6812

Rattus TAACATTTTCTTTTTACATACTGCTCTCTACCTCAGGA-ACTTGGTGTACTCATACTGCT 54043

Danio ------------------------------------------------------------

Mus TTACATTCTGCC-----------CTCTCTACGTCAGGA-ATTAGATATTTTCATACTGCT 44081

Gallus ----------------------------TACTTGGTGA-AATTGAAAGATAAGTGCTGCT 30189

Anopheles ------------------------------------------------------------

Homo ATATATGCTTCT-----------CACTCTCCTTCCGGACATTTGGTACAGTCATGCTGCC 64076

Pan ATATATGCTTCT-----------CACTCTCCTTCCGGACATTTGGTACAGTCATGCTGCC 64555

Drosophila ------------------------------------------------------------

Canis ATGCAGG-----------------ACTCCATCCTAGGACCCCCGG------------ATC 36849

Bos ACA--------------------------------------------------------- 6815

Rattus TAGGGATCTAACCTA--CCAATA------TTTACTCAGCTTTTGTGGGGCTTTGTTTCTT 54095

Danio ------------------------------------------------------------

Mus TAGGGACGTAACTTA--CCAGTAATAGTCTTTACTCAGCTCTTGTGGGGTTTCGTTTCAT 44139

Gallus TTTGGATC---CCTA--CTAAAATTTGACTTTG-------TTTATGGATTTGTCATGGAT 30237

Anopheles ------------------------------------------------------------

Homo AAGGATCATGACCTA--CCAATGACAGTCTTCACTCAGGTCTTTTGTTTTCTAAATGGTC 64134

Pan AAGGATCGTGACCTA--CCAATGACAGTCTTCACTCAGGTCTTTTGTTTTCTAAATGGTC 64613

Drosophila ------------------------------------------------------------

Canis AGGGATCACAACCTGAGCCAAAGGCAGAGAT-GCTCAACCACTAAGCCACCCAGGAGCTC 36908

Bos ------------------------------------------------------------

Rattus TTTGTTTTGCTCAAGATA--GGTGACACTGTTCT-----------TATATTTTTAATTCT 54142

Danio ----------TCGAGAT--------CACAATCCT-----------T-------------- 7530

Mus TTTGTTTTGTGCAAGTTA--AGTGGCACTATTCT-----------TGTACTTTTAATACT 44186

Gallus ATCAATGAGAGCAAGGTTTGGGAGGAGCTATGTT-----------TACATTGTTAGAAGA 30286

Anopheles ------------------------------------------------------------

Homo CTACGTCCA---AAATTCAGAATTCGATTACCTTGTCGCTAATACTAAAACTCCAAGTTA 64191

Pan CTATGTCCA---AAATTCAGAATTCGATTACCTTGTCGCTAATACTAAAACTCCAAGTTA 64670

Drosophila ------------------------------------------------------------

Canis CTTGGTTGG---AATGCCTTTATAGGGTTTTCCT-----------------TTTCAGTCA 36948

Bos ---------------------------------T-----------------TTTCTGTCA 6825

Rattus CTTGCTTCTAC-------TTTCCTAGTAATGAAATTAAAGGTTTACATTCCCATACTTTG 54195

Danio ------------------TTTC----------GATTAA---------------------- 7540

Mus CACACTTCTAT-------TTCCCCAGTAATGAAATTAAAGTTTTATACTCTGATACCT-- 44237

Gallus CTTAGTTTT-----------------------AGTAGAAGGTGT---------------- 30307

Anopheles ------------------------------------------------------------

Homo TTTTCTTCAGTGAAGGTAATTAGTAACAAAGTAATCAAATTTTT---------------- 64235

Pan TTTTCCTCAGTGAAGGTAATTAGTAACAAAGTAATCAAATTTTT---------------- 64714

Drosophila ------------------------------------------------------------

Canis CTGTACTCAGTGC------TTTCTAATGAAAAAGTCAAATGTT----------------- 36985

Bos ------------------------------------------------------------

Rattus TTTATATGGTACTGAGGGAGATCTCATGAATGAAAGATAAGCACTACCAACTGAGCTAGG 54255

Danio -----------------------TCGTG-------------------CAGCC---CTAG- 7554

Mus -------GGTACTGAGGATAGCCTCATGAGTGAAAAATAAGCACTCACGATTAAGCTATG 44290

Gallus ---------------GAGGGAAGGCACGAATAA--------CTGCACCTATTCAGTTGTC 30344

Anopheles ------------------------------------------------------------

Homo -------------GAATGACTACCAGGGCTTAGCGCCCCTCCACTCTCACCCCTACACAC 64282

Pan -------------GAATGACTACCAGGGCTTAGCGCCCCTCCACCCTCACCCCTACACAC 64761

Drosophila ------------------------------------------------------------

Canis ---------------------ATGAAAGGTCAG--------------------------- 36997

Bos -------------------------------AG--------------------------- 6827

Rattus TCCCCAATGCATCTAGTCTTTTAAAAATAGTCCTATGTTTCGAAAGTTCTT-AAAACTTC 54314

Danio -CTCCAACACAG-TAGTTTCT---------------GCACTGGAAGTTTCT-AG------ 7590

Mus TCCCCAATGCATCTAGTATTTTAAAAATAGTTCTATATTTTGAAAATTCTTCAAATTTCC 44350

Gallus AGCTAAATGTCACTGGTGCTAGAAGGAA---CCTTTGCTTATGCTGTATTT--------- 30392

Anopheles ------------------------------------------------------------

Homo ACCCAGAGGCAATTGTATTTTAAGAGAGAAAGCTTTTTTTTTATGACATACAAG------ 64336

Pan ACCCAGAGGCAATTGTATTTTAAGAGAGAAAGCTTTTTTTC-ATGACATACAAG------ 64814

Drosophila ------------------------------------------------------------

Canis -----------ATTAAATTGCATGAAATAGGG--------------------AG------ 37020

Bos -----------ATT---------------------------------------------- 6830

Rattus TATTTTCCCTCATTGAT-----TCTTCAGTCTATTTTTTTCT--TAATAGAAGTAATTAT 54367

Danio -------------------------TTAGTCT-----------------GAAG--ACCAT 7606

Mus TACTTTGCCTCATGATTGATTTTGTTCAATCTATTTTTTTCTCTTAATGGAAGTAATTGA 44410

Gallus -GTTTTCCCG---------------TCAGTCAGTATCT-------GATAGAGATAAATCA 30429

Anopheles ------------------------------------------------------------

Homo -------------------------TCAGAGAATTT-----------TAGAGGCATTTGC 64360

Pan -------------------------TCAGAGAATTT-----------TAGAGGCATTTGC 64838

Drosophila ------------------------------------------------------------

Canis -------------------------ACAGAACGT--------------AAAGACTGCTAA 37041

Bos ------------------------------------------------------------

Rattus CAACTAGCAATAAGGTAATTGAATGTTTCACATTGCTACGGATTAG--CCCCTGTCACTT 54425

Danio ----------------------------------------GATTAG--C----------- 7613

Mus ----------------------ATGTTTCAGATTGCCAGGGATTAGTTCCACTATCACTT 44448

Gallus ---------------------GATGCTGATCACTGCTATAAAGTAA-------------- 30454

Anopheles ------------------------------------------------------------

Homo C----------------------------------TCTAAAACTTTCACTAACATCATTT 64386

Pan C----------------------------------TCTAAAACTTTCACTAACATCATTT 64864

Drosophila ------------------------------------------------------------

Canis C----------------------------------TCTGGGA--------AAC------- 37052

Bos ------------------------------------CTGGAA--------A--------- 6837

Rattus GAAACATGTTTAAAGGAATTAGTGAAATGAAATTATATTAGAATTTCATG---TTAGTTT 54482

Danio ------TGGTTAGGTGTGTT---------------TATTAGAGT---------------- 7636

Mus GAAACATGTTTAAATGAATTAGTGAAATAAAATTATAGTACAACTTCATGATATTACTTT 44508

Gallus -------AATTGGACGGGCCCTTACACAGCAGCTCAGTTGGAGCAT---------GGTTG 30498

Anopheles ------------------------------------------------------------

Homo GAATCAAGTTTGAAAGAATTAGTGAAGTGGCATTGTGTTATAACCTCTACTCTGTTTCCA 64446

Pan GAATCAAGTTTGAAAGAATTAGTGAAGTGGCATTGTGTTATAACCTCTACTCTGTTTCCA 64924

Drosophila ------------------------------------------------------------

Canis GAACTAGGGGTGGTAGAAGGGGAGGAG-GGCGGGGAGTGGGAG----------------- 37094

Bos ------------------------------------------------------------

Rattus CACAATTGAACTAAAGAAAAATCAGAAAAATAATTTATTCAGTTTGGCTAC--------- 54533

Danio ------------------------------------------------------------

Mus CACAATAGGACTAAAGAAAAATCAGAAAAAAAAACT-TTCAGCTTTGCTACTCAAAAATA 44567

Gallus CAGGATATGTCTTAAAGC------------------------------------------ 30516

Anopheles ------------------------------------------------------------

Homo CAATAAAATTATTTTCGTCACTTTACACAACTTTGTTGCTTCAGAGTGTAT--------- 64497

Pan CAATAAAATTATTTTCGTCACTTTACACAACTTAGTTGCTTCAGAGTGTAT--------- 64975

Drosophila ------------------------------------------------------------

Canis ---TGAATGGGTGACGGGCACT-----------------------GGGTGT--------- 37119

Bos -----------------GCACT-------------------------------------- 6842

Rattus ----ACCAGTCCTATTTCATGAATTTGTTC--ACATTGTAGATAAGTAGGTGAATG---- 54583

Danio --------------------------------------------AGCAGCTAAACA---- 7648

Mus TATAGCCAGTCCTATTTCATGAATTTGTTT--ACATTGTAGATAAGTAGGTGAATG---- 44621

Gallus ---------------------------------TGTTGTGAAACTGCTGGTGG-TA---- 30538

Anopheles ------------------------------------------------------------

Homo -------AATTCTGTTTCATGAATTAGTTCACACACTATGGGAAAATAGGTAAATGTTGT 64550

Pan -------AATTCTGTTTCATGAATTAGTTCACACACTATGGGAAAATAGGTAAATGTTGT 65028

Drosophila ------------------------------------------------------------

Canis -------TATTCTGTATGTTAG--TAAATTGAACACCAATAAAAAATAAATTAA------ 37164

Bos ---------TTC-------------------------------AAATAAAT--------- 6853

Rattus --------GTA-TCAATATTTTGAATGTAGAAGCTGCAATGTCTCAATTATACATGTTTC 54634

Danio --------GTG-GC--TCTTTAGGAT--------------------------CAAGTTT- 7670

Mus --------CTAATCAATATTTTGAATGTGAAAATTGCATTGGCTCAATTATACATGTTTC 44673

Gallus --------ACACCTAATATTTTAGCAGGAAGTAGCACATGGTTTGTTTCTTAAATATTA- 30589

Anopheles ------------------------------------------------------------

Homo CTGTATATATAGTGTGTCAGTATAATGTGGAAGCTGCATTGACTTTATTGTACACAGTTC 64610

Pan CTATATATATAGTGTGTCAGTATAATGTGGAAGCTGCATTGACTTTATTGTACACAGTTC 65088

Drosophila ------------------------------------------------------------

Canis ------AAAAAA------AATAAAAT----AAATTGCATGAAATAAATTA---ATATTTG 37205

Bos ----------------------------------------------ATTA---A------ 6858

Rattus TACGACAGAGTGAACATCACAGAGTAACAGTAAATGAAATATAATATTTCACCATGGTTG 54694

Danio ---------------------GGGCAAC------------------------CTTGCTT- 7684

Mus TACAACAGAGTGGACATGACAGAGTAACAGTAAATGAAAAATAGTATCCCATCATAGTTG 44733

Gallus --------AAAGCATGTAAAAGAATGACTGGAGA----------------AATCCTGTTG 30625

Anopheles ------------------------------------------------------------

Homo TCCAGTA-AGTGTGCACCAGAGAGTACCAGTAACTGAA-TGTAGAGTGCTGGCACAGTGG 64668

Pan TCCAGTA-AGTGTGCACCAGAGAGTACCAGTAACTGAA-TGTAGAGTGCTGGCACAGTGG 65146

Drosophila ------------------------------------------------------------

Canis AGTAGAA-GATGACAACCTGGAGTTTTAGAAAGCAGCA-TGTAAAATTCTTTTTTGTTGG 37263

Bos ------------------------------------------------------------

Rattus AATGTGACTAACTG---GAAAAATATAGTATATAATTGGTATATTTATCTAGTTATAGCC 54751

Danio ------------TG---AGAGATGGTAGT-----------------------CTGTAGCC 7706

Mus AATGCAACTAACTGTGGGAAAAATCTAGTATATAATGGATATAGTTGCCTTGTTTTAGCC 44793

Gallus AAT--------TTATAACGTGTTACTATTAAATTACCAACTCTATTAGTAATTTTTGAGC 30677

Anopheles ------------------------------------------------------------

Homo AATGCAGCCAGCTGCGGGGGATGTGGTACATGAGGAATGTGCTCATCTGCTCTTTTGGCC 64728

Pan AATGCAGCCAGCTGCGGGGGATGTGGTACATGAGGAATGTGCTCATCTGCTCTTTTGGCC 65206

Drosophila ------------------------------------------------------------

Canis ATGGAGGTGGTGAGTAAGCAAATTGTTAAGAGGAGAACACACACAGAGTTTTTCTTTGTT 37323

Bos ------------------------------------------------------------

Rattus C------------------------ATGTATGCTTCTTTTTTACACATC---------TT 54778

Danio T------------------------GTCTATGCTTGTCCTTG------------------ 7724

Mus C------------------------ATGGGTGTTCCTTTTTTACAGGTTC-------TTT 44822

Gallus T------------------------ATGAATAACTTCCAT-------------------- 30693

Anopheles ------------------------------------------------------------

Homo ACGTGCTCCATCTTAGAGGTGCTTATTGTGTGGCTTTATCCAGTCTTTATGCCCCCTCCT 64788

Pan ACGTGCTCCATCTTAGAGGTGCTTATTGTGTGGCTTTATCCAGTCTTTATGCCCCCTCCT 65266

Drosophila ------------------------------------------------------------

Canis ----------------------CTAATGTGT---TTCATCTAGT---------------- 37342

Bos ------------------------------------------------------------

Rattus GTTTTTGTGGATCACTCCAAATTTTATTGCCTTTACTTATTTACTTTAATATTTTTGAAT 54838

Danio GTTTTT--------CCCCA---------GCTCTGACCCA--------------------- 7746

Mus GTTTTTGTGGATCACTCCAAATTTTATTGCCTTTACTTC-----TTTAATATTTTTGAA- 44876

Gallus GTTCTTGTCAGTGAACTCAGGGTTGTAGTCCTTTTTTTT------TCAAG---------- 30737

Anopheles ------------------------------------------------------------

Homo CTTTTTGCTCAAGTCTGCATTATAGCAGTTGTGACCTTTCCTTATCCCTGTTTTCTAATA 64848

Pan CTTTTTGCTCAAGTCTGCATTATAGCAGTTGTGACCTTTCCTTATCCCTGTTTTCTAATA 65326

Drosophila ------------------------------------------------------------

Canis ----------GGCATTCCATTTTGGGAGTGGAATGCTTATGCATTCCATAACCTCCAA-- 37390

Bos -------------------------------AATGC------------------------ 6863

Rattus TAGGAATTACACAGGCTTAATCATACTTAATTTCTCATTATGATAATTATATATTTGTTG 54898

Danio ------------------AATCA------------------------------------- 7751

Mus ------TTATATATGCTTAATCATGTTT---CCCTCAGTTTGATAATTATATTTGTTC-- 44925

Gallus ------------------AGTCATG----------------------------------- 30744

Anopheles ------------------------------------------------------------

Homo TG----CTACTGTTA-CTGTTCCCTGTTCGTTACTGGTTTTTTTGTTTTTGTTTTTGCAT 64903

Pan TG----CTACTGTTAACTGTTCCCTGTTCGTTACTGGTTTTTTTGTTTTTGTTTTTGCAT 65382

Drosophila ------------------------------------------------------------

Canis --------------ATTTACTCTTCATTCCTCTCAAGGGGATATATGTATAGATTTAAAT 37436

Bos -------------------------ATTCCTC---------------------------- 6870

Rattus AATTTTAATTAAATATGTAGGTATCAATTAGTGTATCACAAATCTGTTCTTGCATGAAAC 54958

Danio ------------------------------------------------------------

Mus -ACTTTAGTTAGAGGTGTAGTTATCAGCTAGTGTATCACAACTCTGTTTTTGCGTGAAAC 44984

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGTTCTATAGTTACTATTGTATATTGGAAATTAGAGATGCTTTCTGTACACTAGTACTCT 64963

Pan TGTTCTATAGTTACTATTGTATATTGGAAATTAGAGATGCTTTCTGTACACTAGTACTCT 65442

Drosophila ------------------------------------------------------------

Canis ---TTTATGGTGAA-----------GAGAATGAGAGCCGT-------------ATGTTTT 37469

Bos ------------------------------------------------------------

Rattus TGTTTATGGTATAA------------AATGTTATGTTTTAAGAGTGTTTTGGACCTGAGT 55006

Danio --------GTGCAG------------AATGTCATATTT---------------------- 7769

Mus TGTTTGGAGTATAA------------AATGTTATGTTTTAA------------------- 45013

Gallus --------GCACAG------------AACAATCTG------------------------- 30759

Anopheles ------------------------------------------------------------

Homo TATTTTGATTATTAATTATGTTTGTTAACACTAATTACAAAGTT---------------- 65007

Pan TATTTTGATTATTAATTATGTTTGTTAACACTAATTACAAAGTT---------------- 65486

Drosophila ------------------------------------------------------------

Canis TGTCTGAAGGAGCA-----------TAATAGCAAATACAGAA------------------ 37500

Bos --------------------------------------AGAA------------------ 6874

Rattus TTAGTGGCATTGTAGTCCAGATTCTCAGGAAGGACCGTGTTGATTTCCAATATGTCTGTT 55066

Danio ---GTGACA---------AAAT--------------GTGCTAA--------ACGTCTGCT 7795

Mus ------------------AGATTTT-----------GAGCTGATTTCC---AGTTCTGTT 45041

Gallus ------------------AGAGGCA-----------GAATTTATTTTAGGCAAGCTTGCT 30790

Anopheles ------------------------------------------------------------

Homo ------GCATAAGTATTAAGTAGTCTGCACCAAACTGTTTTTGCGTAGGAGGTTTTTAAG 65061

Pan ------GCATAAGTATTAAGTAGTCTGCACCAAACTGTTTTTGCGTAGGAGGTTTTTAAG 65540

Drosophila ------------------------------------------------------------

Canis ----------AATTTTTAGAAGGTG-------------------ATAATGGAGGTCTAAG 37531

Bos ----------AACTACTAGA---------------------------------------- 6884

Rattus TATACTATGTGAAGCCATGTCTCAAACAGTTTTCAAAAACACACATATTAAAATGTACAG 55126

Danio -ATAAAATGTGAA-------------TAG-----AATAACATG-ATATTG---------- 7825

Mus TCTACTATGTGAAACCATGTCTCAAACAGTTTTCAAGCACACATATATTAGAATGTACAG 45101

Gallus GCTTGCACGTGCA-------CTGCAGCAAATAAAAATAGGAAGTATACTAGGATT----G 30839

Anopheles ------------------------------------------------------------

Homo TGCAAAATTTAAAAGATT------GAGTATTTTCAGGGACACATTTATCACAAGAA---- 65111

Pan TGCAAAATTTAAAAGATT------GAGTATTTTCAGGGACACATTTATCACAAGAA---- 65590

Drosophila ------------------------------------------------------------

Canis C-TACTGTTTAGACAGAT------GTGAGAGGAAAGGAAGATGCATGCCAGCAAA----- 37579

Bos ------------------------------------------------------------

Rattus GTGAATCTTAAAAAAT----GTTTCT----TTACTTACCTGTTTGTTGATAA-------- 55170

Danio --------TAAATAAT----GGT------------------------------------- 7836

Mus GTGAATCTTAAAAAAAAAAAGTTTCT----TTACTTAACTGTTTGTTGATAC-------- 45149

Gallus AATCTTTTTATAAAATCCTCGCTGCTG---TTATTTATTCAACAGGACAGAT-------- 30888

Anopheles ------------------------------------------------------------

Homo ----ATCTTATAAAAATGTCTTTCTCAGTAGAACACCTGTATCAATAAACCAAACTTTTT 65167

Pan ----ATCTTATAAAAATGTCTTTCTCAGTAGAACACCTCTATCAATAAACCAAACTTTAT 65646

Drosophila ------------------------------------------------------------

Canis -------CTGCAACAGACTCTTTC--------ACCCCCACATTAGTAGTCC--------- 37615

Bos ------------------------------------------------------------

Rattus -----------CCAGATTATAACGTTTTTTATTTCTATTGCATTGCTTTACACACACACA 55219

Danio ---------------ATTGTAA-------------------------------------- 7843

Mus -----------CCAGATTAGAAC--TTTTTATTTCTGATT-------------------- 45176

Gallus -----------CTTAGTTTTGAAGCCTTTTCTGCTGTCTTCATATTT------------- 30924

Anopheles ------------------------------------------------------------

Homo GAATGTTCATATCTAATTACAGTGTTTTTTGACTAATTTTTATCTAT------------- 65214

Pan GAATGTTCATATCTAATTACAGTGTTTTTTGACTAATTTTTATCTAT------------- 65693

Drosophila ------------------------------------------------------------

Canis ------------CTGACTCCAGAGATTTTT------------------------------ 37633

Bos ------------------------------------------------------------

Rattus CACACACACACACACACACACACACACACAGAGAGAGGGGGTGGGGCTGAGGGAGGGAGG 55279

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GAGGGAAAGAGA---GAAAG-ACAGATAGAGACAGAGATAGACAGAGACAGACAGACAGA 55335

Danio -----ATGGAAA---AAATG-ACAAATAAAAACAGCTA---------------------- 7872

Mus -----GCAGTGATTTATATGCACACATGAGAGGGGTGG---------------------- 45209

Gallus ----AATGGAAATCAGTAGCATAACATAGAAAAGATTAAGCTTAT-------------GT 30967

Anopheles ------------------------------------------------------------

Homo --------ATACCTGAAAAATTCAGTTTAACATATTAAACACTACAG-----------GC 65255

Pan --------ATACCTGAAAAATTCAGTTTAACATATTAAACACTACAG-----------GC 65734

Drosophila ------------------------------------------------------------

Canis ----------ATCTCAAAAATCC---TTGAAATGTTTTTTGTT----------------- 37663

Bos ----------------------------------------GTT----------------- 6887

Rattus CAGATGATAGAGATAAACATTTTAAACATTTTAAGTCGAGTACTACCTGGAAAAAGTATT 55395

Danio -AAATGAT-----TCAACAGTC-----------AGTC----------------------T 7893

Mus -GGGAGATGGAGATAAACATTTTAAACATTTTAAGTAGAGTACTACGTGGAACAAATATC 45268

Gallus TACGTGTGCTCTAAGAATGGTTTTGAGGCTCTGAGGAAAAATCAATAGGTTGTCTCTCTG 31027

Anopheles ------------------------------------------------------------

Homo CAGGCAC---------AGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCG 65306

Pan CAGGCACTGTAATCCCAGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGCTGAGGCG 65794

Drosophila ------------------------------------------------------------

Canis -------------------------TCTCTGTGAATTCATT------------------- 37679

Bos -------------------------CATCAGTGAATT----------------------- 6899

Rattus GATTAATAGTAGTTTGTATTCCTAGA----TGTCAGTGTCATTTGATGAATGTGCTCTGA 55451

Danio GATTAAT----------------------------------TTTGA-------------- 7905

Mus AATGAATAGTAGTTTGTATTACTAGAA---TGTCAGAGTGATTTAATGACTGTGCTCTGA 45325

Gallus CATGATT--TAGTTTGTATTTTTA----------------ATTTAAC--ATTTGATCACA 31067

Anopheles ------------------------------------------------------------

Homo GGCGAATCACGACGTCAAGAGATCGAGACCAACCTGGCCAACGTGGTGAAACCCCCTCTC 65366

Pan GGCGAATCACGACGTCAAGAGATTGAGACCAACCTGGCCAACGTGGTGAAACCCCCTCTC 65854

Drosophila ------------------------------------------------------------

Canis --CGAATT-----------------------------TCAACTTGTTAACATTACTATAA 37708

Bos -------------------------------------------TGGTAAAGTTGC----- 6911

Rattus AAG-AAGACATTGCAAGTCAATGGTGTGTG----------GATCCAGAGTGTTATTCTCC 55500

Danio ---------------AATTGAT-------------------ATCCA-------------- 7917

Mus AAGGAAGACATTGCAAATCAAAGGTGTGTG----------GATCTAGAGCTTTATTCTCT 45375

Gallus TTTGAAAATACTTCAACTATACTGTCTATATAA-------AGGTGATAGGCTTAGTCTCT 31120

Anopheles ------------------------------------------------------------

Homo TACTAAAAATACAAAAAAATTAGCCAGTTGTGGTGGCGTGCATCTGTAGTCCCAGCTACT 65426

Pan TACTAAAAATACAAAAAAATTAGCCAGTTGTGGTGGCGTGCATCTGTAGTCCCAGCTACT 65914

Drosophila ------------------------------------------------------------

Canis CTCTGAAAATGTATAATAAATTGATATTTG-------GTCTTTCATTGCCTCCTGTCATT 37761

Bos -----AGGATACA----AAATTAATAT--------------------------------- 6929

Rattus TTCAGGCAGGATGTATATTTA-------------------------TTGTTCTATATGTA 55535

Danio ----------ATGTCT------------------------------TTGTTT-------- 7929

Mus TTCAGGCAGGATGTATA-----------------------------TTGTTCTGTATGTA 45406

Gallus GCAGAGGTGGTTATAAAT----------------------------TTGGTCTTCATTCC 31152

Anopheles ------------------------------------------------------------

Homo TGGGAGGCTGAGGTAGGAGAAT-CGTTTGAACCCGGGAGGCAGAAGTTGCAGTGAGCCGA 65485

Pan TGGGAGGCTGAGGTAGGAGAATTCGTTTGAACCCGGGAGGCAGAGGTTGCAGTGAGCCGA 65974

Drosophila ------------------------------------------------------------

Canis T---------------------------------------------TTGC------CTCT 37770

Bos ------------------------------------------------------------

Rattus GAACATGCACTTTCCAACCAATTTTATAATTTAGTGATA-----------GGGAGATAAA 55584

Danio ----GTGCA--------------------------------------------------- 7934

Mus GAATTTGCACTTTCTAACTAATTTTATAATTCAATGATA-----------GGGAGATAAA 45455

Gallus G--TGTACCAGTTTGGAAGAATCTGATTAAGATAGAATG-----------AAAACAATCT 31199

Anopheles ------------------------------------------------------------

Homo AATGGTGCCACTGCATTCCAACCTGGCAACAGAGTGAGACTCCATGTCAAAAAACAACAA 65545

Pan GATGGTGCCACTGCATTCCAGCCTGGCAACAGAGCGAGACTCCATGTCAAAAAACAACAA 66034

Drosophila ------------------------------------------------------------

Canis TATGAAGTTATTTCTTT-----------ATGGAG-GAGAATGGATGTGATAGAAAAACA- 37817

Bos ------------------------------------------------------------

Rattus ACATTATCTTCTAACAGGCTGT----TTATTCATTATAGATAGATTCTGTGTTTTGGTTA 55640

Danio -----ACCTTTTACCAGGCCA----------------------GTTCTG----------- 7956

Mus ACATTATATTCTAACAGTCTGCCTATTTATTCATTACTGATATTTTCTGTGTTTTGGTTA 45515

Gallus GCATAATAGTATCTCTGCATAT-----------CTGAGAACATACTTTGCATCATTATCC 31248

Anopheles ------------------------------------------------------------

Homo CAAAAAACACTCCTTGGAAAAAGTATAGGTACATTCTATATAGGATTAGTAGACTGTCAG 65605

Pan CAAAAAACACTCCTTGGAAAAAGTATAGGTACATTCTATATAGGATTAGTAGACTGTCAG 66094

Drosophila ------------------------------------------------------------

Canis TAATAAAACTCCCTTGGA----------------TTTAAATAATAC----AGATTG-CAA 37856

Bos --ACAAAAATCTTTTGTA----------------TTTTTATA---------------TAT 6956

Rattus TAGTTAAGAGAAAT---------------------------------------------- 55654

Danio ------------------------------------------------------------

Mus CAGTTTAGAGAAATTT-------------------------------------------- 45531

Gallus ATCTACAGCACCA----------------------------------------------- 31261

Anopheles ------------------------------------------------------------

Homo AATCACTTGAAGATGTTCCGAAAGCATGACATATCAACAAAGGACATGTGAGTCTAGAAT 65665

Pan AATCACTTGAAGATGTTCCGAAAGCATGACATATCAACAAAGGACATGTGAGTCTAGAAT 66154

Drosophila ------------------------------------------------------------

Canis AAACAATCAGA------------------------------------------------- 37867

Bos AAACAATGA--------------------------------------------------- 6965

Rattus ------------------------------GGTCAAAGAAGATACCATA-ATTTTTTT-- 55681

Danio ------------------------------GGCC-------------TA-ACTTT----- 7967

Mus -----------------GGTAGACTTGAATGGTTAAAGAAGATTCCATGTATTTTTTT-- 45572

Gallus ------------------------------ATATAACCTGTGTGCTGGAAATCCTACT-- 31289

Anopheles ------------------------------------------------------------

Homo GGTGATCCCTAGGACAGGCCATATTACTGCATGCAAAGCAAGTCTTTGTTAACCTTATGA 65725

Pan GGTGATCCCTAGGACAGGCCATATTACTGCATGCAAAGCAAGTCTTTGTTAACCTTATGA 66214

Drosophila ------------------------------------------------------------

Canis -------------------------------------------------TACTCTTA--- 37875

Bos ------------------------------------------------------------

Rattus -----------------------------CCATTAGAATAAT----------GAGAAATC 55702

Danio ------------------------------------------------------------

Mus -----------------------------CAGTTAGAATAAC----------GAGAAATG 45593

Gallus -----------------------------CTTAAATCATAAC----------CTGATGCA 31310

Anopheles ------------------------------------------------------------

Homo CTTGCTCAGGAAGCAAAGTGTTTCATGTCCTAATAGGATAGTAGTATTTTCTGTTATGTT 65785

Pan CTTTCTCAGGAAGCAAAGTGTTTTATGTCCTAATAGGATAGTAGTATTTTCTGTTACGTT 66274

Drosophila ------------------------------------------------------------

Canis -----------------------------CTTATAAGAT--------------TTATATT 37892

Bos ----------------------------------AAGA---------------------- 6969

Rattus AG-CTCCATGTTAGTGTTTTCTTACAT-----TTCTTAGTAGACTAAAGA---------A 55747

Danio -----------------------------------------------------------A 7968

Mus AG-CTCCATGTTAGTGTTTTCTTTTTTACTTATTCTTAGTAGACTAA-GA---------A 45642

Gallus AGACCTCTTGTGGGTGCTGTTTG--------------AGTAGTGGAGAGA---------A 31347

Anopheles ------------------------------------------------------------

Homo ACATTTTAGGAAATTAGGAGTTTTGCATTGTCTTGTAAGAAGGTATTTTAAAAATTTTCA 65845

Pan ACATTTTAGGAAATTAGGAGTTTTGCATTGTCTTGTAAGAAGGTATTTTAAAAATTTTCA 66334

Drosophila ------------------------------------------------------------

Canis ACA----AGAGAAGTAC------------------CAAGAAGG----------------A 37914

Bos -----------------------------------CAAGAAAG----------------A 6978

Rattus TTGAACTTGGATTGCCATGCTGCCTCAGCTAGGTACATGTAACTGAGTTTCATGCCTGGG 55807

Danio TTAAATTTG----------CT--------------------------------------- 7979

Mus TTGAACTTGGCTTGCCATGCTGCCTCAGATAGGGACATGTAACTA----------CTGAA 45692

Gallus CTGTATTGCGTTCTCCGTCTTGTTAC---------------------------------- 31373

Anopheles ------------------------------------------------------------

Homo ATGAAAATAATGAGAAATAGGTTTCCAGT-----------------------------GG 65876

Pan ATGAAAATAATGAGAAATAGGTTTCCAGT-----------------------------GG 66365

Drosophila ------------------------------------------------------------

Canis TTAAACATAATT--AAACAGTCTCCTGGC-----------------------------AT 37943

Bos C-AAAT-TAATG--AAATAATCAC------------------------------------ 6998

Rattus ACTCACAGTATAGAAGGAGAAAATGAACTCATTCAG-TTATCCATTCAACTCCATAGCTT 55866

Danio -------------AAAGAGAAAA--AATT---------------------------GCTT 7997

Mus ACTCACACTGTAGAAGGAGAAAATTAATTCTTTTAGGTTATCAACTCAGCTCAATACCCT 45752

Gallus ----------TAGATAGAAAGAAAGATTTGGGTTAG-------------CAAGTGGACCT 31410

Anopheles ------------------------------------------------------------

Homo TTTTATGCTTTTGGGGAAGAGGTTACTGATGTTTAG-------------CAAAAGATGCT 65923

Pan TTTTATGCTTTTGGGGAAGAGGTTACTGATGTTTAG-------------CAAAAGATGCT 66412

Drosophila ------------------------------------------------------------

Canis TCTAAAGGCTTTGAAGGCAAGAT-----------AG-------------GGAAAGGTG-- 37977

Bos ------------------------------------------------------------

Rattus CATCACCCCTAATAAGTAAATAGAGCATTTTTT-GAAACAAAGAATTGAAGATCATAAAA 55925

Danio TAC----------------------------------------AATTG------------ 8005

Mus CATCACCTCTAATAAGTAAATAGAACATTTTTTTAAAAGAAAGAATTGAAGATCATAAAA 45812

Gallus C------------------------------------------AATCTGAGTACGGAGTG 31428

Anopheles ------------------------------------------------------------

Homo TATATATTCTTAATAGAACAAACCTGAGAATTAGTTCTTAAAGAGTTAAGGCCCATAAAA 65983

Pan TATATATTCTTAATAGAACAAACCTGAGAATTAGTTCTTAAAGAGTTAAGGCCCATAAAA 66472

Drosophila ------------------------------------------------------------

Canis -------------------------AAAAGCTTCTTTCTACGTTAGCAAGGTTC---AAC 38009

Bos -----------------------------------TTTTAC------------------- 7004

Rattus TAA---GTAAGTGTCAATACTCTAGAA--CAGTCCATAGATCAGTTTTGTAGTATATACA 55980

Danio TAA---GTAA-------TATTTCA--------------------------AGTATAT--- 8026

Mus TTA---AAAAGTATCAATACTCTAGAA--TGGGCCATAGA-CAGGTTTGTAGTATATATA 45866

Gallus TGG---GAGACAGGTACCACTCTGA--------------------TGTGTAAACCACCTT 31465

Anopheles ------------------------------------------------------------

Homo GAAACTGTAAGTGTTGGTACTCTTGTAGCTGGGCCACAGATCAGATCCTTAGTATGATAA 66043

Pan GAAACTGCAAGTGTTGGTACTCTTGTAGCTGGGCCACAGATCAGATCCTTAGTATGATAA 66532

Drosophila ------------------------------------------------------------

Canis TAAACTGCAA-TATTGAG----------------TACATACCAAA-------------AA 38039

Bos -----------TGTTG----------------------CATCAGA-------------AA 7018

Rattus GTTCAGTG--CTTTGTGGTTTATGTTTTGGAAGCCATTCTATTAATGAGGACTTGAATTT 56038

Danio ------------------------------------------------------------

Mus GTTTAGTG--CTTTGTGGTTTATGTTTTGGAAGCCATTCCATCAATGAGGACTTGAATTT 45924

Gallus GTCTA------------------------------------------------------- 31470

Anopheles ------------------------------------------------------------

Homo AATTTGGTATTTTTGTGCTTCAATTTTTGGAGACCATTC----AATGATCACTTACATTT 66099

Pan AATTTGGTATTTTTGTGCTTCAATTTTTGGAGACCATTC----AATGATCACTTACATTT 66588

Drosophila ------------------------------------------------------------

Canis GA--------------GCATTAGCTTATAAACAA---------AGTGGAAATTTAT-TTC 38075

Bos GA--------------GTA----------------------------------------- 7023

Rattus TATATTGTCTCTTACTGTTGAAT-AGGTACCTTTAATAA-ATGTACCAATCATAGTAAAG 56096

Danio ------------------------------TTTTAATAG-ATGGAC----------AAAG 8045

Mus TATATTGTTTCTTATTTTTGAATTAGGTACCTTTAATAATATGTAGCAATCATAATAAAG 45984

Gallus ------------------------------TCTGAATAGCACGTTG--------ATGAGT 31492

Anopheles ------------------------------------------------------------

Homo TATATTGTCTTTCATTGTGAAAC---ATATATTATAGCAGAGGTGGGAGTCATTAAAAAT 66156

Pan TATATTGTCTTTCATTGTGAAAC---ATATATTATAGCAGAGGTGGGAGTCATTAAAAAT 66645

Drosophila ------------------------------------------------------------

Canis TAGCTTATCT----------AAC---AGCCATCATATTCCAGGTTGGCACC--------- 38113

Bos ------------------------------------------------------------

Rattus -----ATATTTATGTGTTAGACATAT-----------TATCAATGTATGGGATATATTGT 56140

Danio -----ATGCT-------------------------------------------------- 8050

Mus -----ATTTT-ACATGTTAGATATAT-----------TGGCAATGTATGAGGTGTATTAT 46027

Gallus -----ATGTT---------------------------------------CCAGCTGTTAT 31508

Anopheles ------------------------------------------------------------

Homo TCTACATGTT-GTACACTACATGTATAAGGGTATATTTGGCGCAATGGAGGTAGGATTGT 66215

Pan TCTACATGTT-GTACACTACATGTATAAGGGTATATTTGGCACAATGGAGGTAGGATTGT 66704

Drosophila ------------------------------------------------------------

Canis -------GTT-CTACTTCACATA------------------------------------- 38128

Bos ------------------------------------------------------------

Rattus CAATGTAAATAAAAAAATTAAACTACCTTCAATGTTTAATTTAATAATTCTAG-----TG 56195

Danio ------------------------------------------------------------

Mus CAATGTAACCATAAAA-TTATCCTAACTTAAATGTT-----TAATAATTATAA-----TA 46076

Gallus TCATACGAACAAATAACCCACCTGCCCTACAGTGCGT----------------------- 31545

Anopheles ------------------------------------------------------------

Homo CTGTGTGCCTCTAAAATTAACCT---CTCAAGTAGTTAATCTGATGATGACAAGTATGTC 66272

Pan CTGTGTGCCTCTAAAATTAACCT---CTCAAGTAGTTAATCTGATGATGACAAGTATGTC 66761

Drosophila ------------------------------------------------------------

Canis ------GTCTTTCAGAAATGCTT---CTGTAGTGG------------------------- 38154

Bos ------------------------------------------------------------

Rattus TGCTACTCTTTGATGAAAGAGATTAAGTTTGGCTTCAGCATTATTATT-------TGATA 56248

Danio -----------------------------------CAACATTATTTCT-------T---A 8065

Mus TGTTACTCTTTGGTGAAAGAGATTAG---TGGTTTCAACATTATTATT-------TGATA 46126

Gallus -----------------GTAATTTAGAAGGAAGCATAAACTTATCCTG-------TGTTG 31581

Anopheles ------------------------------------------------------------

Homo ACTTTATTGATAAAAGGGAGAATTAAGACTATTCTCAGTATTATGTTGGTCAGTACACAA 66332

Pan ACTTTATTGATAAAAGGGAGAATTAAGACTATTCTCAGTATTATGTTGGTCAGTACACAA 66821

Drosophila ------------------------------------------------------------

Canis -----------------------------------CATTGTTATCTT----------CAA 38169

Bos ------------------------------------------------------------

Rattus AATATATTAATTTGTAAGACTTTAG----TATATAAAATGTCATCTTTTCCCAATTAGAT 56304

Danio AGCACAC-----------ACTT-------------------------------------- 8076

Mus AATATATTACTTTCTAAAACTTTAA----TATGTAAAATGTTACCTTTTTCCAAAAAGAT 46182

Gallus AGAGTTTT---TTGAGTGATTTTCAGGTATGTGTTAGGTAAAAACTATTACGGAACACAT 31638

Anopheles ------------------------------------------------------------

Homo AATATATCATTTGTTTTTACCTGTGAAATGAAATATCTTTCATCCTATTAGCCAGAAGGG 66392

Pan AATATATCATTTGTTTTTACCTGTGAAATGAAATATCTTTCATCCTGTTAGCCAGAAGGG 66881

Drosophila ------------------------------------------------------------

Canis CACATGGCTTCCAGAGCATCCTGGGAG----------CATCATCCCATTAGCCAGAAGGA 38219

Bos -ACATGCCT--------------------------------------------------- 7031

Rattus AAAATATCTTT-TGTTTTGTTAAC--GAAATGGTAAAGCCTTTGTTGAAAGTAA--TTTC 56359

Danio --AATACTT--------------------------------------------------- 8083

Mus A-AGTATCTTT-TGTTTTGTTAACCTGAAATGGTAAAGCCTTTGTTGAAATTTACATTTG 46240

Gallus AAAAATTCTTA-TCTATTTCTAAT------------------------------------ 31661

Anopheles ------------------------------------------------------------

Homo AGAAAGCCTTGGCCTGAAAATAACACTTA-TCTCAAAAAGTTGGGAAATGTGG------- 66444

Pan GGAAAGCCTTGGCCTGAAAATAACACTTA-TCTCAAAAAGTTGGGAAATGTGG------- 66933

Drosophila ------------------------------------------------------------

Canis --AAAGCCTTGGCCTGA-AGTAGCCCTTAACCTCAAAAACCTGGGAAACCTGGGA----- 38271

Bos ------------------AGTA---CTAAACCT---AAACCT------------------ 7049

Rattus CCTAAGCTAGGAGA-----------TTTATGGTCCAAATCTGTTCCTGGGAGAAAAATAG 56408

Danio -----------------------------------------------------AAAATA- 8089

Mus GCCTAGTGGTGAGAAGCTAGAGACTTTTATGATCCCAATTCTATTTCTGGGAGAAAATAA 46300

Gallus -------------------------------ACTCTTATTTCTTACATTCAACAAAATAA 31690

Anopheles ------------------------------------------------------------

Homo --------------------------------TCCAACTCTGTGCCCAGGAAAAGAGGAA 66472

Pan --------------------------------TCCAACTCTGTGCCCAGGAAAAGAGGAA 66961

Drosophila ------------------------------------------------------------

Canis -------------------------GATGGAGTCCAAATCTGC-CCAGAAAGGAGAGGAA 38305

Bos -------------------------------------ATCT--------AAGGAGA---- 7060

Rattus ATATGAATTTTGGTGCTTGTGGTCTTTACTCTCTTAGCTTCTTCCTTTTATTTGTTTTTG 56468

Danio ---------------CTTACATTCTTTA-------------------------------- 8102

Mus ATATAGGTTTTAGTGCTTGTGGTTTTTGCTTTCTTAGCTTCTTTCTTCTGTTTGTTTTTA 46360

Gallus ------------GTTACTGCATCTTTTAA------AGATCTGTCTTTAAGTTGGATTATG 31732

Anopheles ------------------------------------------------------------

Homo ATAGATTTTGATGACTACATAGTC-TCTGCACTGCTTGCCAGCTCATAAGTTTACTTCT- 66530

Pan ATAGATTTTGATGACTACATAGTC-TCTGCACTGCTTGCCAGCTCATAAGTTGACTTCT- 67019

Drosophila ------------------------------------------------------------

Canis AAAGATTTTGGTGACTACATAGTAATCTGTTTTACTTGTCTGCTTTTATATCCGTTCTTA 38365

Bos ------------------------------------------------------------

Rattus AATGACTG-------TAATAATTTCTAGTTGCTCTGTTAAGAGTTATTAGAACCCAAATA 56521

Danio ------------------------------------------------------------

Mus AATGACTGATGACTGTAATAATTTCCAGTTGCTCTGTTAAGAATTGTTAGAACCTGAGTA 46420

Gallus TATG-------------------------TGCTCAGTTGAAAAAAGTTGATAGTTTAGTT 31767

Anopheles ------------------------------------------------------------

Homo TTGCACTG----------TTTGTTTTCATTGCTCAAAAACTATTTTCTGTCACTCTATGA 66580

Pan TCGCACTG----------TTTGTTTTCATTGCTCAAAAACTATTTTCTGTCACTCTATGA 67069

Drosophila ------------------------------------------------------------

Canis CCCCACTG----------TAT-TTTTTATTACTCTGTAACAATATCCTGTTAGTCTATAA 38414

Bos ------------------------------------------------------------

Rattus ATGGTCATAGGTAGTAGTAGCTGT-----AGTAGCAGTTTTA----ACTTCAGTAGAGTT 56572

Danio -------------------------------TAGCAG----------------------- 8108

Mus ATGGTCATAGGTAGTAGTAGTTGT-----AGTAGCAGTTTTA----ACTTCAGTAGAGTT 46471

Gallus CAGGTAGT--GTAGTGACTTGTGT-----GTTGGCTGTACTG----ATTT---------- 31806

Anopheles ------------------------------------------------------------

Homo GATTTAGTCTAACCTGATTCCTGGCTGTGGAAAGCAGTTTCT----ACTTAAGAGCCGAT 66636

Pan GATTTAGTCTAACCTGATTCCTGGCTGTGGAAAGCAGTTCCT----ACTTAAGAGCCGAT 67125

Drosophila ------------------------------------------------------------

Canis GGTGTCTTCTAATCTGATTCCTGGCTACAGATGGCAGTGTTTGTTAACTTCAGATCTTAT 38474

Bos ------------------------------------------------------------

Rattus TACTTGAGTAGTAATA---TCTTTTTCTCAGCTTCAGAATGAAAACTCTGGAAGAAATGA 56629

Danio -------------------------------------GATG------------------- 8112

Mus TACATGAGTAGTAATA---TCTTTTCCTCAGCCTCTGAATGGAAATTCTGGAAGAAATTA 46528

Gallus -------------------------------------ACCAGAAGCATTGGTATTGTGTC 31829

Anopheles ------------------------------------------------------------

Homo GAGAAATGGTATATT----CTTCTCAATCACTCACAGAATGACTACCCTGGA-ACAAACT 66691

Pan GAGAAATGGTATATT----CTTCTCAATCACTCACAGAATGACTACCCTGGA-ACAAACT 67180

Drosophila ------------------------------------------------------------

Canis GAGAAATGGTATATTAATTCTTCTCAATCACCCACAGAATGACTACCCTGGAAAAAAACT 38534

Bos ----------------------------CACCTA---------TACTCT----AAAAACT 7079

Rattus A-----GAATACATAACATGAGTCAGTTTGATTTTACGATATACAAAAGTATAGAAAGAG 56684

Danio -----------------------------GATTCTGT----------------------- 8120

Mus G-----GAATACATAAGATGAGTCAGTTTGGTTTTAGTATATACAAAAGTATAGAAAGAG 46583

Gallus A-----CGCAGCCTTATTAAGGCTTTTAAGGTTTTAACATCTC----------------G 31868

Anopheles ------------------------------------------------------------

Homo A----GGAAGACCCAAAATGAACCAGTTTGATTTTAATACATACATAGATGCTGAAGGAG 66747

Pan A----GGAAGACCCAAAATGAACCAGTTTGATTTTAATACATACATAGATGCTGAAGGAG 67236

Drosophila ------------------------------------------------------------

Canis AAAAAGGAGGATTCAAAG-GAAGCAGTTGGATTTTAAGATGTATAAAAATAAGACAAGGG 38593

Bos ------------------------------------------------------------

Rattus TTGATTGCAAATGAAGGGGTTGAGGAAACCTTGT---AAAACCTTGCCTCCTTAGTTTTT 56741

Danio TTGACTGCA------------------------------------------TTGGTCTTT 8138

Mus TTGATTGCAAATGAAGGGGCTAAGGAAACCTTGTTATAAAACCTTACCTCCTTAGTTTTT 46643

Gallus CTGATTGC-----------TCTAGTTACTCTTGT-----------------TTAGACTAT 31900

Anopheles ------------------------------------------------------------

Homo CCTTTTTTTAAGA----------------------------CCTTGCCTTCTTAGTCTTT 66779

Pan CCTTTTTTTAAGA----------------------------CCTTGCCTTCTTAGTCTTT 67268

Drosophila ------------------------------------------------------------

Canis CTATTTCCCAAAGAGGATGCTGAAGGAACCTC---------TCTTGCCTTCTCAGTCTTT 38644

Bos ------------------------------------------------------------

Rattus TGAGAACAATGTAAAGGAAAATGA----TTTTAGGTTATTAGCATAGTA----GCTTTTC 56793

Danio TAA--------------------------------------------------------- 8141

Mus TGAGAACAATGCAAAGGAAAATGA----TTTCAGGATTTTA-TATAGTA----GCTTTTT 46694

Gallus CTAATACTATC------AAACTAA----GTGTCCATCAACTGCAAAGCA----GATTTT- 31945

Anopheles ------------------------------------------------------------

Homo GGAGAACAGAGTACTGAAACAAGAAAACTCACAGATTAGTAGTATTTCTGTGTGTTCTAC 66839

Pan GGAGAACAGAGTACTGAAACAAGAAAACTCACAGATTAGTAGTATTTCTGTGTGTTCTAC 67328

Drosophila ------------------------------------------------------------

Canis TGAGA--AGAATAGTGAGATAAGAAACCTCTCAGAAGAACAGTAGTTTC---TGCTCTGA 38699

Bos ------------------------------------------------------------

Rattus GGTAAGGTTGTAATAAA-GTACAGTGATGAAA-----TGATAAATATATATATTTGTTCA 56847

Danio -------CTGT------------------------------------------------- 8145

Mus GTTAAGGTTGTAATAAA-GTACAATGAGGAAA-----TGACAAGTATATATATTTGTTCA 46748

Gallus -------CTATCCCAGA-ATGTTCTCTGATCA-----ACATCCACAAATAAGATGGTATA 31992

Anopheles ------------------------------------------------------------

Homo AGTGAGGTTTTAAGAGCTGTATTATGATTAAT-----CAGTACATGAC-ATATTGGTTCA 66893

Pan AGTGAGGTTTTAAGAGCTGTATTATGATTAAT-----CAGTACATGAC-ATATTGGTTCA 67382

Drosophila ------------------------------------------------------------

Canis AGTGAGGTTGTAAGAAGTGTATCATTATGAATTAAATCAGCACATAGTTATCTTGGTTCA 38759

Bos ---------GTAAGA-----------------------------------TCCTG----- 7090

Rattus TATCTACAA-TAAATGTTACATACCAGTACATGTCTCGGTTACAAGGCAAGTCTTAAATT 56906

Danio --------------------------------------------------GTCTT----- 8150

Mus TACCTACAA-TTAATGTTACATACCAGTACATGTCTTGGTTACAAGGCATGTCTTAA-TT 46806

Gallus CAAAAGAGT-TCTGAGTTGGTGATTTATTGTGTTAATGAAAGTGAGTCATGTCTTAAATT 32051

Anopheles ------------------------------------------------------------

Homo TATTTATAA-TTAAAGCTATACATTAATAGATATCTTGATTATAAAGAAAGTTTAAACTC 66952

Pan TATTTATAA-TTAAAGCTATACATTAATAGATATCTTGATTATAAAGAAAGTTTAAACTC 67441

Drosophila ------------------------------------------------------------

Canis TATTTATAAATTAAAGCTACATGTTAATTTCTACTGTGATTTTGAAAAGAGTTCAAGCTC 38819

Bos ------------------------------------------------------------

Rattus ACCAATGCATAATTAATAATTATATGTTG---AATGAGTGCCAAAGAAAGGGTGAGGTTG 56963

Danio ------------------------------------------------------------

Mus ATCAATGCATAATTAATAATTATATTTTGTTCAATGAATGCCAA-GAAAGGGTGA----- 46860

Gallus TATAAAG------TGCTGACACTATTTTTTGTTATGTGTGCTGATGGTATAAT------- 32098

Anopheles ------------------------------------------------------------

Homo ATGATCTT---ATTAAGAGTTATACATTGTTGAAAGAATGTAAAAGCATGGGTGAGGTCA 67009

Pan ATGATCTT---ATTAAGAGTTATGCATTGTTGAAAGAATGTAAAAGCATGGGTGAGGTCA 67498

Drosophila ------------------------------------------------------------

Canis AT-----------TAAAAGCTATATATTAT-GAAGGAATATAAAA-----GATGAGATTG 38862

Bos ----------------------------AT-GAAAGAA-ATTGAA-----GATGACAC-- 7113

Rattus TTGGGATTACTTAAATAAAAAAGGAGCTGGTGATTTTAGGG-------TGTTAATAAGTA 57016

Danio ------------------------------TGACTTTCAAG-------TGTT-------- 8165

Mus -------------------------------GATTGTTGGGATT-ACTTGTTAATAAGTA 46888

Gallus --------------------------------ATACACAGA--------TTTATTGTGTA 32118

Anopheles ------------------------------------------------------------

Homo TTGGTATAGGTAGG--TAGTTCATTGAAAAAAATAGGTAAGCATTAAATTTTGTTTGCTG 67067

Pan TTGGTATAGGTAG------TTCATTGAAAAAAATAGGTAAGCATTAAATTTTGTTGGCTG 67552

Drosophila ------------------------------------------------------------

Canis TTGCAATTAGTAG---TAGTTCATTGAAA-AAATAGGAAAATAT---ATTTTGTTTGTTG 38915

Bos ------------------------------AAACAGGTAGGAAT---ACTACATTC---- 7136

Rattus AATTACATTTTTTTAAAA----------------------ATTCTAAATCAAATTCAGAA 57054

Danio ------------------------------------------------------------

Mus AATTACATCATTT-AAAA----------------------ATTCTAAATCAAGTCCAGAA 46925

Gallus AAGCACGTTAGCC--------------------------------------------GTA 32134

Anopheles ------------------------------------------------------------

Homo AATCTAAGTATTAGATAC---TTTAAGAGTTGTATATCATAAATGATATTGAGCCTAGAA 67124

Pan AATCTAAGTATTAGATAC---TTTAAGAGTTGTGTATCATAAATGATATTGAGCCTAGAA 67609

Drosophila ------------------------------------------------------------

Canis AATCTAAATATTAGATCTGTTTTTAAAAGAGTTGTAATTCAACTGGTATTGAGTACAAAA 38975

Bos ----------TTAGA-------CTGAAAGA-------TTCAG------------------ 7154

Rattus TGTTTAGATATTTTATTTGTTCAGTAAAAATTAT---AACAAAATAAACATGTATATTAT 57111

Danio ------------TTACT------------------------------------------- 8170

Mus TGTTTAGATATTTTACTTTTTCACTAGCAATTATTTTAACAAAATAAACATGTATATTAC 46985

Gallus TTTTCTTAATTTTTATCT------------------------------------TAATAC 32158

Anopheles ------------------------------------------------------------

Homo TGTTTGGCTGTTTTACTTTT-----AGAACTTTTTGCAACAGAGTAAACATACATATTAT 67179

Pan TGTTTGGCTGTTTTACTTTT-----AGAACTTTTTGCAACAGAGTAAACATACATATTAT 67664

Drosophila ------------------------------------------------------------

Canis GG----GCTGTTTTACTTTTC-ACTAGAACTT---AAGACAAAATAAACATAC---TTCT 39024

Bos --------TGTTTT-------------------------CAAAATAACTATAT---TACC 7178

Rattus AATAATAAATGTTCT----TTTTCTTTCCATTTTCTAGAGGTGGACTACCTAACTGAAGA 57167

Danio --------ATGTTTT----TTTTTT----ATTTGGCAGATCTGAATTTCTTGACTGAGGA 8214

Mus AACA-TAAATGTTCT----TTTTCTTTCCATTTTCTAGATGTGATTTACCTAACTGAAGA 47040

Gallus AATTAATAATAATAT----TTTCTGT----TGTTATAGATGTGACTTTTCTAACGGAAGA 32210

Anopheles ------------------------------------------------------------

Homo GAAAATAAATGTTCTC-TTTTTTCCTCTGATTTTCTAGATGTGACTTACTTAACAGAAGA 67238

Pan GAAAATAAATGTTCTC-TTTTTTCCTCTGATTTTCTAGATGTGACTTACTTAACAGAAGA 67723

Drosophila ------------------------------------------------------------

Canis AAAAATAAATGTTCTCCTTTTTTTCTCTAACTTTCTAGATGTGACTTACCTAACAGAAGA 39084

Bos CAAGGTAA-----------------TCTA------CAGATGCGA---------------- 7199

Rattus GAAAGTATATGAAATTTATGAAT-TTTGTAGGGAGAGAGAGGATTACTCCCCTTTAATTC 57226

Danio TAAGGTGTATGAAATCC-TGAGCATCTGCAGTGAGACAGAGGACTATTCTCCTCTAATCC 8273

Mus GAAAGTATATGAAATTTATGAAT-TTTGTAGAGAGAGTGAGGATTATTCCCCTTTAATTC 47099

Gallus CAAGATATATGAAATTCTTGAAC-TATGTCGGGAGAAAGAGGATTATTCCCCTTTAATCC 32269

Anopheles ------------------------------------------------------------

Homo GAAGGTATATGAAATTCTTGAAT-TATGTAGAGAAAGAGAGGATTATTCCCCTTTAATCC 67297

Pan GAAGGTATATGAAATTCTTGAAT-TATGTAGAGAAAGAGAGGATTATTCCCCTTTAATCC 67782

Drosophila ------------------------------------------------------------

Canis GACGGTGTATGAAATTCTTGAAT-TATGTAGAGAGAGAGAGGATTATTCCCCTTTAATCC 39143

Bos ---------TGCAGTCCT--ACT-TAT-CAGA---------------------------- 7218

Rattus GTGTAATTGGAAGAATATTTTCTAGTGCTGAGGCACTGGTTCAGAGCTTTCGGAAAGTCA 57286

Danio GTGTTATTGGTCGGGTTTTCTCAAGTGCAGAGAGTCTAGTCCAGAGTTTCCGCAAAGCAA 8333

Mus GTGTAATTGGAAGAATATTTTCTAGTGCTGAGGCACTGGTTCTGAGCTTTCGGAAAGTCA 47159

Gallus GAGTGATTGGGAGAGTATTTTCCAGTGCAGAAGCACTGGTACAGAGTTTCCGAAAAGCCA 32329

Anopheles ------------------------------------------------------------

Homo GTGTTATTGGAAGAGTTTTTTCTAGTGCTGAGGCATTGGTACAGAGCTTCCGGAAAGTTA 67357

Pan GTGTTATTGGAAGAGTTTTTTCTAGTGCTGAGGCATTGGTACAGAGCTTCCGGAAAGTTA 67842

Drosophila ------------------------------------------------------------

Canis GTGTTATTGGAAGAGTTTTTTCTAGTGCTGAGGCATTGGTACAGAGCTTTCGGAAAGTCA 39203

Bos ---TTACTAGTGGCATTTTTC-------------------ACAGAACT------------ 7244

Rattus AACAGCACACTAAGGAGGAATTGAAATCTCTTCAAGAGAAGGATGAAGACAAGGATGAAG 57346

Danio AACAACACACCAAGGAAGAGCTCAAGTCCCTTCAGGCCAAGGATGAAGACAAAGATGAAG 8393

Mus AACAGCACACAAAGGAGGAATTGAAATCTCTTCAAGAAAAGGATGAAGACAAGGATGAAG 47219

Gallus AGCAGCACACCAAGGAGGAGCTCAAGTCTCTTCAAGGAAAGGATGAAGACAAAGATGAAG 32389

Anopheles ------------------------------------------------------------

Homo AACAACACACCAAGGAAGAACTGAAATCTCTTCAAGCAAAAGATGAAGACAAAGATGAAG 67417

Pan AACAACACACCAAGGAAGAACTGAAATCTCTTCAAGCAAAAGATGAAGACAAAGATGAAG 67902

Drosophila ------------------------------------------------------------

Canis AACAACACACCAAGGAAGAACTGAAATCTCTTCAAGGAAAGGATGAAGACAAGGATGAAG 39263

Bos ----------------AGAACAAAAATTTTT----------------------------- 7259

Rattus ATGAAAAGGAAAAAGCTGCGTGTTCTGCTGCTGCTATGGAAGAAGACTCAGAAGCATCTT 57406

Danio ATGAGAAAGAAACGGCTTCTGGTTCATCCACAGCAATGGAGGTGGAACCAGAAGCTTCAG 8453

Mus ATGAAAAGGAAAAAGCTGCATGTTCTGCTGCTGCTATGGAAGAAGACTCAGAAGCATCTT 47279

Gallus ATGAAAAGGAAAAAGCTGCCTGTTCGGCTGCTGCTATGGAAGAAGACTCAGGCGCGTCAT 32449

Anopheles ------------------------------------------------------------

Homo ATGAAAAGGAAAAAGCTGCATGTTCTGCTGCTGCTATGGAAGAAGACTCAGAAGCATCTT 67477

Pan ATGAAAAGGAAAAAGCTGCATGTTCTGCTGCTGCTATGGAAGAAGACTCAGAAGCATCTT 67962

Drosophila ------------------------------------------------------------

Canis ATGAAAAGGAAAAAGCTGCATGTTCTGCTGC---TATGGAAGAAGATTCAGAAGCATCTT 39320

Bos ------------------------------------------------------------

Rattus CTTC---------AAG----GATGGGTGATAGCTCACAGGGAGACAACAATGTACAAAAA 57453

Danio CATC---------AAGTGGAGACGGGTCAT--CTCATGGGGAGA--ACAACGTCCAAAAG 8500

Mus CTTC---------AAG----GATGGGTGATAGTTCACAGGGAGACAACAATGTACAAAAA 47326

Gallus CATCTTCATCGTCGAG----AATAGGTGAAAATACACAAGGAGATAATAACCTCCAAAAA 32505

Anopheles ------------------------------------------------------------

Homo CCTC---------AAG----GATAGGTGATAGCTCACAGGGAGACAACAATTTGCAAAAA 67524

Pan CCTC---------AAG----GATAGGTGATAGCTCACAGGGAGACAACAATTTGCAAAAA 68009

Drosophila ------------------------------------------------------------

Canis CTTC---------AAG----GATAAGTGATAGTTCACAAGGAGATAACAACTTACAAAAA 39367

Bos ------------------------------------------------AACTT------- 7264

Rattus TTAGGTCCTGATGATGTGACTGTGGATATTGATGCTATAAGAAGGGTCTACAGCAGTTTG 57513

Danio TTGAGTCCTGTAGAAGTTTCTGTAGACATTGATGCTGTAAGAAGAGTGTACGACAGATTA 8560

Mus TTAGGTCCTGATGATGTGACTGTGGATATTGATGCTATTAGAAGGGTCTACAGCAGTTTG 47386

Gallus TTGGGCCCTGATGAAGTGTCTGTAGATATTGAAGCAGTCAGGCGGGTCTACGATAGATTA 32565

Anopheles ------------------------------------------------------------

Homo TTAGGCCCTGATGATGTGTCTGTGGATATTGATGCCATTAGAAGGGTCTACACCAGATTG 67584

Pan TTAGGCCCTGATGATGTGTCTGTGGATATTGATGCCATTAGAAGGGTCTACACCAGATTG 68069

Drosophila ------------------------------------------------------------

Canis ATAGGCCCTGATGATGTGTCTGTGGATATTGAGGCCATTAGAAGGGTCTATACCAGATTA 39427

Bos --------------------TGT------------------------------------- 7267

Rattus CTCTCTGATGAAAAAATAGAAACTGCCTTCCTGAATGCACTTGTATATCTGTCACCTAAC 57573

Danio TTATCGAATGAGAAGATTGAGGCAGCTTTCCTCAACGCGTTAGTCTACTTGTCGCCCAAC 8620

Mus CTCGCTAATGAAAAATTAGAAACTGCCTTCCTGAATGCACTTGTATATCTGTCACCTAAC 47446

Gallus CTTTCTAATGAAAAAATAGAAACTGCCTTTTTAAATGCACTTGTGTACTTGTCACCTAAC 32625

Anopheles ------------------------------------------------------------

Homo CTCTCTAATGAAAAAATTGAAACTGCCTTTCTCAATGCACTTGTATATTTGTCACCTAAC 67644

Pan CTCTCTAATGAAAAAATTGAAACTGCCTTTCTCAATGCACTTGTATATTTGTCACCTAAC 68129

Drosophila ------------------------------------------------------------

Canis CTCTCTAATGAAAAAATAGAAACTGCTTTTCTCAATGCACTTGTGTATTTGTCACCTAAT 39487

Bos ---------------ATGGAAAC------------------------------------- 7275

Rattus GTGGAATGTGATTTGACATATCATAATGTGTACACTCGAGACCCTAATTATCTCAATTTG 57633

Danio GTAGAGTGTGACCTCACCTATCACAATGTGTACGCCGCTGACCCTAATTACCTGAACGTC 8680

Mus GTGGAATGTGATTTGACATATCATAATGTGTATACTCGAGATCCTAATTATCTCAATTTG 47506

Gallus GTGGAATGTGACTTGACTTACCATAATGTATACTCTCGGGATCCTAACTATCTGAATTTG 32685

Anopheles ------------------------------------------------------------

Homo GTGGAATGTGACTTGACGTATCACAATGTATACTCTCGAGATCCTAATTATCTGAATTTG 67704

Pan GTGGAATGTGACTTGACGTATCACAATGTATACTCTCGAGATCCTAATTATCTGAATTTG 68189

Drosophila ------------------------------------------------------------

Canis GTGGAATGTGACTTGACGTATCACAATGTATACTCTCGAGATCCTAATTATCTGAATTTA 39547

Bos ----------------------ACAA-----------GAGACCCCGAATAGCCAAA---- 7298

Rattus TTCATTATTGTAATGGAAAATAGGAATCTCCACAGTCCTGAATATCTGGAAATGGCATTG 57693

Danio TTCATCATTGTGATGGAGAACAGTAACCTCCACAGTCCCGAATACTTAGAAATCGCCTTG 8740

Mus TTCATTATTGTAATGGAGAATAGTAATCTCCACAGTCCTGAATATCTGGAAATGGCGTTG 47566

Gallus TTTATTATCGTTATGGAGAATGGCAATCTTCATAGCCCAGAATATCTGGAAATGGCTCTG 32745

Anopheles ------------------------------------------------------------

Homo TTCATTATCGTAATGGAGAATAGAAATCTCCACAGTCCTGAATATCTGGAAATGGCTTTG 67764

Pan TTCATTATCGTAATGGAGAATAGAAATCTCCACAGTCCTGAATATCTGGAAATGGCTTTG 68249

Drosophila ------------------------------------------------------------

Canis TTCATTATTGTAATGGAGAATAGAAATCTACACAGTCCTGAATATCTGGAAATGGCTTTG 39607

Bos -------------------------------GCAGTCCTGA-------GAAA-------- 7312

Rattus CCGTTATTTTGCAAAGCTATGAGTAAGCTACCCCTTGCAGCTCAAGGAAAACTGATTAGG 57753

Danio CCACAGTTCTGCAAGGCCATGAGCAAGCTACCTCTTCCGGCTCTGGCCAAGCTTGCACGG 8800

Mus CCATTATTTTGCAAAGCTATGTGTAAGCTACCCCTTGAAGCTCAAGGAAAACTGATTAGG 47626

Gallus CCGTTGTTTTGCAAAGCAATGAGCAAGCTGCCCCTTGCAGCTCAAGCAAAACTGGTCAGA 32805

Anopheles ------------------------------------------------------------

Homo CCATTATTTTGCAAAGCGATGAGCAAGCTACCCCTTGCAGCCCAAGGAAAACTGATCAGA 67824

Pan CCATTATTTTGCAAAGCGATGAGCAAGCTACCCCTTGCAGCCCAAGGAAAACTGATCAGA 68309

Drosophila ------------------------------------------------------------

Canis CCATTGTTTTGCAAAGCAATGAGTAAGCTACCCCTTGCAGCCCAAGGAAAATTGGTTAGA 39667

Bos -----------CAAAAC------------------TGCAGCTGAAGGAA------TCAGG 7337

Rattus CTGTGGTCTAAATACAGTGCTGACCAGATTCGGAGAATGATGGAAACATTTCAGCAACTT 57813

Danio TTGTGGTCGCAGTACGGTGTGGACCAGATCCGACGTTTGGTCGAGACTTTCCAGCAGCTT 8860

Mus CTGTGGTCTAAATACAGTGCTGACCAGATTCGGAGAATGATGGAAACATTTCAGCAACTT 47686

Gallus TTGTGGTCTAAGTATAGAGCAGACCAAATTCGGAGAATGATGGAGACGTTTCAGCAGCTT 32865

Anopheles ------------------------------------------------------------

Homo CTGTGGTCTAAATACAATGCAGACCAGATTCGGAGAATGATGGAGACATTTCAGCAACTT 67884

Pan CTGTGGTCTAAATACAATGCAGACCAGATTCGGAGAATGATGGAGACATTTCAGCAACTT 68369

Drosophila ------------------------------------------------------------

Canis CTGTGGTCTAAATACAGTGCAGACCAAATTCGTAGAATGATGGAAACATTTCAGCAACTT 39727

Bos CT----TCCTGATCT----CAGACCG--------------------TACTCCAAAGCTTT 7369

Rattus ATTACCTACAAAGTCATAAGCAATGAATTTAATAGCCGAAATCTAGTGAATGATGATGAT 57873

Danio ATTACCTACACGGTCATCAGCAACGAGTTCAGCAGTGATAACCTAGTCAATGAGGATGAT 8920

Mus ATTACCTACAAAGTCATAAGCAATGAATTTAATAGCCGAAATCTAGTGAATGATGATGAT 47746

Gallus ATTACTTACAAAGTCATAAGCAACGAGTTCAACAGTCGTAACCTAGTGAATGATGACGAT 32925

Anopheles ------------------------------------------------------------

Homo ATTACTTATAAAGTCATAAGCAATGAATTTAACAGTCGAAATCTAGTGAATGATGATGAT 67944

Pan ATTACTTACAAAGTCATAAGCAATGAATTTAACAGTCGAAATCTAGTGAATGATGATGAT 68429

Drosophila ------------------------------------------------------------

Canis ATTACTTACAAAGTCATAAGCAATGAATTTAACAGTCGGAATCTAGTGAATGATGATGAT 39787

Bos AGTACTCA---------------------TAACGGTTGGTAT------------------ 7390

Rattus GCCATTGTTGCTGCTTCAAAGTGTTTGAAAATGGTTTACTATGCAAATGTAGTGGGAGGG 57933

Danio GGTGTGGTGGCAGCCACCAAGTGCTTGAAAATCGTCTACTATGCAAACGTGCTGGGCGGC 8980

Mus GCCATTGTTGCTGCTTCAAAGTGTTTGAAAATGGTTTACTATGCAAATGTAGTGGGAGGG 47806

Gallus GCTGTTGTTGCTGCTTCCAAGTGCTTGAAAATGGTTTACTATGCAAATGTAGTAGGAGGG 32985

Anopheles ------------------------------------------------------------

Homo GCCATTGTTGCTGCTTCGAAGTGCTTGAAAATGGTTTACTATGCAAATGTAGTGGGAGGG 68004

Pan GCCATTGTTGCTGCTTCGAAGTGCTTGAAAATGGTTTACTATGCAAATGTAGTGGGAGGG 68489

Drosophila ------------------------------------------------------------

Canis GCTATTGTTGCTGCTTCAAAGTGCTTGAAAATGGTTTACTATGCAAATGTAGTGGGTGGG 39847

Bos -------------------------TGAGA-------------CAGAAACAG-------- 7404

Rattus GACGTGGACACAAATCATAATGAGGAAGATGATGAAGAGCCTATACCTGAGTCCAGTGAA 57993

Danio GACCTAGACACGGATCACAATGAGGAGGACGACGATGAACCGATCCCTGAGTCCAGCGAG 9040

Mus GATGTGGACACAAATCATAATGAGGAAGATGATGAAGAACCCATACCTGAGTCCAGCGAA 47866

Gallus GATGTGGATACAGATCATAATGAAGAGGAAGATGAAGAACCCATCCCGGAATCAAGTGAA 33045

Anopheles ------------------------------------------------------------

Homo GAAGTGGACACAAATCACAATGAAGAAGATGATGAAGAGCCCATCCCTGAGTCCAGCGAG 68064

Pan GAAGTGGACACAAATCACAATGAAGAAGATGATGAAGAGCCCATCCCTGAGTCCAGCGAG 68549

Drosophila ------------------------------------------------------------

Canis GAAGTGGACACAAATCACAATGAAGAAGATGATGAAGAGCCCATCCCTGAATCCAGTGAA 39907

Bos -----AAATACAGGTCA--GTGAAGCAGA-------AAGCCCA-----GA---------- 7435

Rattus TTGACACTTCAGGAGCTTCTGGGAGAGGAAAGAAGAAATAAGAAAGGTCCTCGAGTGGAT 58053

Danio CTGACGCTGCAGGAGCTGCTGGGAGAGGAGAGACGCAATAAAAAAGGCCCTCGAGTGGAT 9100

Mus TTAACACTTCAGGAGCTTCTGGGAGATGAAAGAAGAAATAAGAAAGGTCCTCGAGTGGAT 47926

Gallus CTAACTCTTCAAGAGCTGTTGGGTGAGGAAAGAAGAAATAAAAAAGGTCCTCGAGTGGAC 33105

Anopheles ------------------------------------------------------------

Homo CTGACACTTCAGGAACTTTTGGGAGAAGAAAGAAGAAACAAGAAAGGTCCTCGAGTGGAC 68124

Pan CTGACACTTCAGGAGCTTTTGGGAGAAGAAAGAAGAAACAAGAAAGGTCCTCGAGTGGAC 68609

Drosophila ------------------------------------------------------------

Canis TTGACACTTCAGGAGCTTTTGGGAGAGGAAAGAAGAAATAAGAAAGGTCCTCGAGTGGAC 39967

Bos --GACACCTGCGG-------------------------------------TCG------- 7449

Rattus CCACTAGAAACCGAAATTGGCGTTAAAACTCTAGATTGTCGAAAACCACTTATCTCCTTT 58113

Danio CCGCTAGAGACAGAAATGGGCATCCGTGCCTCGGACTGTCGAAAACCCCTCATCCCATTC 9160

Mus CCACTAGAAACCGAACTTGGCGTTAAAACTCTAGACTGTCGAAAACCACTTATCTCCTTT 47986

Gallus CCACTGGAAACTGAACTTGGTGTTAAAACTATAGATTGCAGAAAACCACTTATCCCCTTT 33165

Anopheles ------------------------------------------------------------

Homo CCCCTGGAAACTGAACTTGGTGTTAAAACCCTGGATTGTCGAAAACCACTTATCCCTTTT 68184

Pan CCCCTGGAAACTGAACTTGGTGTTAAAACCCTGGATTGTCGAAAACCACTTATCCCTTTT 68669

Drosophila ------------------------------------------------------------

Canis CCATTGGAAACTGAACTTGGTGTTAAAACTCTGGATTGTCGAAAACCACTTATCCCTTTT 40027

Bos ---------------------GTTAA---TCTG---TGTCA------------------- 7463

Rattus GAAGAATTCATTAATGAACCACTGAATGATGTTCTAGAAATGGACAAAGATTATACTTTT 58173

Danio GAGGAGTTCATCAATGAACCACTCAATGAGGTGCTGGAAATGGACAAAGACTATACCTTC 9220

Mus GAAGAATTCATTAATGAACCACTGAATGATGTTCTAGAAATGGACAAAGATTATACCTTT 48046

Gallus GAAGAATTTATTAATGAACCACTGAATGATGTTCTAGAAATGGACAAAGACTACACTTTC 33225

Anopheles ------------------------------------------------------------

Homo GAAGAGTTTATTAATGAACCACTGAATGAGGTTCTAGAAATGGATAAAGATTATACTTTT 68244

Pan GAAGAGTTTATTAATGAACCACTGAATGAGGTTCTAGAAATGGATAAAGATTATACTTTT 68729

Drosophila ------------------------------------------------------------

Canis GAAGAGTTTATTAATGAACCACTGAATGATGTTCTAGAAATGGATAAAGATTATACTTTT 40087

Bos GAGGGGC----------------------------AGGAGTG------------------ 7477

Rattus TTCAAAGTTGAAACAGAGAACAAATTCTCTTTTATGACATGTCCCTTTATATTGAATGCT 58233

Danio TTCAAGGTGGAGACAGAGAGCAAGTTCTCCTTTATGACCTGCCCTTTCATACTTAACGCT 9280

Mus TTCAAAGTTGAAACAGAGAACAAATTCTCTTTTATGACATGTCCCTTTATATTGAATGCT 48106

Gallus TTCAAAGTAGAAACAGAAAATAAATTCTCTTTTATGACTTGTCCCTTCATATTGAATGCT 33285

Anopheles ------------------------------------------------------------

Homo TTCAAAGTAGAAACAGAGAACAAATTCTCTTTTATGACATGTCCCTTTATATTGAATGCT 68304

Pan TTCAAAGTAGAAACAGAGAACAAATTCTCTTTTATGACATGTCCCTTTATATTGAATGCT 68789

Drosophila ------------------------------------------------------------

Canis TTCAAAGTAGAAACAGAGAACAAATTCTCTTTCATGACATGTCCCTTTATATTGAATGCT 40147

Bos --TAATGCAGAAA-----------------------AGACGTCTCTTCA----------- 7501

Rattus GTCACAAAGAATCTGGGATTGTATTATGACAATAGAATTCGCATGTACAGTGAAAGAAGA 58293

Danio GTGACTAAGAATCTGGGCCTGTACTATGACAACCGGATCCGCATGTATAGCGAGCGCAGG 9340

Mus GTCACAAAGAATCTGGGATTATATTATGACAATAGAATTCGCATGTACAGTGAAAGAAGA 48166

Gallus GTTACTAAGAACCTGGGACTGTATTATGACAATAGGATCCGGATGTACAGTGAACGACGC 33345

Anopheles ------------------------------------------------------------

Homo GTCACAAAGAATTTGGGATTATATTATGACAATAGAATTCGCATGTACAGTGAACGAAGA 68364

Pan GTCACAAAGAATTTGGGATTATATTATGACAATAGAATTCGCATGTACAGTGAACGAAGA 68849

Drosophila ------------------------------------------------------------

Canis GTCACAAAGAATTTGGGATTATATTATGACAATAGAATTCGCATGTACAGTGAACGAAGA 40207

Bos ------------------------------------------------------------

Rattus ATCACTGTTCTTTACAGCCTAGTTCAAGGACAGCAGTTGAATCCATATTTGAGACTTAAA 58353

Danio ATTACTGCCCTCTATAGTTTGGTGCAAGGACAGCAACTAAACCCTTATCTGCGTCTCAAA 9400

Mus ATCACTGTTCTTTACAGCCTAGTTCAAGGACAGCAGTTGAATCCGTATTTGAGACTCAAA 48226

Gallus ATAACTGTGCTCTACAGCTTAGTTCAAGGACAGCAGCTCAACCCATATTTACGACTTAAA 33405

Anopheles ------------------------------------------------------------

Homo ATCACTGTTCTCTACAGCTTAGTTCAAGGACAGCAGTTGAATCCATATTTGAGACTCAAA 68424

Pan ATCACTGTTCTCTACAGCTTAGTTCAAGGACAGCAGTTGAATCCATATTTGAGACTCAAA 68909

Drosophila ------------------------------------------------------------

Canis ATCACTGTTCTCTACAGCTTAGTTCAAGGACAGCAGTTGAATCCATATTTGAGACTCAAA 40267

Bos ------------------------------------------------------------

Rattus GTCAGACGTGACCATATTATAGATGATGCACTTGTCCGGGTAAGTTTGACTATTATTTAA 58413

Danio GTGCGCAGAGACCACATCATAGACGATGCTCTTGTCAGGGTAAGT---GCCA-------- 9449

Mus GTCAGACGTGACCATATTATAGATGATGCACTGGTCCGGGTAAGTTTGACTATTATTTAA 48286

Gallus GTGAGACGTGATCACATCATAGATGATGCACTCGTGCGGGTAAGTCACACAGCAACATGG 33465

Anopheles ------------------------------------------------------------

Homo GTTAGACGTGACCATATCATAGATGATGCACTTGTCCGGGTAAGTTGGGCTGCTA----- 68479

Pan GTTAGACGTGACCATATCATAGATGATGCACTTGTCCGGGTAAGTTGGGCTGCTA----- 68964

Drosophila ------------------------------------------------------------

Canis GTCAGACGTGACCATATCATAGATGATGCACTTGTCCGGGTAAGTTGGGCTAATGCTTAA 40327

Bos ------------------ATAAGTGGTAC----------------TGGGAGAATG----- 7522

Rattus ------------AATTGGACTTAAACTAAAAGCTGCAGAGTGTTATATTTCAGTGAATTC 58461

Danio ---------------------------AAAAGCT-CAGA-TGATGAAT----GCGGTTTC 9476

Mus ------------AATTGGAATTAAACTAAAACCTAGACAGTGATGTATTTCAATTTATTC 48334

Gallus ------------AACC-------------TAGGTTTGTAGTGTTTGACTGTCACCGACTA 33500

Anopheles ------------------------------------------------------------

Homo ------------GATTAAAAACCTAATAATGGGGATATCATGATACAGTTCAGTGAATTC 68527

Pan ------------GATTAAAAACCTAATAATGGGGATATCATGATACAGTTCAGTGAATTC 69012

Drosophila ------------------------------------------------------------

Canis AAACTAGTATTAGAATAAATACCTAATGCTGGGGAGATTGTAATACAGTTCAGTGAATTC 40387

Bos ------------GGACAGGTAC------------------------------GTG----- 7535

Rattus TTTAACTTTGAAT------AAAAAAGATAGAAT--------------------CATGTTA 58495

Danio --------------------AAAGAAGTGAA----------------------------- 9487

Mus ATTTTATCTATAAT-TTTGGAAAAAAATAGGAT--------------------TATGTTA 48373

Gallus CCCAGGCTTTGACT-AACTGAAAAAGACTACAT--------------------G------ 33533

Anopheles ------------------------------------------------------------

Homo ATTTTAAAAGTGA----CTGAAAAAAATGATAC-----CATATAGCATAGGAACACATGG 68578

Pan ATTTTAAAAGTGA----CTGAAAAAAATGATAC-----CATATAGCATAGGAACACATGG 69063

Drosophila ------------------------------------------------------------

Canis ATTTTATAAGTAGACTGCTTAAAAAAATTACATGGCATTACGTGGTATAGAAACATTTGG 40447

Bos -------------------TAAAAGAATGAGAT--------------TAGAA-------- 7554

Rattus ACATTTCTGATTTAT------ATTACTCCAACTTTGTTGCTACTTACCAAAAATATTGG- 58548

Danio -------TAATTTAT------ATAA--------------------AATAAACATGTAA-- 9512

Mus ACATTTCTGATCTGT------ATTGCTACACCTTTGTTGCTTCTTACCAAAAATACTGG- 48426

Gallus -------TGAATTCA------GTAGTTTGTGTGCTAGACTTCCTCAGCAAGAATCTCAAA 33580

Anopheles ------------------------------------------------------------

Homo ACATTTCTGATCTTA--TATAAGTATTATACTTTTGTTGTTCCTGTGCAAGTTTATAGAT 68636

Pan ACATTTCTGATCTTA--TATAAGTATTATACTTTTGTTGTTCCTGTGCAAGTTTATAGAT 69121

Drosophila ------------------------------------------------------------

Canis GCATTTTGTATTATAAGTGTAAATATTATACGTTTGTTGTTCCTGTCCAAATTTATAAAT 40507

Bos -TATTCTCTA--------------ACTATACAC--------------------------- 7572

Rattus -----------TATCTTGGTTGTCT-----AATGATAATTTTCTTTTGAACAAGAATAAA 58592

Danio ---------------TTGGTTGT-------------AGTT-------------------- 9524

Mus -----------TATCCTGGTTGTCT-----AATGATAATTCTCTTTTGAAGAAGAATAGA 48470

Gallus -----------TAGCTTTACTGTAT-----TA----AGTT-------------------- 33600

Anopheles ------------------------------------------------------------

Homo GTGTTCTACAAAGTATCGGTTGTATTATATAATGGTCATGCTATCTTTGAAAAAGA---- 68692

Pan GTGTTCTACAAAGTATCGGTTGTATTATATAATGGTCATGCTGTCTTTGAAAAAGA---- 69177

Drosophila ------------------------------------------------------------

Canis GTGTTCCACAAAGTATTGGTTGTCTTGAATAATGATCACTCTCTCTTTGGGAAAAACAAA 40567

Bos ---------------------------------------------------AAAAATAAA 7581

Rattus T-------TTT-CTAGGGTTGGGGAGATGACTCACTGGAT-------------------- 58624

Danio ----------------------GGAGATGATTGCCATGGA-------------------- 9542

Mus T-------TTTTCTAGTACTAGGGGAATGACTCAGTGGTT-------------------- 48503

Gallus ---------------------------TGAAATTCTGAAC-------------------- 33613

Anopheles ------------------------------------------------------------

Homo ---ATGGGTTTTCTAAATCTTGAAAACTAAATCCAAAGTTTCTTTC---ATTCAGAAGAG 68746

Pan ---ATGGGTTTTCTAAATCTTGAAAACTAAATCCAAAGTTTC-------ATTCAGAAGAG 69227

Drosophila ------------------------------------------------------------

Canis CAAACAGACTTCTTAAGTATCAACAACTAACTCTAAAAGTTTCTTCTCTGTTCAGAAGAC 40627

Bos C------------------TCAA------------------------------------- 7586

Rattus -AAACATTTTGTTGTGCAAACATGAGGGCTTACGCT-TGGATTTCTTGAACACATGTAAA 58682

Danio -AAACCCA-------GCAGACCTGAAGA--------------------AACAACTGTATG 9574

Mus -AAAACGTTTGTTGTGCAAACATGAGGACTTATCCT-TGGATTTTCTGAATACATGTAAA 48561

Gallus -ACGCTGCT------GGAGACTTAAATGTTCA----------TCTCAGAGCAGTTGCCAT 33656

Anopheles ------------------------------------------------------------

Homo AATAGAGTGTTGGACAAAGACCAGAACA---------AGAGAAATGTGGAGATACCCAAT 68797

Pan AATAGAGTGTTGGACAAAGACCAGAACA---------AGAGAAATGTGGAGATACCCAAT 69278

Drosophila ------------------------------------------------------------

Canis AAATGGATGTTGGAAAAAGACCTGAGCACAGGAACAAGGGGGAATGTGGACATACC---- 40683

Bos -AGTAGATT------AAAGACTTAAG-----------------ATATGTAC--------- 7613

Rattus ACAGGATATGATAGTTCCATTTGTAAT----------------ACTACTTTCTAAAGCAA 58726

Danio -TGGAGTTTGAGGGT---------------------------------------GAGCAA 9594

Mus ACAGGATATGGTAGTTCCATTTGTAAT----------------AGTACTGCCTAAAGCAA 48605

Gallus CTTAGGTGTTTAAGTATTGGGCGGTTC----------------TTAACCCTCACAAACAG 33700

Anopheles ------------------------------------------------------------

Homo AATAAGTGTGGATGTGCAGTCTTGAACTGGGAGTAATGGTACAGTAAAACCATACCATAA 68857

Pan AATACGTGTGGATGTGCAGTCTTGAACTGGGAGTAATGGTACAGTAAAACCATACCATAA 69338

Drosophila ------------------------------------------------------------

Canis AATAAGTATAAATGTCAAATCTT-AACTGGGAAAAGTGGTATAATAAAATCATACCATAA 40742

Bos ------TATAAA-----AATCTT-AG------------------------------AGGA 7631

Rattus GATAGAAAGTAG-AGACAGAAGAATCCTCAGAAGCTAACCTCA------------TATGT 58773

Danio GGTGTAGATGAG-GGA--GGAGTATCCAAAGAA--------------------------- 9624

Mus GATAGAAAGTAT-AGACAGAAAAATCCTCAGAAGCTAATCTGA------------TATAT 48652

Gallus GTTTCATGCTGTTAGATATCTTGATGCAGAGAG--------------------------- 33733

Anopheles ------------------------------------------------------------

Homo AATTATAGGTAGTGTCCAA-AAAATTCCATCGTGTAAAATTCAGAGTTGCATTATTGTGG 68916

Pan AATTATAGGTAGTGTCCAA-AAAATTCCATCGTGTAAAATTCAGAGTTGCATTATTGTGG 69397

Drosophila ------------------------------------------------------------

Canis AGAAATAAGTAGTATCCAAAAAAATTCCGTGACTTAAAATTTAGAG-----TTAGTGTGA 40797

Bos AGACATAAGCAG--------AACACTCTTTGACATAA----------------------- 7660

Rattus AAACTGAAAAATAACCAGACCCTGTCTC----GGTAGAAAGCAAACACTAATACT----- 58824

Danio ------------------------------------------------------------

Mus AAACTGACAAATAACTAGACCCTGTCTCAGTTGGTAGAAAGCAAAGTCTGATACT----- 48707

Gallus --------------------------------------AAGCCAAGTTCTTTATC----- 33750

Anopheles ------------------------------------------------------------

Homo ACTTGATGAAGTGACCATGGCAGATCAGTGCCTGTTGCCAGTAAGAGTTGAGTCC-TGCT 68975

Pan ACTTGATGAAGTGACCATGGCAGATCAGTGCCTGTTGCCAGTAAGAGTTGAGTCC-TGCT 69456

Drosophila ------------------------------------------------------------

Canis AGTT---GAAATGATCTGGGCAGTTTGGTGTGCTGCTCTAGTAAGAGTTCTGTTCATTCT 40854

Bos -----------------------------------CTTT--------------------- 7664

Rattus ---------------------------TGACGTTCTCTGACCTCCACACAAATATTTCCC 58857

Danio --------------------------------TTCTTTCA-------------------- 9632

Mus ---------------------------TGATGTTCTTTGACCTCCACACATACGTTTTCC 48740

Gallus ---------------------------TTATTTTCTCTGAACTCAGGGC----------- 33772

Anopheles ------------------------------------------------------------

Homo GGGCCACTTAGAATATCCCTGTGTGGACGGCACTGCCTGGCTGTGGTAG---TTTCTTCC 69032

Pan GGGCCACTTAGAATATCCCTGTGTGGACGGCACTGCCTGGCTGTGGTAG---TTTCTTCC 69513

Drosophila ------------------------------------------------------------

Canis GGATCATTTACAGGAGCCCC---TGTATAGCACTACCTGACTGTGGTAT---TTTCTTAC 40908

Bos ---------------------------TAGCAATATCT---------------------- 7675

Rattus CCTTTTGGCCTTTACACACACACA--------T--------------ATGCATACACATG 58895

Danio ------------------------------------------------------------

Mus CCTTTTGGCATTTACATGCACACA--------TGCATGCATGCATGCATGCATACATATG 48792

Gallus ----------------------------------------------------------TG 33774

Anopheles ------------------------------------------------------------

Homo CACTTAAAAATTCATAGAGACAACTCTGGGTCTTGGAACTTCTG-GAAAACAGCAGCTAT 69091

Pan CACTTAAAAATTCATAGAGACAACTCTGGGTCTTGGAACTTCTG-GAAAACAGCAGCTAT 69572

Drosophila ------------------------------------------------------------

Canis CACTTAAATATTT-TGGAGTTGG---------TTGGAACTACTGGGAAAACATCAGCCAT 40958

Bos -----------TT-TTGAGATAA---------T------------GAAAATA-------- 7694

Rattus CATACACATGTGCATACTGACAG------------------GCACAAAACAAACAAAAGG 58937

Danio ---------------ACTG----------------------------------------- 9636

Mus CACACAGATGCGCAGACAGACAG------------------GCACAAAGCAAGTAAAAGG 48834

Gallus CATCATCTTTTGATAACGGGG--------------------------------------- 33795

Anopheles ------------------------------------------------------------

Homo TCCAAAAATCTGGGGATTAGTGGTGCCTGTAACATCAA----GTCCAGGGAGATTGAGCA 69147

Pan TCCAAAAATTTGGGGATTAGTGGTGCCTGTAACATCAA----GTCCAGGGAGATTGAGCA 69628

Drosophila ------------------------------------------------------------

Canis TCCAGGAATCT--AAATTAATGGTGCTT-TGTCATCAACCCAGTCCAGGGAGCTTGAGCT 41015

Bos -------------AAA----------------------------CCAAAAAGC---AGC- 7709

Rattus AATGGATTTTCTAAATCTTGAAAGCCAGCCTTACACGTTTCCATTAAGAAGAAAAGATTT 58997

Danio ------------------------------------GTT--------GTAGAGGAGATCT 9652

Mus AATGGATTTTCTGAATCTTGAAAGCCAGCCTCATATATTTCCATTAAGAAGAAAAGATTG 48894

Gallus ------------------------------------GTTTTTGC----AAATGGGTGTTT 33815

Anopheles ------------------------------------------------------------

Homo GGG-AAATACTGGAAACTCAGGTACTCA-TCCTAACTTCCTGGTTTTCCAGATGGGGTTG 69205

Pan GGG-AAATACTGGAAACTCAGGTACTCA-TCCTAACTTCCTGGTTTTCCAGATGGGGTTG 69686

Drosophila ------------------------------------------------------------

Canis GGGAGAATATTGGGAACACAAGTACCCACTTCTAACTTCCTGTTTTTCCAGATTTG-CTG 41074

Bos ----AAAT----GAGACTTAATTA---------AACCT---------------------- 7730

Rattus GTTTTCAAAGATTGGAACACATG-ACAAATGGTATTGTTATACCCAATGTTAAGAATGGA 59056

Danio ----TCAA----------------------------------CCCA------------GA 9662

Mus GTTTTCAAAGATTGGAACACATG-ACAAATGGTATTGTTATACACATTTTTAAGAATGGA 48953

Gallus GAATTAAAACCTTTCAGC----------------------TGTGTGCTATTCTTGAGGAC 33853

Anopheles ------------------------------------------------------------

Homo CCATTTGTTCCTTTTCTTTCCTCCACAAGAT-----AATTTTAGTGTATCTGTTTAAGAA 69260

Pan CCATTTGTTCCTTTTCTTTCCTCCACAAGAT-----AATTTTAGTGTATCTGTTTAAGAA 69741

Drosophila ------------------------------------------------------------

Canis CCTTTTGTTCATTA-CTTGCTTCTACAAAAATTAAAAATTTTAGTGCCCCCATTTAAGAA 41133

Bos ----------------------------AAA--AAAAGCTTT-----CCTCAGCAAAGGA 7755

Rattus AGTAGGTGTAATTGGAAGA----------------------------------------- 59075

Danio TATAGGT----------------------------------------------------- 9669

Mus ---AGATGGAATTGGAAGA----------------------------------------- 48969

Gallus TTGTGATCTTCTAGGTACA----------------------------------------- 33872

Anopheles ------------------------------------------------------------

Homo TATAAGAGTGGCCAGAAGACAGAAAGCAGTCGTCAGTCACATTTCACCAAAATTTACATT 69320

Pan TATAAGAGTGGCCAGAAGACAGAAAGCAGTTGTCAGTCACATTTTACCAAAATTTACATT 69801

Drosophila ------------------------------------------------------------

Canis CGGAGGCCTGGCCAGAAGATAGAAACCAATTGCCAATCAC----CAGCAAC--------T 41181

Bos ----------------------------------AACCAT----AGGCAA---------- 7767

Rattus --------------------AATAATACAATAAATCTGTATTGTAAAAGAA--------- 59106

Danio --------------------AATAATC------ATTTGTTTT------------------ 9685

Mus --------------------AATAATGCAATAAATGTACATTGTAAAAGAA--------- 49000

Gallus --------------------AAGCATGCATAAAGATTGACTGCTTGATAAG--------- 33903

Anopheles ------------------------------------------------------------

Homo TGTCTCAGGTGCATTATCGCAGAGCTTTATTGTATTTCTAGTATTAGCTATCCCTGTCAT 69380

Pan TGTCTCAGGTGCATTATCGCAGAGTTTTATTGTATTTCTAGTATTAGCTATCCCTGTCAT 69861

Drosophila ------------------------------------------------------------

Canis TATTTTCCATAGTTTAGCAGAATGATGTAGAGTATCTGTATGACATGAGTGATGTGTTGT 41241

Bos ---------------AACAAAAAGACA------ACCCACATAATGGGAG----------- 7795

Rattus ------------TTAAAAACTGCTCATCAAATTCCTTTATGTAGAATACAACTCAGAGTT 59154

Danio --------------------------------TCCT------------------------ 9689

Mus ------------T-AAGAGCTGCTCTTCAAATTCCATTATGTGTAACACAACTCAGCTTT 49047

Gallus ------------CAGAA-----CTTCTCACTTTTCT-------------AAGCCTTGTTG 33933

Anopheles ------------------------------------------------------------

Homo TGCTGCTACTTTTTTATCATCTTCAAGTAAAATTTAATG--TCAACAAAAATTAAGGTAG 69438

Pan TGCTGGTACTTTTTTATCATCTTCAAGTAAAATTTAATG--TCAACCAAAATTAAGGTAG 69919

Drosophila ------------------------------------------------------------

Canis GA--AAAATGTGTTGAAAATCTT---GTAAATTTCAGTTGTTAGAGTAGAATTGCAAATC 41296

Bos ----AAAATAT----------TT---GCAAAT----------AGAAAAGACTAATAAA-- 7826

Rattus GTA-----------------------TTGTGAACTTGATG---------ATATGACCAGG 59182

Danio --A-----------------------TT-TGGGTTT------------------------ 9699

Mus CTA-----------------------TTGTGAACTTGATG---------ATATGACCAGG 49075

Gallus CTA-----------------------TT-TGGTGCAAATA---------ACATGACTGAG 33960

Anopheles ------------------------------------------------------------

Homo TTAATAATAC------TATAGTATACTAGTAAAGTTGT----CTGACACAGACAACTAGG 69488

Pan TTAATAATAC------TATAGTATACTAGTAAAGTTGT----CTGACACAGACAACTAGG 69969

Drosophila ------------------------------------------------------------

Canis CCAAGACTATACACTTTATGGTTGGCTTCTTGGGTTGGGATCCTTTCATCTATCTCCAAT 41356

Bos -------------------------------GGGTTAG----------TCTAC------- 7838

Rattus AAAGGTTAGTCTATGTTAACTAGTAAGTCTTTGGAGTTCT---AAGCCACCCAGTATCTT 59239

Danio ---------------TTCAGTAG--AGCTTTTGGGGTTCTTTCATGCAACCTAATGT--- 9739

Mus AAAGGTTAGTCTGTATT-ATCAATAAGACTTTGGAGTTCT---AAGCCACTC--TGTCTT 49129

Gallus AAAGGGGAAGTAGGACCTGTTAGT---ACCTGAGAACTGTG--AGAGCAGCCAGTTTCTA 34015

Anopheles ------------------------------------------------------------

Homo AAATGTGATTTTTA--CTTTAAAATGTATTTTAGTT-----TTAGAATGTCTAAATTTTA 69541

Pan AAATGTGATTTTTA--CTTTAAAATGTATTTTAGTT-----TTAGAATGTCTAAATTTTA 70022

Drosophila ------------------------------------------------------------

Canis AAAAACTATGCCTAGCCTTTAAAAAGCAGTGAAGTTATTCTCCATAAGATTCAATCCAGA 41416

Bos --AAAATATCC------------AAACAGC-----------TCATGCAGCTCAAT----- 7868

Rattus GTT------TGACACTGTAGG-ATTTT---TTTT-----------------TAAATAA-- 59270

Danio -----------ACATTTTAGA-TTCAC---TTAT-----------------CAAATAA-- 9765

Mus GTG------TGACATTGTAGG-ATTTTGTTTTTT-----------------TAAATAA-- 49163

Gallus GCT------TCTTAAAGTAAATATGCTAGCTTCT-----------------TAAAGTA-- 34050

Anopheles ------------------------------------------------------------

Homo GTT-----TTAGAATTGTCTAAATTCGAGAATTCATAAAGCTGTAGCCCGGTGGAAAA-- 69594

Pan GTT-----TTAGAATTGTCTAAATTCGAGAATTCATAACGCTGTAGCCCGGTGGAAAA-- 70075

Drosophila ------------------------------------------------------------

Canis GTTAGAAATTAAAAAAAAAAAAATTGTCCACCTTCCTAATCCGCCTTCAGCTAAGAAATC 41476

Bos -------ATCAAAAAAGCAAA--------------------------------------- 7882

Rattus ----TAATAATAATTATGTGAATTTTAAAACTAATGTAAAATAGCTATTTTTGTGACTTG 59326

Danio ----T--------------------TAAAACTGACTAAAAACATCTGCTC---------- 9791

Mus ----TAATAACA------TGAATCTTGAAAATTCTGTAAAGTGGCTATTTTGGGAGCTTG 49213

Gallus ----AAA------------------CAAAGATTCTTGATCGTGTATTTTTTGAAGATGGG 34088

Anopheles ------------------------------------------------------------

Homo -AGTTATTTGACATCTCAGAAATTAAAAATTGCAGAGATTTTGTGTGTTTTTTTTTTTTT 69653

Pan -AGTTATTTGACATCTCAGAAATTAAAAATTGCAGAGATTTTGTGTGGTTTTTTTTTTGT 70134

Drosophila ------------------------------------------------------------

Canis TACCCAACTAATCTGCCTTCAATTAAGAAATCTACCCAACTT---TATTTTCCTTCCCCT 41533

Bos --------CAGTCT------AATCAAAAAATGGAC------------------------- 7903

Rattus GAATTAATATTAATA---------------GTGTTAGTTAAATCTATATGATTTAACTGG 59371

Danio ------------------------------------------------------------

Mus GAATTAATGTTAGTA---------------ATACCAGGTAAATCTAGATGATTTAACTGG 49258

Gallus AGTT----GTGCAGA---------------ATACAAACTACA------------------ 34111

Anopheles ------------------------------------------------------------

Homo TGTTACTGGTTTGTTTTTTTTTTTT----AATGTCAGATATGTTTATAGTGTTGGAGAAA 69709

Pan TGTTACTGGTTTTTTTTTTTTTTTTTTTTAATGTCAGATATGTTTATAGTGTTGGAGAAA 70194

Drosophila ------------------------------------------------------------

Canis TGTTTCCCACCACCACCTCCTCTTA-------GTAAAGCAAGGCTA-AGAACCAATAAAA 41585

Bos -----------------------------------------------AGAACC------- 7909

Rattus GAAGTCAGGAACTTCTAACTGCCTGTTTCCCCCCTCCCTCCCCCACCAAATGATATTGCC 59431

Danio ----------ACTTTTGATTGC---------------------------ATAACTACGCC 9814

Mus GAAGTCAGGAACTTCTTACTGCGTGATTTTTGTTTTTGTTTTC----AAATAACATTGCC 49314

Gallus ------GGGAGTATTTAACGGTAAACACTTCTCC---------------ATAAATTTGCC 34150

Anopheles ------------------------------------------------------------

Homo GATTCTGCATTATTTAAGCAACTCAGGTGGTTTTCTAGCA------GAGACAAAAGGGGG 69763

Pan GATTCTGCATTATTTAAGCAACTCAGGTGGTTTTCTAGCA------GAGACAAAAGGGGG 70248

Drosophila ------------------------------------------------------------

Canis GTTTAAGTACTTGTTGTATA-CTTATTTTGTCATCTAGAATTTT--GAGGAAACAGTCAT 41642

Bos --------------TGAATA-GACATTTCTCCA-------------AAGAAGACA----- 7936

Rattus TCTTGTCTGT-----TCCTTCTTTCCACAGATGACAAGAATTGCAGAGTCCGTATCAGTT 59486

Danio -------------------------------------------------CCGT-----TT 9820

Mus TCTTGTCT-------TCCTTTTTTCTACAGACGACAAAAATTACAGAGTCCCTGTCAGTT 49367

Gallus CCTTAATT--------------------------------TTAGAACTTTTCCTCCATTT 34178

Anopheles ------------------------------------------------------------

Homo CTTTAACTGCCTGAAGTCATTATTATTGCTTGCTTTCTGGTAC-------CCTTTTTATT 69816

Pan CTTTAACTGCCTGAAGTCATTATTATTGCTTGCTTTCTGGTAC-------CCTTTTTATT 70301

Drosophila ------------------------------------------------------------

Canis TTTTGTTTAT--AAGGCCTTTTTAAAAGCAGGTTTTAGGGTAAAACTGGACTTTTTAATT 41700

Bos -------TA-------------------CAGAT-----GGTCAAA-----------AATC 7954

Rattus AAACCAGAAAATTGGTTTGGAAATTGCCAGTCATATGTTA---------ACAAAATTATA 59537

Danio ACACTAG--------------------------TGCGTT----------------TTAGA 9838

Mus AAACCAGAAATTTGGTTTGAAAATTGTCAGTCACATATTA---------ACAAAATTATA 49418

Gallus AGTTCT---------------------------TTGCTTA---------AAGCTGTTATT 34202

Anopheles ------------------------------------------------------------

Homo TCACTTACATAGTTTTGAGACACATG------AATAATTA------------ATACACTT 69858

Pan TCCCTTACATAGTTTTGAGACACATG------AATAATTA------------ATACACTT 70343

Drosophila ------------------------------------------------------------

Canis ATGCTGAGGTTTTTTAGTGAGTTCTG------CTTAATTATGTCAAGCCAGAATATTATA 41754

Bos AC----------------------------------------------------ATGACA 7962

Rattus TTTAAGGAATT------CAGGGTATTCCTTGGTATTAATTATTCTTGTTAGTGCTAGTTC 59591

Danio TCGAA-------------------------------AACGATCCGTGTCCACACTAGC-- 9865

Mus TATAAGTAATT------CAGGGTATCCCTTGGTATTAATTGTTCCTGTTAGTGCTAGTTC 49472

Gallus TTTCAGAAGTC------CATTTTTGTTCTCTGTTAAAAGCAAAACAGTCCGTGTAAATTT 34256

Anopheles ------------------------------------------------------------

Homo AATGACTGATCATAAGGCAGCCAGCACCTTAC------TTTACATAGT--TTAGCAGA-- 69908

Pan AATGACTGATCATAAGGCAGCCAGCACCTTAC------TTTACATAGT--TTAGCAGA-- 70393

Drosophila ------------------------------------------------------------

Canis TTTGACCAATTTTAAACCAGGATTCACTAAATAATAAATGTACTTAACTGTTACCAGTTC 41814

Bos CATGGTCAA--------CA----TCACTAA--------------------TTATTAG--- 7987

Rattus TTTTTGTTTAACTTGATG-----------TAAGATTTAGTACCAGTTACAAAT-GAAGCA 59639

Danio --------------------------------------GTATCA---------------- 9871

Mus TTGTA--TAAACTTGATG-----------TAAGATTTAGTACTAGTTACAGATTGAAGCA 49519

Gallus TTAAACTTAAACTTGCT-----------------TTTAATGCATGTCACTAAGAAGTCCA 34299

Anopheles ------------------------------------------------------------

Homo ATGATAGGGTATTTTATAAGAAT-GTGAGTGATGTTTTATGAAAGGTATGTTGAGGTCTG 69967

Pan ATGATAGGGTATTTTATAAGAAT-GTGAGTGATGTTTTATGAAAGGTATGTTGAGGTCTG 70452

Drosophila ------------------------------------------------------------

Canis ATGAAAGTTCACTTCAGAAATCTTATGTATGAGGCACTTTGCTAAGCA-GTAGAGATATA 41873

Bos ---------------------------------------------------AGAAGTGCA 7996

Rattus TCAT-CCTTA-----TATTCTAACAAATTATA---ACCCATTAATGAATAACTAACA--- 59687

Danio -----CCTTG-----TGTC----------------------------------------- 9880

Mus TCAT-CCTTA-----TAGTCTAACAAATAATATTAACTCATTAACAGATAACTAACAA-A 49572

Gallus ACAGGGCGTG-----CATTTGGGAGAGACTTTGGGGAAGATGAGTCTTTGCTTCTCAATG 34354

Anopheles ------------------------------------------------------------

Homo TCTATGACTATCCATTGTTGGAGCAGAACTGCAAATGCCAAAGCTACATACTTTATGTTT 70027

Pan TCTATGACTATCCATTGTTGGAGCAGAACTGCAAATGCCGAAGCTACATACTTTATGTTT 70512

Drosophila ------------------------------------------------------------

Canis AAAATGAAT---TATGATACTAAGAAGCTTCTTAGGGACTAAAATAC-----TCATATTA 41925

Bos AATCTGAAC---TACAATG----------------------AGGTA------TCACATCA 8025

Rattus TACT-----------AGTTATTTGAACATTTATCTTT-------GGGGTGGATTTGTCTA 59729

Danio --------------------TCCGAACAT--ATCTCC-------G-----------TCCA 9900

Mus TAAT-----------ATTTATTTGAACATTTATTTTTTTTGGGGGGGAATGGATTGTCGA 49621

Gallus CAAC-----------AGCTGTTTCTACTTTGACTTTCAACTACTGAAGATCAGTTGCGAG 34403

Anopheles ------------------------------------------------------------

Homo GGCTTCTTGAGGTGAGATCCCTTCAGCTGTCTTCATCAAAAGCTATGTCTAGCCTTTAAA 70087

Pan GGCTTCTTGAGGTGAGATCCCTTCAGCTGTCTTCATCAAAAGTTATGTCTAGCCTTTAAA 70572

Drosophila ------------------------------------------------------------

Canis AGC-----------AAATTTATTCTTCCTTCCC---------TTTTTTCTTTTTTTTAAT 41965

Bos CAC-----------AGA-----------------------------------------GT 8033

Rattus AATATGAAAAGCCATAAGATTGGACTAAATCCACATTTAATAGAAAAATTATGCACCTGT 59789

Danio CACT----ACGCCA----------CCAAAATCGTATAT---------------CACGTGA 9931

Mus AATCTGAAAAGCCTTAAGACTGAGCTAAATACACATTTAATAAAAAATTTATGCACCTGT 49681

Gallus AGCCCTGAAGGAGCT----CCCACCTTGATTTGCAGCAAACATCTGAATTTCTCAATGAG 34459

Anopheles ------------------------------------------------------------

Homo AGGCAATGAAATTACACTGTAAGAATCATTCCAGGGTTCAAA---AAATTGTCTACCTTC 70144

Pan AGGCAATGAAATTACACTGTAAGAATCATTCCAGGGTTCAAA---AAATTGTCTACCTTC 70629

Drosophila ------------------------------------------------------------

Canis GACAGAAAAGGTTAGGAGAAAAACATCAAAATAGGCCTTGTG---AGACAGTCAAA---- 42018

Bos GGCA-----------------ATCATCAAAA----------------------------- 8047

Rattus CCTTCCTGATTTTTTTTCATTATTTTC----TTCTTATATTCTTATATTCTTTTTTTTTT 59845

Danio CC------------------------------------ATTCGCACACTC---------- 9945

Mus CCTACCTGATTTTTTTT--------------TTATTATCTTCTTATACTATTTTTTT--- 49724

Gallus TTTAGCTGCTTCTCAGGAATTGTTAAT----GTTATGAATTAACACAGACTTTTCCT--- 34512

Anopheles ------------------------------------------------------------

Homo CTTATCTGTCTTTCGCTCAGAAGTCTACTCAGTCTTATTTTCCTCAGTCCCCCATTTTTT 70204

Pan CTTATCTGTCTTTTGCTCAGAAGTCTACTCAGTCTTATTTTCCTCAGTCCCCCATTTTTT 70689

Drosophila ------------------------------------------------------------

Canis TTGATCCTATTTTAAAAAACATTCATAGCTGGTATGGTTATGATAAAGTCCTAGTATTTT 42078

Bos ------------------------------------------------------------

Rattus CTGTAATAAAGGTATTG------------GATTAAGAGCCAGTAA----AAGCTTAGATA 59889

Danio --------AGGGCAT----------------------GC--------------------- 9954

Mus CTATAATAAAGTTATTG------------AGTTAAGAACCAGTTA----AAACTTGGATA 49768

Gallus ------TCAGAGTACCA------------GGT-GGGGGAAATGAA----GAGGGAAATTT 34549

Anopheles ------------------------------------------------------------

Homo TCTCTAGTAAAGCAAGACTAAAAACAAAAGTTTAAGTACTTGGTA--TATACTTTATTCT 70262

Pan TCTCTAGTAAAGCAAGACTAACAACAAAAGTTTAAGTACTTGGTG--TATACTTTATTCT 70747

Drosophila ------------------------------------------------------------

Canis AG---GACAAACTACAACAAAAAGT---AGTTTAAGGTCCTCTTAGCTGAACTCTGAAAA 42132

Bos --------AATCTACAA------------------------------------------- 8056

Rattus GTATTAATAAATTTTTTAAATTATCAT------------------------AATTAGCCC 59925

Danio GCATT------------------------------------------------------- 9959

Mus GTATTTGTAAAATTTCATTTAGGACGA------------------------AATTAGCCC 49804

Gallus GCGGTGCAAAGATGGCTTTGGTCTGAA------------------------AGCCTAGTT 34585

Anopheles ------------------------------------------------------------

Homo ATATT--TTAAATTCTATTCTAGAATT-TTAAGGAAACAACTGC-------TTTTAAAGC 70312

Pan ATATT--TTAAATTCTATTCTAGAATT-TTAAGGAAACAACTGC-------TTTTAAAGC 70797

Drosophila ------------------------------------------------------------

Canis GTACTGATGGAATTTTAATATCTTACTCTTCAAGGATCTACTTTACTTTTTTCTTAAAGC 42192

Bos ------------------------------------------------------------

Rattus CTTATT-TTCCTAATGAATTGTTGGAGTAAAATTAACAGTTAAGCCTTGTAATTATGCTA 59984

Danio ---------------------CTGGTGTAAA-----CAGA-AAGC---------ATGC-- 9981

Mus CTTCT------------GTAGTTGGAGTAAAATTAACAGTTGAGTCTTGTAATTATGCTA 49852

Gallus TTTAT-------AATAGGCAGATGGGGAATACACTGTTGTAAACTCTCCTATGTTTTCTG 34638

Anopheles ------------------------------------------------------------

Homo CTTAG----------GTGTTAGTGT---AAAATTAA-CTGTGAGCTCTTTAATTATGGTA 70358

Pan CTTAG----------GTGTTAGTGT---AAAATTAA-CTGTGAGCTCTTTAATTATGGTA 70843

Drosophila ------------------------------------------------------------

Canis CTTATTCTTCCTCCTGTATCAGTTTGACAAAATAAAGCTATTGACCACTTTCTTATGACC 42252

Bos ----------------------------AAGATAAA------------------------ 8064

Rattus ACA-------AACTGTTGCTAGT--AAATACCATTTAAT-----TATGTCAACTGGTCAT 60030

Danio ---------------------------GTCTCACTTGG-----------CATTTGGTTAT 10003

Mus ACA-------AACTGTTGCTAGT--AAATCTTATTTAT---------GTGAACTAGTCAT 49894

Gallus GTTTTTTTTTGTTTGTTTTTGTA--GAATGCTGTTTGT-------AGTTTTACTATCTAT 34689

Anopheles ------------------CTGCG--AGGCACTG--------------------------- 13

Homo ----------ACTTGTTTTTAGC--AAGTTCTGCTTAATTATATCAAAATTA--GATAAT 70404

Pan ----------ACTTGTTTTTAGC--AAGTTCTGCTTAATTATATCAAAATTA--GATAAT 70889

Drosophila ------------------------------------------------------------

Canis ----------TGCTAATTTGAACTAGAGAGTAGGTTGGGAAGAGAAAAAGAAATGAGAAT 42302

Bos ----------TGCTAG---------GAGAGTATGT-----GGAGAAAAAG------GAAT 8094

Rattus ATGGTTTGACACATTATAAATTGTGATTCCTTTGATAATATCCATACTTGACTAGTACCA 60090

Danio TTGGTT------------------------------------------------------ 10009

Mus ATGGTTTGACA------------TGATTCATTTGATAATATCCATATTCGACTAGTAGTA 49942

Gallus CAAGCTTACC-------------------------TTGTGTCCAGTTCAGTTTTGT--CA 34722

Anopheles ------------------------------------------CGGGTCGGT--------- 22

Homo ATAGTGTGGCCTATCATAAATCAGGATTCACTAGATAGTATATGTACTTGAATATTGCCA 70464

Pan ATAGTGTGGCCTACCATAAATCAGGATTCACTAGATAGTATATGTACTTGAATATTGCCA 70949

Drosophila ------------------------------------------------------------

Canis TTTGGTGAGTTCAATGTTAATAAGTAATTAA--GGTTATAGGATCATATACTTTTTTTTT 42360

Bos CCTCCTA----CACTATTAATAGGAATGTAAACGGTTATAG---------CCCCTTT--- 8138

Rattus GTTTAAACAAGCCCTGGCTGGCCTTCAGCAATTCTGTGTGTCTGTCTCATTGATAAGCAG 60150

Danio -----AACAAACGCCGGTTG-----------------------------------AACAT 10029

Mus TTTTATAGAAGCCCTGGCCT----TCATCAATTCTGTGTGTTTGTCTCATTGATAAGCAG 49998

Gallus CCTTAAAGTAA--CAGAGTTAATTTCATTGACACTCTTCAACTTTGATACACATAAATAA 34780

Anopheles -------------CAG-------------------CTTCCGCGCTGAC------------ 38

Homo GCCCACAAAAG--CAGTTCACT--TCAGAAATCATGTGTGTTAGGCAGTTTAATAAACTG 70520

Pan GCCCACAAAAG--CAGTTCACT--TCAGAAATCATGTGTGTTAGGCAGTTTAATAAACTG 71005

Drosophila ------------------------------------------------------------

Canis TTTTTAAGATT--TTATTTATTCATCAGAGACAGAGAGAGAGAGGCAG--------AGGG 42410

Bos ---------------------------------------------------------GGA 8141

Rattus TAGAGTTACA----AGGAGATGGAATTTATCACAAAAATTCTTAAGAGTTTTCACCGAGC 60206

Danio TA-------A----ACGCGATGG-------CAAAGAAAGC---AAGAG------------ 10056

Mus TAGAATTACA----AAGATA-GGTACTTTTTGAGAAAATTCCTAAGAGTTT-CACCCAGC 50052

Gallus TGGAA----A----AGAGTAAAGTACTTTCTC------TTCAGGAGAGGATGAACTGAAC 34826

Anopheles ---------------GAGCGAAG------------------------------------- 46

Homo TGAAAATAGA----AAGAGATGATGCTTACAGAGAAGCTTCCTTAGGGGCTCTGAATGCT 70576

Pan TGAAAATAGA----AAGAGATGATGCTTACAGAGAAGCTTCCTTAGGGGCTCTGAATGCT 71061

Drosophila ------------------------------------------------------------

Canis GAGAAGTAGACTCCATGCAGGGAGCCCTACGTGGGACTCTATCCCAGGTCTCCAGGATCA 42470

Bos GGATAGTA-----------------------TGG-----------AGGTTCC-------- 8159

Rattus TCTTCTCCTTTCCCCTATCTTGCTTTCTTCTCCCTTTCTCTTTCTCTTTTTTCTCTTTCT 60266

Danio ------------------------------------------------------------

Mus TCTTCT---TTGTCCTATATTGCTTTCTTTTCCACTTCTCCTCTT--TTTTTCTCTTTCT 50107

Gallus CAGTGTA----------------------------------------------------- 34833

Anopheles ------------------------------------------------------------

Homo CACACTAAGCAG---------------------------------ATTTTACTCTTAACT 70603

Pan CACACTAAGCAG---------------------------------ATTTTACTCTTAACT 71088

Drosophila ------------------------------------------------------------

Canis CACCCTGGGCTGC--------------------------------AGGCGGCGCTAAACC 42498

Bos ------------------------------------------------------------

Rattus GAATCATTTTAAACTGA-CCCCTCTCAAATGTTTTCCTTTTGTAGTATTCTAGTATGAAA 60325

Danio --------------------------AGGTATTTT------------------TGTGGAC 10072

Mus GGATCATTTTCAACTGAACCCCTCTAAAATTTCTTGGTTTTTCAGCATACTAGTGGGAAA 50167

Gallus ----------AGAGTTAGTTCTGGGGAGATGTTTTATTAATATCA-AGTCTAGCAGAGAA 34882

Anopheles ---------------------------------------------------AGCAGGAA- 54

Homo TTCTTTCTCCCTTGCTTTTTCTTCCTTTTCTTTTTTTTAAAAAAATAACAGAATGTGAAA 70663

Pan TTCTTTCTCCCTTACTTTTTCTTCCTTTTCTTTTTTT-AAAAAAATAACAGAATGTGAAA 71147

Drosophila ------------------------------------------------------------

Canis GCTGCGCCACCAGGGCTGTCCCAGGATCATATACTTTAAAAGCTAAAAGGAGCCTTGCAG 42558

Bos ----------------------------------TTAAAAAACTAAAAGAG--------- 8176

Rattus GGGTTAGAAATATAAGCATAGACTCAGGCCTTAGAGATCAAATTGATGACCCC-----CA 60380

Danio AGAT----------------GAC----------GAGGTCGAGTTG--------------- 10091

Mus GGGTTAGAAATAGAAGCAAAGACTCAGACTTTAGAGATCAAATTGATGACCCT-----GA 50222

Gallus GAAGCAGACCTTC---CTCATACTGAAAGGT-GGGGAAGAAATCTTTGA---------GG 34929

Anopheles ----------------------CTGAAACGT-GTG-------TCC--------------- 69

Homo AGACTAGAAAAACCAGCATCGAAATAGGTCTTATAAGTAAAATTGATAACCTGTGTAATT 70723

Pan AGACTAGAAAAACCAGCATCGAAATAGGTCTTATAAGTAAAATTGATAACCTGCGTAATT 71207

Drosophila ------------------------------------------------------------

Canis TTCATCTACTCATTAGTTTACAAATGAGGCCCAGAA--AATAGTGACTACATATATGGCA 42616

Bos -----CTAC-----------CATATGA--TCCAGTA--ATCA----------------CA 8200

Rattus GCAAAGGGTAATTATTTTAGTCATACTAGATTAATAC-AGAAAGTTGGAGGTTTACAGCA 60439

Danio -----------TTACT--AAACATACCAAATGAATA------------------ACTGCA 10120

Mus GCAAAGGATAATTATTATATTCATATTAGATTAATAGCAAAAAGGTGGAGGTTTACAGCA 50282

Gallus ACAAAAAGTGTTTAATGTA-----ACTTAGCTCATGG-----------------ACAGCA 34967

Anopheles ACGAAAA---------------------AGCTCATCG-----------------A--ACG 89

Homo TTTTGAAGTAAGTATTCACAGCAGGTGATGATTATGATAAAGCCACATA---TTTTAGTA 70780

Pan TTTTGAAGTAAGTATTCACAGCAGGTGATGATTATGATAAAGCCACATA---TTTTAGTA 71264

Drosophila --------------------------------------------------------GATA 4

Canis CTCTAGGGTATGTTTCTGTGTTAGTTC----TTATTTTTTAGTTATGAA---TT---GTA 42666

Bos CTCCTGGGCATATATCC------------------------------------------- 8217

Rattus AGCTATATTTGAGAAAATGCCCACAGGTGAAC-TGATGGAATTCTACTGTCT-------- 60490

Danio --CAATG---------ATGCCTAAAACTGAAAATAGTGCAAAC--AACGCTC-------- 10159

Mus AGCTGTATTCAAAAGAATACCCACATATGAAC-TGATGGAATTCTACTCTCTT------- 50334

Gallus AC---TACTTG-GTGAGTTCCTACAGCTCAGC-TGGGCCACAGCAGACATCT-------- 35014

Anopheles A----TACTT----------CTAC----CAGC-TGA------------------------ 106

Homo ACACATAGTAGAA----GTTCTATAATAGAAAGTGGTTTAAGATTATTCTCTCATATGAA 70836

Pan ACACATAGTAGAA----GTTCTATAATAGAAAGTGGTTTAAGATTATTCTCTCATATGAA 71320

Drosophila TCACT-------A----GTTCATCGATAGCACATCGTTTAGAATGATT------------ 41

Canis AGGCTGACTGGCAT---GGTAGAAAAGAGGAGG-AGTGGAGGAGTACCTTC--------- 42713

Bos -------------------------AGAG------------------------------- 8221

Rattus ---------------------CCATGTCTT-ATTCTACATAAACCCCTGTTGTT----TT 60524

Danio ---------------------CCAT-------TTCTGTG----CCCATGTTGTT----GT 10183

Mus --------------------TCCACGTCTTTATTCTCCACAAATCCCTATTGTT----TT 50370

Gallus -------------------------------GCACTGCA-------CTGTTGGTGA--TT 35034

Anopheles -----------------------------------TGCA-------AGGCTG-------- 116

Homo AGCTCAAAAGTGATGAATTTTTCAAGATCTTATTTCCCAAGGATCTCTGCTTTTTAAGCC 70896

Pan AGCTCAAAAGTGATGAATTTTTCAAGATCTTATTTCCCAAGGATCTCTGCTTTTTAAGCC 71380

Drosophila --------------------TTCAA-----TATTC-------GTTGCTGCCT-----GCT 64

Canis -AGTTAATAATTACAG----TTTTGCTTTTTTTTTAATAAAAAAATATGTTC------CT 42762

Bos ------ATAACCATAA----TTC---------------AAAAGGATGTGT---------- 8246

Rattus TAAGCCTTGTTCTTTCTTTCATAAAATAGCTTGACAGAATATTTCTGTTCATCACTGTCT 60584

Danio TTA----------------------------------------------CAGTACTGTCT 10197

Mus GAAACCTTGTTCTTTCTTTCATAAAAAAACTTGGCAGAATATTCATGTTAATCACAATCT 50430

Gallus TAAATCAAACATACTCATTTGTGA-----------------TGCATGTTCAGCA------ 35071

Anopheles -------------------------------------------------CGGCA------ 121

Homo TCATTCTTATATATCACA--GTGAACAAACT----AGTGGCCACTTTTTTATGACTT--- 70947

Pan TCATTCTTATATATCACA--GTGAACAAACT----AGTGGCCACTTTTTTATGACTT--- 71431

Drosophila TCATTC------------------ATAAAC-----------------------ACTT--- 80

Canis TCACTTTCGTGTACCATGTAATTCAAAGACT----AGCAA----------ATTATGT--- 42805

Bos ----------GCACCACA-----------------------------------GTGT--- 8258

Rattus CTTTT-ACCGGATCATTTTGAACTGTATAGGAAG-CTGTGTAGAGAAAAAGGAATGAGAA 60642

Danio T------CCGG------------------------------------------------- 10202

Mus TTTATGACCCGGTCATTTTGAACTGCATAGTAAGGTTGTATAGAGA---AGGAATGAGAA 50487

Gallus ------GCCCGGGCACTCC-AGCAGTCTACAAA---TACATGCCTGGGCAGTTGCCATGG 35121

Anopheles ------ATCCG-------------------AAA---T-------------GTTGCAA--- 137

Homo -------GCTAAT--TTTGGAATTGTATAGCAGGGTTGGGTGGAAAAGAAGAAATGAGAA 70998

Pan -------GCTAAT--TTTGGAATTGTATAGCAGGGTTGGGTGGAAAAGAAGAAATGAGAA 71482

Drosophila -------AC--------------------------------------------------- 82

Canis -------CCTA----TGTAGGGTT-TTTAGAGTAACTGGGT------------------- 42834

Bos -------TCTT----TGCAGCATTATTTACAATAGCC----------------------- 8284

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Rattus GTTTTGCAGTGAATTTAACATTAA----TAAATACATA---------------------- 60676

Danio ---------------TAGCGTTA-----TAGTCATGTG---------------------- 10220

Mus GTTTTGCAGTGAACTCAACATTAA----TAAATATAAAGAAAGAAAGAAAGAAAGAAAGA 50543

Gallus ATCCTGTAATGGATGTTAATTTAAGCTGTCAGAACATGTTAC------------------ 35163

Anopheles -----------------------------CAAAA-------------------------- 142

Homo ACTTTGTGGTAAGCTTAATATTGATAAATAAAATTATGGGATC----------------- 71041

Pan ACTTTGTGGTAAGCTTAATATTGATAAATAAAATTATGGGATC----------------- 71525

Drosophila ------------------------------------------------------------

Canis --TTTGTT-TGTTTTAAAGATTTATTTATTTATTTATTTATTT----------------- 42874

Bos ------------------------------------------------------------

Rattus -----------------------------------------------ATAAAAGTTATAG 60689

Danio -----------------------------------------------AT----------- 10222

Mus AAGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAAAGAAAGAAAGGTTATAG 50603

Gallus -----------------------------------------------ATTATGATGATCT 35176

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------CTAGGCTTTAAG 71053

Pan ------------------------------------------------CTAGGCTTTAAG 71537

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------ATTTATTTATTT 42886

Bos ------------------------------------------------------------

Rattus AACC-T----AACCTTTTG-----------------------AGTTAGTAGGAAGGAAAT 60721

Danio -----T----GACTTGACG-----------------------AAT-------AAGGGAAG 10243

Mus AACCCT----AACCT--TG-----------------------AGCTAT---GAAGGAAAT 50631

Gallus GACTGTCAAAAACCTAAGGAT---------------------AGT---------AGAAAT 35206

Anopheles -ACTGT-----GCCTCA-------------------------AGT---------GGAAA- 161

Homo AGCTAAAAGAAACCTTAGAGTT-ATCCACTCCTTAGTTTAGAAATCAA-GCCCAGAAAAT 71111

Pan AGCTAAAAGAAACCTTAGAGTTTATCTACTCCTTAGTTTAGAAATCAA-GCCCAGAAAAT 71596

Drosophila -GCTA---------TTACAGTC---------------------------------AAAAT 99

Canis ATTTGAGAGAGAGCGTGGGGGG------------------GGGGTGGC-GCAGAAGAAGT 42927

Bos -----------------------------------------------------AAGAAAT 8291

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Rattus AATATGTTTTTCTCCTTAGTTTATAAGTGAGGCCTA---GAAAAGCCTATATATGTGAGT 60778

Danio TATACGC------------------AATGACAC-------AAAAGCCC------------ 10266

Mus AATACCGTTTTCTCCTTAGTTTATAAGTGAGGCCTA---GAAAAGATTACATATGTGACT 50688

Gallus TTTAGACTGTT-----TATTCTGAGACTGAAAATAA---AGGAAAATTGAA--------- 35249

Anopheles ------------------------------------------------------------

Homo AGTGACTTCAT-------------ATATGAGACT---CTTGTATGTTTTCTGTTG-AGGA 71154

Pan AGTGACTTCAT-------------ATATGAGACT---CTTGTATGTTTTCTGTTG-AGGA 71639

Drosophila TGT------------------------CAAAAC------------------GTTG-ACGA 116

Canis GGGAAAGTGA--------------ATCTCAAGCAGACTCAGCACAGAGCCCGATGCAGGG 42973

Bos AG---------------------------AAGCA-------------------------- 8298

Rattus TTTGTAACTTTTCTTTTGACTCTCGTATTTCAGTGTTA----GACTAGCTGCCTTAAAGG 60834

Danio ------------------------------------------------------------

Mus TTTGTAAGTTTTCTATTGAATCTCACATTTCAGTGTTAATTAGATTAGCTGGCTTAATGG 50748

Gallus -----------------------CGCTTTT------------------------------ 35256

Anopheles ------------------------------------------------------------

Homo GTGGTAACTTGAATTAATAATTGTGGATTTTTTTAAAAAAGAAAAATATATTCATTG--- 71211

Pan GTGGTAACTTGAATTAATAATTGTGGATTTTTTTTTAAAAGAAAAATATATTCATTG--- 71696

Drosophila -------------------ATTATCGAGCTTT----AAAGGA------------TTG--- 138

Canis CTCGAGATCACAACCTTGAGATGAGGACCTGAGCTGAAACCAGCA--------GTTGGG- 43024

Bos --------------------------ACCTA----------------------------- 8303

Rattus TAGACAGTAGGGTAGTAAATTAAAATTA-------------------------------- 60862

Danio ----CAATCAGGTAGCGAATC----TCA-------------------------------- 10286

Mus TAGACAGTAGGCGAGTAAATTAGAATTAATTTTGTTTGTTTGTTTGTTTTTGTTTTTTGT 50808

Gallus ---ACAGTCAAACGGTGAGCTGAACTTA-------------------------------- 35281

Anopheles -----GGTCGAGCG----GCTGA------------------------------------- 175

Homo -CTTTTATATATTGTGAAATTCAAACCAGACTA--------------------------- 71243

Pan -CTTTTATATATTGTGAAATTCAAACCAGACTA--------------------------- 71728

Drosophila -CTATCAGATTGCAAGGAAGTC-------------------------------------- 159

Canis CCCTTAACCAACTGAGCCACCCAA------------------------------------ 43048

Bos ---TTTGTCCACTGAG-------------------------------------------- 8316

Rattus -----------------------GTAAT---------------------TTTTTATTTTT 60878

Danio -----------------------GCAG--------------------------------- 10290

Mus TTTTCGAGACAGGGTTTCTCTGTGTAGCCCTGGCTGTCCTGGAAATCACTTTTTATTTTT 50868

Gallus ------------------------TGGTG-----------------------------TT 35288

Anopheles ------------------------------------------------------------

Homo -----------------------GCAGCTT-------------------TTTTCCTGAGG 71261

Pan -----------------------GCAGCTT-------------------TTTTCCTGAGG 71746

Drosophila ----------------------------------------------------------GG 161

Canis ----------------------------------------------------------GC 43050

Bos ------------------------------------------------------------

Rattus ATTTGATAAAGAATATTTATATAGCCTATCCTTGCACTTGGGATATTGTTTCTGTTTCCC 60938

Danio -----------------------------CCCCGC--------------CTCCGTTTTC- 10306

Mus ATTTAATAAAGAATGTTTA----GCCTATCCTTGGACTTCTGATCTTGTTTATCTTTTCC 50924

Gallus GGTCAACAAAAA--------------CAAGCATGGACCAAG-----------CACTTCT- 35322

Anopheles ----------------------------------------------------CAC----- 178

Homo TTTTTAGAGAAATTGTCTTTGATGACAAGAGAAGAATTCATG---TTGATAGTATTTTC- 71317

Pan TTTTTAGAGAAATTGTCTTTGATGACAAGAGAAGAATTCATG---TTGATAGTATTTTC- 71802

Drosophila CGTTCAGCG--------CTCGACGA----------------------------------- 178

Canis GCCCCAGAGGAGCTGTTTCTGATGGCAGCTGAAGAATAC-TG---TTTACAGTATTTTA- 43105

Bos -----AGAGGAAATG------------GATAAAGAA------------------------ 8335

Rattus ACTTGAATGCTAAAATTATAAATGTGTACAAACACTCCTGGCCAGTTTTCTTTT------ 60992

Danio -------------------AAATGT---------CTCT------GTTTTTCCT------- 10325

Mus ACTTGAGTGCTAAAATTATGTGTGTATA---ACACTCCTAGCCAATTCTTTTTT------ 50975

Gallus ---------CGAAAGTGAAAAATGAGTG---ATATTCAAGAAATGGTGATGATT------ 35364

Anopheles ---------CGAATGCGG------------------------------------------ 187

Homo -ACTAATCTC---------TGATTGTAGGAAACACTATCATTTTATTACTGCT------- 71360

Pan -ACTAATCTC---------TGATTGTAGGAAACACTATCATTTTATTACTGCT------- 71845

Drosophila ------------------------GCGGGCAACA-------------------------- 188

Canis -TTGAACCTTAGATACTATTGATTGGAGGACACACTATTATTTTCTTAGTACTAAAAGGG 43164

Bos -----------GATAC------------GATACA-------------------------- 8346

Rattus ----TTAAGCAAAAGTCCATTCATTGATTTCAATCTGTCTAACAACTCTTTTCCCCAACT 61048

Danio -----------------CATCCAC---------------------------------ACT 10335

Mus ----GTAAGCAAAAGTTTATTCATTATTTTCAATCAGTATAACAACTCTTTCCCCCAACT 51031

Gallus ----GAAG----------ATTTACT---------------------------------CT 35377

Anopheles ----------------------------------------------------------CC 189

Homo --AAGACAGAAAAATACCAGCAATTCATTGTAAGATG---------------------CT 71397

Pan --AAGACAGAAAAATACCAGCAATTCATTGTAAGATG---------------------CT 71882

Drosophila --GAGGCA-----ACGGCAGCGGCTGA--------------------------------- 208

Canis AAAAAAAAAAAAGAAGCTGCCAATTAGTTGTGAGATG---------------------CC 43203

Bos ---------AAAGAA--TATTACTCAG-------------------------------CC 8364

Rattus GGTATTTTTAG---AAAATCTGTCTTATTGACAAGAGAATAGTT--AGTGTA-------- 61095

Danio GGGAT------------------------------AGAGCAGC---AGCGT--------- 10353

Mus GTTATTTTTAG---AAGATCTGTCTC----ACAAGAGAATAGTC--AGTATAAAAGTATA 51082

Gallus GTTGTA--CGG---ACCATCGGTTTC----------AAACTGAA--AGAGTGGAGA---- 35416

Anopheles GCCGCC--CGG---GCCATCC----------------AGCTG------------------ 210

Homo ATCATTTGTATGGTGTAATCTGATTTC--------AGAGAT-----AATGTGAAAAAAG- 71443

Pan ATCATTTGTATGGTGTAATCTGATTTC--------AGAGAT-----AATGTGAAAAAAGA 71929

Drosophila --------------GTAGC-----TTC--------AGC-AT-----AA------------ 223

Canis ATCAATTTTATGGTATATCCTGATTTC--------AGAGATGTTAAAATGTGAAAAAG-- 43253

Bos AT--------------------------------------------------AAAAAG-- 8372

Rattus ---TACTATTTTCTTAAATTTATTTCTACTAAACAGTAAATAAACAATAAAGAAGTAAAT 61152

Danio ------------TTCAGAATGA--------AAACGGCC---------------------T 10372

Mus AGGTACTATTTTTTAAAATTTGTATGTACTAAGCAATAAATAAATAATAAAGAAATAAAT 51142

Gallus ------------TTTAGATTGGATGCAAGGAAAGGTTTTTTGG----------------T 35448

Anopheles -----------------------------------------------------------T 211

Homo ------------TGAATTTTAGAATCAATAGAATA--------------------TAAGT 71471

Pan AA--------AGTGAATTTTAGAATCAATAGAATA--------------------TAAGT 71961

Drosophila -------------GAATTTTAG------------------------------------GT 234

Canis -------------GAATTTTAGAACCAATGAAATAATGGTAAAATA---------TAAGT 43291

Bos -------------GA-------------TGAAATAATG---------------------- 8384

Rattus CTACAATTTATTTCTACTAAAAAGAAAAAAATGCAACAG-TTCTCTTACTTTGT---TTT 61208

Danio CTCCAGTGT-TTTC-------------AAAACGC---------------TCCGT---TTT 10400

Mus CTACAAATT-CTACTA--AAAAGGAAAAAACTCCAATAT-TTCTTTTGCTTTAT---TTT 51195

Gallus TTTCGGTTTGTTTTTTT-----------CATTGCAAGGG-TAGTGATACCCTGG---AAC 35493

Anopheles TCTCG----------------------------CAGGAG-----GCCGCCCTG------- 231

Homo TGTCTCTTCACAAATAC----CTTAGAACTGCTTAAGAA-CACCCCCACCCTACCCGTTT 71526

Pan TGTCTCTTCACAAATAC----CTTAGAACTGCTTAAGAA-CACCCCCACCCTACCCGTTT 72016

Drosophila AGCCGCGACACAAAAA------------------AGGGA-CATCAACATC---------- 265

Canis TGTCTGGTCACAAGTAGGTATCTCAGAATCATTTAAGAACTACCCACACC-------TCT 43344

Bos ----------------------------TCATTTG-----TAGCAACA------------ 8399

Rattus GAATGGTTTTGCCCTTTTTAA---AATTAGAAAATAATACAGATATAAATATTAATGAGA 61265

Danio CGGCGCTC------------------------------------------------GAGA 10412

Mus GAATGGTTTTGGCCTTTTTTTTTTAACGAGAAAATTATACAGATATAAATACTAATGAGA 51255

Gallus AGGTTGCTCA----------------------------------------------GAGA 35507

Anopheles ----TGCTCG----------------------------------------------GAAA 241

Homo AACTTACTGCCATAGTTC----------------------------------CCCTAGGA 71552

Pan AACTTACTGCCGTAGTTC----------------------------------CCCTAGGA 72042

Drosophila ----------------------------------------------------------GA 267

Canis AAGTTACTGGAGTATTTCT---------------------------------CCCTGTGA 43371

Bos -------TGGA--------------------------------------------TG-GA 8407

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Rattus ACCTAGATTCCATTTCAGTAACAATCCTAGTGTAGAAGTTTTAACATATTCTTTAAAAAA 61325

Danio AC-----------TTCGGCG-------TAGTGTGGACG---------------------- 10432

Mus TCCCAGCTTCCATTTGAACAACAATCCTAGTGTAGAAGTTTTAACAGTCTTAAAAAAAAA 51315

Gallus GG-------------TGGTGGATGCCCCATCCTTGGAGA--------------------- 35533

Anopheles CG-------------CAGC-----------CCTCGAAG---------------------- 255

Homo CTTATTTTCAGTATTTTTTCGTTATTGTTCCTTAGAAAACAGTACAGT------------ 71600

Pan CTTATTTTCAGTATATTTTCGTTATTGTTCCTTAGAAAACAGTACAGT------------ 72090

Drosophila TTTTTTTT-----------------TGCTCC----------------------------- 281

Canis CTTTGATTAG-----TTCTTGTTGTTGTTTCTTAGAAAATCATACAGT------------ 43414

Bos CCTGGA----------------------------GATGATCACAC--------------- 8424

Rattus AAA---------------------------------------TTCTTTGTAGGCTGTTGT 61346

Danio ------------------------------------------------------------

Mus AAAAAACAAATAAAACAAAAAAAAAAAAACAAAAAACAGATATTCTTTGTAGGCTGTTGT 51375

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GTTGGTTTAGTACATAAAGCCACTTACCACCAGGCTTGATGACTGCATTTAATTCCTAAG 61406

Danio -------------------------------------GATG---GCGT------------ 10440

Mus GTTGGTTTATTGGGTAAAGTCACTTGCCACCAGGCTTGATGACTGAGTTTA--------- 51426

Gallus --------------------CATTCAGGGCTGGGCTGGATG---GAGCTCTGAGC----- 35565

Anopheles -----------------------------CTGGCGAAAACG---GA-------------- 269

Homo ----------------GATAAACATGAGCTTAGACTTCACCTTTCATTTGAATGA---CA 71641

Pan ----------------GATAAACATGAGCTTAGACTTCACCTTTCATTTGAATGAAGACA 72134

Drosophila ---------------------------------------CATTTCGTTT----------- 291

Canis ----------------GATACTCATGAGCT---------CACTTGAATTAAAACAA---- 43445

Bos ------------------------TAAG---------------TGAAGTAAA-------- 8437

Rattus ACATAAATTGTAGGAAATAATTG-ACTCTTCAG--------------------------- 61438

Danio -----AACCGTAGCAAA-------ACTTATGCG--------------------------- 10461

Mus -----ATCCACAAGACGTAATTA-ACTCCTTGGCACATG--------------------- 51459

Gallus -----AACCTGATGTAGCCATAG-GTGTCCCTG--------------------------- 35592

Anopheles ------------------------------------------------------------

Homo TTCCTAATGTGATGAGGTTTTTACAAATATGTAAAACCATATTTACAAATTTACATTTTT 71701

Pan TTCCTAATGTGATGAGGTTTTTACA----------------------------------- 72159

Drosophila -------TGTGA------------------------------------------------ 296

Canis --TCCAAACTCATAAGGTTTTTACAATATTTTACTAATA--------------------- 43482

Bos ---------TCAGAG--------------------------------------------- 8443

Rattus ---------------------------------------------------------TCT 61441

Danio ---------------------------------------------------------TTT 10464

Mus ---------------------------------------------------------TTT 51462

Gallus ----------------------------------------------------------TT 35594

Anopheles ------------------------------------------------------------

Homo AATATAAATATGTAATTTAATTTAATATGTAAATTAATTTAATTTAAATATGTAAATATT 71761

Pan --------------------------------------------------------TATT 72163

Drosophila ------------------------------------------------------------

Canis -------------------------------------------------------ACATT 43487

Bos ------------------------------------------------------------

Rattus TATTCTGTGAAC------------------------------------------------ 61453

Danio TA---------------------------------------------------------- 10466

Mus TCTTCTACCA-------------------------------------------------- 51472

Gallus CATTGCAAGGG------------------------------------------------- 35605

Anopheles ------------------------------------------------------------

Homo TACATATTTACAAATATGCAAATATTTACATATTTACAAATATGTAAATATTTACATATT 71821

Pan TAC--------------------------------------------------------- 72166

Drosophila ------------------------------------------------------------

Canis TGC--------------------------------------------------------- 43490

Bos ------------------------------------------------------------

Rattus ------------------TCCTCATGTTGTTGTTCTTTGGCACACATGTCCCTCTACTAT 61495

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TACAAATATGTAAATATTTACATATTTACAAATATGTAAATATACCCATTTGTGTGTTCT 71881

Pan ---------------------------------------------CCATTTGTGTGTTCT 72181

Drosophila ------------------------------------------------------------

Canis ---------------------------------------------CTATTTGTATATTCT 43505

Bos ------------------------------------------------------------

Rattus CCAGCAAATAAATGACACATTTTTTCTCTCCCCTTTTTAAAAAATAAAGCATTTTGAAAG 61555

Danio -----AAACAAA-AACGCATTAGTGT---------------AAACGGGGCGTT---AAA- 10501

Mus CCAGCAAATAAATGGCACATTTTTCTCCTC---TTTTTAAAAAATAAAGTGATTTCAAGG 51529

Gallus TGTTTGAGTAGATGGCCTTTAGAAGTCCCTTC--------CAACTCAAACAGTTCTATGA 35657

Anopheles ---------------------------------------------CGAACACCACCATG- 283

Homo TTTACAAGTAGATAATTTCTCATTTTTCTT-----------AGATGAAGCACTTCCAATG 71930

Pan TTTACAAGTAGATAATTTCTCATTTTTCTT-----------AGACGAAGCACTTCCAATG 72230

Drosophila -------------------------------------------GTGGAGCA--------- 304

Canis TTTAAAAGTAGATGATTTGTCATTTTTCTT-----------------AGCATTCCCAGGG 43548

Bos ---AAAGATACATCATACATCATTTAT--------------------------------- 8467

Rattus ATGTTGCATATATAAAATCTTAAAACCTTTTTTTTTAAAGTAGTAT-------AAGATCA 61608

Danio ----TGCATGT---------TAATACC----------AGGTGACAT-------AA----A 10527

Mus ATATAGCATATATAAAATCTTAAAACCTTTTTTTAAAAAGTGGAAT-------AAGATCA 51582

Gallus ---TTCTATATAAACTATGATTAAAAATACTGATAGAGAATGTAAT-------AGTAATA 35707

Anopheles -----------------CGACTG------------------GCAGT-------AGCGGCA 301

Homo ATAGTATGTATTAAGATTTTTTAAATTACTTCTTAAAGGAGAAGATAGAGGTTATAAGTT 71990

Pan ATAGTATGTATTAAGATTTTTTAAATTACTTCTTAAAGGAGAAGATAGAGGTTATAAGTT 72290

Drosophila ----------------------AAATCACTTTC--------------------------- 315

Canis GAAAGGGGTAT---GAGATTTTATTTTACTTTTTATTTTAGGAGAT-GATATTAGGAGAA 43604

Bos -----------------------------------------------------------A 8468

Rattus GATGTAT----CAAGAGACAGTATTGCCATGTGTGAGAT-GAGTTAGACTCCCTTCACAA 61663

Danio CATTTAT----TA----------------------------------------------- 10536

Mus GATGTAT----CCAGAGACAGTATTGCCATGTGCGAGAT-GCTTTAGACTGCGTTCACAA 51637

Gallus -ATACAG----CATACAGTAGT-------------------------------------- 35724

Anopheles -GTACGT----C------------------------------------------------ 308

Homo TATGGA------AGAATATAGTATTGCCATC-ATGAGGT-CCCTCAAACTGCCTTCACAT 72042

Pan TATGGA------AGAATATAGTATTGCCATC-ATGAGGT-CCCTCAAACTGCCTTCACAT 72342

Drosophila ------------------------------------------------------------

Canis TATGGATATCATGAAAGACAGCATGGCCACCTGTCATGTACCCTAAAACTGTCTTCACAT 43664

Bos TATGGA----------------------------------------------------AT 8476

Rattus TCTAAAAGGAGAATTGCCCCCCAAAAATACACA-----ACAAA----AGTCGAGGTCTGG 61714

Danio ---------------------------------------------------------TGT 10539

Mus TCTAAAAGCAGAATTGCCCAGAAAATAAAAACACAGCAACAGA----ATTTAAGGTCTGG 51693

Gallus -----------------------------------------------------------C 35725

Anopheles -----------------------------------------------------------C 309

Homo CTGAATGGGAAAATTGTTTAAAAAAAATAAATAAATAAATAAATAAAATCCAGGGCCCTA 72102

Pan CTGAATGGGAAAATTGTTTAAAATAAATAAACAAATAAATAAATAAAATCCAGGGCCCTA 72402

Drosophila -----------------------------GACAAACAAAGAAA----------------- 329

Canis CTGCATGT--------TTTA------------AAAAAAAAAAA----ATCCAAGCTTCTA 43700

Bos CT-------------------------------AAAAAACAAA----GT----------- 8490

Rattus TCTTTTAGGGGTCCAGATTAGGAATTCT------------------------------TA 61744

Danio TCTTTTAGA------------------T------------------------------TT 10551

Mus ACTTTTAGGAGTTCAGACTAAGAATTCTGATAGGAAAAAAAAAAAAAAAGAATTCTGATA 51753

Gallus ACCTTTAAATG------------------------------------------------A 35737

Anopheles AC---------------------------------------------------------- 311

Homo ACCTCTAGAGGTTTAGATTAGAAGCTGTATTG-------------------TAGAGCCTA 72143

Pan ACCTCTAGAGGTTTAGATTAGAAGCTGTATTG-------------------TAGAGCCTA 72443

Drosophila ------------------------------------------------------------

Canis CCTTCTAGAGATTCAGATTAGGAGCTCTGATAA------------------TAGAGCCTA 43742

Bos ----------------------------GATA---------------------------- 8494

Rattus TGAAAACT---TAGTGGTCTGTTCCTTCTAGTATTTTGGTAC------------------ 61783

Danio TAAGGAGT---TTGTAGT--------------------GCAC------------------ 10570

Mus TGAAAATG---TAGTGGTCTGTTCTTTACA-TGTTTTGGTAC------------------ 51791

Gallus TGAATGTG---TTTTAGTTGAC----------AATAAGAGTT------------------ 35766

Anopheles -----GTG---TTCCCCCT----------------------------------------- 322

Homo TGAATCTGAACTTCTGGTAATACTCCACAAATATTTTGATAA------------------ 72185

Pan CGAATCTGAACTTCTGGTAATACTCCACAAATATTTTGATAATGCCATAAATAAACAAAT 72503

Drosophila ------------------------------------------------------------

Canis GGAAT-TCTATTTCTGGTAGTGCCCC-CAGATATTCTGATAA------------------ 43782

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AAATAAATAAAATCCAGGGCCCTAACCTCTAGAGGTTTAGATTAGAAGCTGTATTGTAGA 72563

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -----------------------------------------------ATCTATCCTCCAA 61796

Danio -----------------------------------------------AATTCCTCTCACA 10583

Mus -----------------------------------------------ATCTATGCTACAA 51804

Gallus -----------------------------------------------ATCAGTGCTCAAG 35779

Anopheles ------------------------------------------------CCGTTGCTCAAG 334

Homo -----------------------------------------------AGCCAGACTCCAA 72198

Pan GCCTACGAATCTGAACTTCTGGTAATACTCCACAAATATTTTGATAAAGCCAGACTCCAA 72623

Drosophila ------------------------------------------------------------

Canis -----------------------------------------------AGCCAGACTACAA 43795

Bos ---------------------------------------------------------CAA 8497

Rattus ACCAATATTTGGGAA-ACAATGGTTAGTACAGTTTTTACGTA------------------ 61837

Danio GTCAA-----------------------ACACATTTTAC--------------------- 10599

Mus ATCAATATTTGGGAA-ACAACAGTTAGTACAGTTTATAAGTA------------------ 51845

Gallus GGCATAATT-----------CTTCCAGTGCATCTTA------------------------ 35804

Anopheles GA---------------------------------------------------------- 336

Homo -----TATTTGGGAAGATGGCCTTTGGTTCAGCTCA-------------GGTGGGGGTGT 72240

Pan -----TATTTGGGAAGATGGCCTTTGGTTCAGCTCG-------------GGTGGGGGTGT 72665

Drosophila ----------GGGGCGGCGGC----------------------------GGTGGGGGCGT 351

Canis ATCGATATTTGGGAAGATGGCGGTTGGTACAGTTTATATATACATATTTATTGAGGCCAT 43855

Bos AT---------------------------------------------------------- 8499

Rattus --------------------------------------TAGGTTATTGATTACTTTA--- 61856

Danio --------------------------------------TGGATTGTC--CTGCTTT---- 10615

Mus --------------------------------------TAAATTATTGAATAATAT---- 51863

Gallus ---------------------------------------AAGTTATCCATCTTATT---- 35821

Anopheles ------------------------------------------------------------

Homo GTGTGCA----------------------------TGTGTGTTTATGTGTGTATGTG--- 72269

Pan GTGTGCA----------------------------TGTGTGTTTATGTGTGTATGTG--- 72694

Drosophila A----------------------------------------------------------- 352

Canis TTTTAAGGTTTTTTTTTTGTTTTTTTTTTGTTTTTTAAGATTTTATTTATTCATGAGAAA 43915

Bos --------------------------------------GAACTTACTTAC---------- 8511

Rattus ------------------GTGTCATGTGTAGAGTAT---------------------TGC 61877

Danio ------------------------------------------------------------

Mus ---------------------CCATGTGTAGAATAT---------------------TGC 51881

Gallus ---------------------------------------------------------TGC 35824

Anopheles ------------------------------------------------------------

Homo --------------------TGCATATATAGAGAGAAAGAGAAAGGCCATTTTGATATAC 72309

Pan --------------------TGCATATGTAGAGAGA----GGAAGGCCATTTTGATATAC 72730

Drosophila ------------------------------------------------------------

Canis TAGAGAGAGAGAGAGGCAGAGACATAGGCAGAGGGAGAAGCAGGCTCCATGCCGGAAATC 43975

Bos ------------AAAACAGAAACATA---------------------------------C 8526

Rattus TAGTATTTAAAAGGG--------------------------------------------- 61892

Danio ------------------------------------------------------------

Mus CAGTGTTTAAAACGA--------------------------------------------- 51896

Gallus CAG--------------------------------------------------------- 35827

Anopheles ------------------------------------------------------------

Homo AAGTATGTTTATGTGTTTTGGA------------------------AACTCAGATTT--- 72342

Pan AAGTATGTTTATGTGTTTTGGA------------------------AACTCAGATTT--- 72763

Drosophila AAGTGCG-------------------------------------------CAGATTT--- 366

Canis CAATGTGGAACTCGATCCCGGATCTCCAGGATCATGCCCTGGGCTGAAGGCAGATGCCCA 44035

Bos CAA-GTGAAAC-----------------------------------AAACTTAATG---- 8546

Rattus -----------ATAATGAAGTC-------------------------------------- 61903

Danio ------------TAATGA------------------------------------------ 10621

Mus -----------ATAATGAAGTC-------------------------------------- 51907

Gallus ------------TCATGAA----------------------------------------- 35834

Anopheles ------------------------------------------------------------

Homo ------------TTAAGAGG----------------------------------ATCATG 72356

Pan ------------TTAAGAGG----------------------------------ATCATG 72777

Drosophila ------------CAGCGAAG----------------------------------AT---- 376

Canis ACCACTGCGCCACCGAGGGGCCCCTATTGAGGCCAGTTTTATATACAAGTACATATTTAG 44095

Bos --------GTTACCAAGGGG---------------------------------------- 8558

Rattus -------------------AGTGTGACTAAAATAGGAATTGACAGTGGTATGGGACCTGA 61944

Danio ------------------------------------------------------------

Mus -------------------AGTGTGACTAAAATAGGAGTTGACAGTGGTATGGGACATGA 51948

Gallus -------------------------------AGAAGAATC--------TATCAGGAGCTA 35855

Anopheles ------------------------------------------------------------

Homo GGGAC--------------AGCAAGCTTGGAATAGAGGATGATGATGATGTGAAACTTGG 72402

Pan GGGAC--------------AGCAAGCTTGGAATAGAGGATGATGATGATGTGAAACTTGG 72823

Drosophila ------------------------------------GAACGGTGGCG------------- 387

Canis GAAACTAGCAGTCTTTGAGAGCAGGTTTAGAATAAGGGTTGACAATGGTATGCAACTTGT 44155

Bos GAAA-------------------GGT---GGGGAAGGGATAA------------------ 8578

Rattus TTAAATTTAGTTAAG----TTCTAAAATTTTCCATAG-------TTAACTACAAATAATT 61993

Danio -----------------------------TTCCA-------------------------- 10626

Mus ATAAATTTAGTTAAG----TTCTAGAATTTTCCATAG-------TTAACCAAAAATAATT 51997

Gallus ATAAGTGCAGGCA-------TTTGGTGTGACTCACA--------CAAACCTCAGGAAGGC 35900

Anopheles -------------------------------TCAAA--------CGAACC---------- 347

Homo TTCCAATTAGTCAGGGAG-TTCTAGCATTTCACATAAATATCTAAAAACCAAAAGGAATG 72461

Pan TTCCAATTAGTCAGGGAG-TTCTAGAATTTCACATAAATATCTAAAAACCAAAAGGAATG 72882

Drosophila ------------------------------------------------------GGGGTG 393

Canis TTCAGATTAGGCAGGCAGGTCCTAGAATTCTGGATTGGGATCTAAAGACTGAAAGGAATG 44215

Bos TTCAG-------------------GAGTTTGGGATTGACATACACACACT---------- 8609

Rattus GTTAAGATGTAGACTTGGAAAGGAAAGTCCAAAAACCCAGGAGCTGGCATACATACATGA 62053

Danio ---------------------GAAGACTCCAAGAA-----GAG----------------- 10643

Mus GCTAAGTTGTAGAATTGGAAAGAAAAGTCCAAAAACCCAGGAGCTGGCACACATCGATGA 52057

Gallus TCTAAGCTGT--------------AAATCTGCAGTT-----AGCAGG-ACAAGTTAGTCA 35940

Anopheles --------------------------GTC--CAGT-------GCAG-------------- 358

Homo GCTGAGATGTGGAATTGAATAGGGAAGTTCAAAAAT--AGGAATTAGCACAGATAAAGGT 72519

Pan GCTGAGATGTGGAATTGAATAGGGAAGTTCAAAAAT--AGGAATTAGCACAGATAAAGGT 72940

Drosophila GCGAGGATG---------------------------------ATCAGCAT---------- 410

Canis GCTGAAATGTAAA-CTGAGTAGGAAAGTCCAAAAAT--ACGAACTAGAGCTGATCAAGGT 44272

Bos ------ATGTA------------------------------------------TTAAAGA 8621

Rattus AGAAAAAGTTGTTTGAATTACTGCATTACTGCCCAAT----------------------- 62090

Danio ---------TGTTAGAATT----TATTA-TGT---AT----------------------- 10663

Mus AGAAAAAGTTGTTTGAATT--------ACTTCCTCAA----------------------- 52086

Gallus GGGAAATGCTGCTCAGTGC-------TATCGCCTTGTG---------------------- 35971

Anopheles -----ATGCGGATCGGT-C-------CAACGC---------------------------- 377

Homo GATTGGCACAGATAAAAAG----CCCCACTACCAGGAGGTTCTGCAAAATCCCCTCTAAA 72575

Pan GATTGGCACAGATAAAAAG----CCCCACTACCAGGAGGTTCTGCAAAATCCCCTCTAAA 72996

Drosophila ----------------------------CTGCCAGGTG---------------------- 420

Canis GATAAGCACAAATGAATAG----CCCTACTACCAACTGTTTCCCTCAGTTCCATTCA--- 44325

Bos GAGAATCA---------------------------------------------------- 8629

Rattus -------------TTTCTCTGAAAGTCCAGAAGCATTATTTAACTCAGCTTCCATTATTT 62137

Danio -------------TATCGCTAAAAATCCTTACGTATT----------------------- 10687

Mus -------------TTTCTCTGAAAGTCTAGATGCATTGTCTAGCTGAGCTTCCATCATTT 52133

Gallus -----------CTTTACTCAGCAGGGTCTGATCTGTCAGTTT------------------ 36002

Anopheles ---------------ACGCTGGAGGG---------------------------------- 388

Homo AGTCACTGGCCCTTTTTATCTGGTTTCTAATAGCCTAGTCTAACCCAGCTTCCAGCATTT 72635

Pan AGTCACTGGCCCTTTTTATCTGGTTTCTAATAGCCCAGTCTAACCCAGCTTCCAGCATTT 73056

Drosophila ------------------------------------------------TTTCCAG----- 427

Canis -----------TTTTTTTCCTGAGCTGTGACAGGGCTATCTAACCGAGGCCCCAGCATTT 44374

Bos -----------------------------ACAGGG--ACCTA------------------ 8640

Rattus CAC-----------------TTAATATAAAAACCGATTGCAAC------ATAAACTTGAT 62174

Danio ---------------------------------CAATTG----------------TTGAT 10698

Mus CTC-----------------TTAGTATAAATACCTATTGCAAC------AAGAACTTGAT 52170

Gallus ----------------------------AAAAACCAGTGCTG-------------TTGCT 36021

Anopheles -----------------------------------AGTGC-------------------- 393

Homo TCAGCTCCCAGCTTCCAGCATTGGTGAACACTCTTACTAGTGA---AACATGAACGTAAT 72692

Pan TCAGCTCCCAGCTTCCAGCATTGGTGAACACTCTTACTAGTGA---AACATGAACTTAAT 73113

Drosophila -----------------------GTGAATA------------------------------ 434

Canis TCC-----------------TTGGCAAACACCCTTAGTTATAATTTAAATAAAACTTGAT 44417

Bos ------------------------------------------------------------

Rattus CTTTTTTTAAATATGTTGACATATAGTTCTTTAATAATGGAGTTTTTCTGCACTACTCTA 62234

Danio TTTT-------------------------------------------------------A 10703

Mus TTAAA--AAAATCATTTGACATACATTGCTTTAATAATGGAGTTTTTCTGTGCTGCTCTA 52228

Gallus ATAGG--------------------TGCTTCCCGTAACAAATTTG------GAAGTGCTT 36055

Anopheles -----------------------------------AGCAAAG------------------ 400

Homo TCTTTTATTTATTCATTGACTCACAGAGCTTTAAAAATGAGATTATTCTGTGCTGCACTA 72752

Pan TCTTTTATTTATTCATTGACTCACAGAGCTTTAAAAATGAGATTATTCTGTGCTGCACTA 73173

Drosophila ---------------------------ACTTCA------------------GCTAC---- 445

Canis TCTTTTATTT-TTCACAATTGATGATTACTTTAAGAATAA---TATCCTGTGCTGCTCTG 44473

Bos ------------------------------------------------------------

Rattus GGTGTATTTCATT------CATTCATTAATAAAATTGTGCTTAATATGG---------TA 62279

Danio AGTGTAT-------------ATTTATTATTGAAAT-GCTCTTGCCATG------------ 10737

Mus GGTGTAATT----------CATTCATTAATAGAATTGTACTTAATGTGA---------TT 52269

Gallus GTCACAATT------------TTCATTGATTGGTTTCCACTTCCTGATG---------CT 36094

Anopheles ------------------------------------------------------------

Homo GGTATGTTTAATTTTGTCTTACACATACACTATATTGTGGTTAACATGTAATTTCCATTG 72812

Pan GGTATGTTTAATTTTGTCTTACACATACACTATATTGTGGTTAACATGTAATTTCCATTG 73233

Drosophila -----------------------------TTACGTTGTGG----CAT------------- 459

Canis AGTATGATTGATTTTATCTTGTACATTCAGTATATTGTGCTTA--ATGCAATGACCATTA 44531

Bos ------------------------------------------------------CCAT-- 8644

Rattus GCT---ATTTAAAATTATTCTA-ACAGAAATTAATGGAA-----------TCTTCTTATT 62324

Danio -----------AAATTAGTCT--------------------------------------- 10747

Mus TCTCTTATTTAAAATTATTCTA-ATAGAAATTAATGGAA-----------GCCGGGCGTG 52317

Gallus TCATTTGCGTGAAATAAGTCAGGACAGAAGTC---------------------------- 36126

Anopheles -------------------------AGAA------------------------------- 404

Homo TTCTTTCTTGTGATTTATTCTAATTGAAATCAAAAATGAAACCAAGAAATATGCTTGGTT 72872

Pan TTCTTTCTTGTGATTTATTCTAATTGAAATCAAAAATGAAACCAAGAAATATGCTTGGTT 73293

Drosophila ------------ATTAAATCTGATT--------------------------TTCTT---- 477

Canis TTGTTTTTTATGATTTATTCTAAATGAAATGAAGAACTT----------CATACCTGATT 44581

Bos -----------------------ATGACACAGGGAACTC----------CA--------- 8662

Rattus TCTATCCTCAAAGTAATTTCTTACAACCAGAATG-AGAGGTAAACAAGTCAGTAGCATAA 62383

Danio -------------TGGTTGCTGACA----------------------------------- 10759

Mus GTGGCGCAAGCCTTTAATCCCAGCACTCGGGAGGCAGAGGCAGGCAGATTTCTGAGTTCG 52377

Gallus ----------------TTCATTATGTCCCATTCATAGAAGTGACCTGGTGTCTCTGCTCA 36170

Anopheles ------------------------------------------------------------

Homo TATGCCCTCAAAGTAATTTCTCAGAAACTGAATGAGAGAATGAAGCCTATATATACATAG 72932

Pan TATGCCCTCAAAGTAATTTCTCAGAAACTGAATGAGAGAATGAAGCCTATATATACATAG 73353

Drosophila --TGCCCCCCA---------TCAG----TGCATCAG-----------------------G 499

Canis TATGTCCTCAAAAGAG------ATAAAAAGAATGAAG----------TAGATCTGCATAG 44625

Bos ------------------------------------------------------------

Rattus AAGCTTAGCATCATATAATCATTTAAA-AGAATGAAATTTATTAAAGTCCCTAGTGCTAC 62442

Danio ------------------------------------------------------------

Mus AGGCCAGCTACAGAGTGAGTTTCAGGATAGCCTGGGCTACACAGAGAAACCCTGTCTCGT 52437

Gallus GAGTTGG----------------------AACTGCAGGTCAAAGACAGATTTGATGCCAT 36208

Anopheles ---------------------------------------CAAAGA--------------- 410

Homo ATCCTCAGCATTATATAATAATTTAAG-ACAATGAAAC--ATCAAACTT---AGTATTAC 72986

Pan ATCCTCAGCATTATATAATAATTTAAG-ACAATGAAAC--ATCAAACTT---AGTATTGC 73407

Drosophila ATCTGCAGC-----------------------TGGAGC--G------------------- 515

Canis ATTCTCAGCATTATATAATAAACTAAG-AAAATGAAACTTGTCAAACTTCTTAGTTTTAT 44684

Bos ---CTCAGTATTTCATAGTA------------------------------------TCAT 8683

Rattus ATTAAAAAAAAATTGGAATTTAGAGAGATTCTTACTTGCAGAAATGAATGTCATATTTGG 62502

Danio -------------------TTAGGG-------------------------------TTGG 10769

Mus GTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGAAGAAGAAGAAAGAAAGAAAG 52497

Gallus C---------AGTGTTAGGGTAGAAACA-----------------------CACGGTATG 36236

Anopheles ------------------GGTAGA-----------------------------------G 417

Homo ATGTGAGGAAAATGAAATCTAAAAGAGATTCCAGCCTACATAAATTAATGGCAGAATTGG 73046

Pan ATGTGAGGAAAATGAAATCTAAAAGAGATTCCAGCCTACATAAATTAATGGCAGAATTGG 73467

Drosophila ------------------------------------------------------------

Canis GTGTGAGACAAATGAAACTCA-----GATTCTGGCCTATAGAAATTAATGGCAGAATTGG 44739

Bos G--------------------------------------AGAAA--------AGAATCTG 8697

Rattus ATTTTGGATGGGACTTAGGA-------------------TGTAAGATGTAATCATTTAAC 62543

Danio GT----------ACATAG------------------------ACGATGCCATCGTCCATC 10795

Mus AAAAAAAAAAGAAATTAATGGAATCCTCTTCCCTTTATCTTCAAAATAATTTCTTACAAC 52557

Gallus AAAGTGAAAGCTACTCTGTA---------------------CAAGTTTGTATCA-GTAAC 36274

Anopheles AAAATGGA---------------------------------------------------- 425

Homo AAATAG----AAGTC---AGGATTCCAGGTCTC----ATGGACGAACGTGATTATGTGAT 73095

Pan AAATAG----AAGTC---AGGATTCCAGGTCTC----ATGGACGTACGTGATTACGTGAT 73516

Drosophila -------------------------------------GTGGGCGGGCG------------ 526

Canis AAATAGAACAAGGTCTATTGGTCTGCTGGTCTC----ACAAGCAGATGTGGTTATATGAT 44795

Bos AGA------AAGG---ATGGATCTGT---------------GCGTATGT----------- 8722

Rattus TCAGCTGTTACCT----------C-CTTAAACTTTAAGGCACAATAGA--CTGGTCTTGA 62590

Danio ---GCTGAT----------------------------GGC-CGATAGA--C--------- 10812

Mus CAGAATGGGA---------------GATGAAGTAGTCAGTACGATAAGAGCTTAGCATCA 52602

Gallus --AGCTGGAGCTT----------AGGGTGTCATATTGAACTTGGCAAGGATCT------- 36315

Anopheles ------------------------------------------------------------

Homo TTGG-TGTTACCCAAACATTT-AAACT--ACATTTGAGATATAACAGA--CTTTTCTTCA 73149

Pan TTGG-TGTTACCCAAACATTT-AAACT--ACATTTGAGATATAACAGA--CTTTTCTTCA 73570

Drosophila -----------------------AGCC--ACGCCCGAAATGAAGC--------------- 546

Canis ATGGCTGTTACTCAAACATCT-AAACTTTATATGTAAGATATAGAAAA--CT-----TCA 44847

Bos ---------------ACACCTGAAACTGTATATGTTAAATTTA----------------- 8750

Rattus GTTATTTACAGAACATGAAAAAG------TT-----AAAT---TCATC---------AAG 62627

Danio --------------ATCACAATG------CT-----AAGC---TG--------------- 10829

Mus TATAATAATTTAAAAGAAAGAAA------TTTAGAGAGAT---TTTTACTTATAGAAATG 52653

Gallus --CACTGACAACTATTAGAAAGA------CTTTGCCAAGT---CTTGA------GCTGTG 36358

Anopheles --------------------------------------------------------TGTG 429

Homo TGTGTTTATCGTGAACATGAAAAAATTAATTTGGATAA-----TCTGGAAATCTCAAGCA 73204

Pan TGTGTTTATCGTGAACATGAAAAAATTAATTTGGATAA-----CCTGGAAATCTCAAGCA 73625

Drosophila ---GTTCGGCGG-------------------TGCGCAG-----CCTAA-----TCAAGCG 574

Canis ACTGTTTATAGAGAA-ATGAAAA--------TGAACAAATGTATCTGG------------ 44886

Bos ---------------------------------------------TGG------------ 8753

Rattus ATAATTGCATTTAC---------------------------------------------- 62641

Danio ------GCATT-GC---------------------------------------------- 10836

Mus AAAGTCATATTTA----------------------------------------------- 52666

Gallus AAAGCGTAGTCTTA---------------------------------------------- 36372

Anopheles ------------------------------------------------------------

Homo ATAGTTTAAGCCTCAAGTTGACTGAAGTAGTTGAAGCTAGCCTTTCTTTCTTTTTCCTCT 73264

Pan ATAGTTTAAGCCTCAAGTTGACTGAAGTAGTTGAAGCTAGCCTTTCTTTCTTTTTCCTCT 73685

Drosophila ATACTTCCACC-----------------------AACTAC-------------------- 591

Canis ATAATCTAAA-------------------------------------------------- 44896

Bos ATACTTTA---------------------------------------------------- 8761

Rattus ------------------------GATCTATTTATC------------------------ 62653

Danio ------------------------GATCC------------------------------- 10841

Mus ------------------------GATTT--TTATC------------------------ 52676

Gallus ------------------------AATCTGTTCA-------------------------- 36382

Anopheles ------------------------------------------------------------

Homo TTTTTTTTTTTTTTTTTTAGACGGAGTCTTGCTCTGTCACCCAGGCTGGAGTGCAGTGGC 73324

Pan TTTTTTT------TTTTTAGACGGAGTCTTGCTCTGTCACCCAGGCTGGAGTGCAGTGGT 73739

Drosophila ------------------------AATCCGGCTGTG-----------GGAACGC------ 610

Canis ------------------------GATCTTGTTCTA------------------------ 44908

Bos ----------------------------TTATT--------------------------- 8766

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GCAATCTTGGCTCACTGCAAGCCCCGCCTCCCAGGTTCATGCCATTCTCCTGCCTCAGCC 73384

Pan GCAATCTTGGCTCACTGCAAGCCCCGCCTCCCAGGTTCATGCCATTCTCCTGCCTCAGCC 73799

Drosophila -CAA----------CTGCAG-----------CA-----ATGCCAAT----TGC----GCC 635

Canis ----------------------------------------GTCAGT----------AGCT 44918

Bos ------------------------------------------------------------

Rattus ----AAAGTGTGTAAGTCACTCTTCTTT---ACCCC------------------------ 62682

Danio ------------------------------------------------------------

Mus ----AAAGTGTATAAATTACTCTTCTTGGAGAGTCT------------------------ 52708

Gallus -------GTGCTTAAGTT------------------------------------------ 36393

Anopheles ---------GCCTACG-------------------------------------------- 436

Homo TCCCGAGTAGCTGGGACTACAGGCGCCTGCCACCAT-GCCCAGCTAATTTTTTTGTATTT 73443

Pan TCCCAAGTAGCTGGGACTACAGGCGCCTGCCACCAT-GCCCAGCTAATTTTTTTGTATTT 73858

Drosophila TCC--AGCGGCAAGGT-----GGCGCC---CATGAC-GCCCAAC---------------- 668

Canis T----GAAAGTGTAAACAA--AGTGTTTAACCCTAGAGTCTAAT---------------- 44956

Bos -----GAAAGTATAGA-------------------------------------------- 8777

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTAGTAGAGATGGGGTT-CACCGTGTTAGCCAGGATGGTCTCAATCTCCTGACCTCGTGA 73502

Pan TTAGTAGAGATGGGGTTTCACCGTGTTAGCCAGGATGGTCTCAATCTCCTGACCTCGTGA 73918

Drosophila ------GAGGTGG-------CCG------CCAGAG------------------------- 684

Canis ------AAGTTGAAGTT------------------------------------------- 44967

Bos ---------TTTCAGTT------------------------------------------- 8785

Rattus --------------------------------AAACAAT--------------------- 62689

Danio -----------------------------------CACC--------------------- 10845

Mus --------------------------------AAACA-T--------------------- 52714

Gallus ----------------------------------ACAGG--------------------- 36398

Anopheles ----------------------------------ACAAG--------------------- 441

Homo TCCGCCCGCCTCGGCCTCCCAGAGTGCCGGGATTACAGGCATGAGCCACCACGCCCGGCC 73562

Pan TCCGCCCGCCTCGGCCTCCCAGAGTGCCGGGATTACAGGCATGAGCCACCACGCCCGGCC 73978

Drosophila ------CACTGCAGCTCTTT------------TCACAGG-----------ATGCACAGCT 715

Canis -------GCTTAAGCCAGCCA---------TTCTTCAAG------------------ATC 44993

Bos -------GCTC-------------------TTTTTCAAG------------------AT- 8800

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Rattus ---------------------------------TTTAAAATAGAGCTA-----------A 62705

Danio ---------------------------------TTTTAAATAG----------------- 10855

Mus ---------------------------------TTTTAAATAGAGCTA-----------A 52730

Gallus ---------------------------------T---AAGTAATACCA-----------C 36411

Anopheles ---------------------------------T---AAGT------------------- 446

Homo TTGAAGCTAGCCTTTCTTAGAAATCCCAGGCATTCTTAAGTATTAGAG--GTCTCTTTTA 73620

Pan TTGAAGCTAGCCTTTCTTAGAAATCCCAGGCATTCTTAAGTATTAGAG--GTCTCTTTTA 74036

Drosophila CTG----------------------CGAGGCGTTC----ACATCGGAG--GCC------- 740

Canis TT-------------------------AGGTATTCTTAAGTATTAGAGAGGTCTATTTTA 45028

Bos ------------------------------TGCTCTTAA--------------------- 8809

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Rattus TTTGAGTGTTGCTTCTATTTAA-CAATATCATTAGC----AGTTTCTT-TTTT------- 62752

Danio -----------TTTCTATCTA--CA-------TAGC----A------------------- 10872

Mus TTTGAGTGTT-GTTCAACTTAAATAGTATCATTAGT----AGTTTTTTGTTTT------- 52778

Gallus TTCTGATG----TTTTACTCTTGCACTGCTGTTGTT----TTTTCTTT------------ 36451

Anopheles ---TGA----------ACGCCTGCG-------TGTT----GCTTCTTT------------ 470

Homo TCTGATTATTGCTTCTACTTAAATATTCATGGTATTAAGGAATTTTTTTA---------A 73671

Pan TCTGATTATTGCTTCTACTTAAATATTCATGGTATTAAGGAATTTTTTTA---------A 74087

Drosophila ---------------------AACA-----GGTG----AGAATTCTCTTA---------A 761

Canis TGTGACTACTACTTCTACTTAAATATCTATACTACTAAGGAATTTTTTCAGTTATGGATA 45088

Bos --TGA-----------ACTTGCAT------------------------------------ 8820

Rattus -CAACTGTGTCAAAATAGGATTTGAGAT----AAAAACTCGGGATTTCCAAAGGTTTTA- 62806

Danio --AAC----------------------------AAAACTG-------------------- 10882

Mus -CAGTTATGTTAACATAGGATTTTAGAT----GGTAACTCTGGATGTCTAAAGGTTTTAT 52833

Gallus -TGTTTGTTTTACTTACGGGATTTGTAT----ATGAACTGTTGATCTGAA---------- 36496

Anopheles -TGCT-----------------------------AAAATGATGCTTTAAG---------- 490

Homo AAAATTATGAATTGATTTGATGTAATAGCTCAGAAAACTATAAGATTTTAAGTGATAAGG 73731

Pan AAAATTATGAGTTGATTTGATGTAATAGCTCAGAAAACTATAAGATTTTAAGTGATAAGG 74147

Drosophila CAAAT----------------------------GGAACTG----------GGTAGCAAAG 783

Canis AAGATGACTTTATCATAAGTAATAGTAGCCCAGAATACTAT------TTAAAGGATGGGG 45142

Bos ------------------------------------------------------------

Rattus -----------------------------------GGCTAGCTTCCTTCCTT-------- 62823

Danio ------------------------------------------------------------

Mus TTAGCCTGCCTGCCTGCCTGCCTGCCTGCCTGCCTGCCCGCCTTCTTTCCTTGTTTCCTT 52893

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTTCCTTTTGAT-----------------------TCCTGTAAGTCTAGTAA-TATCAT 73767

Pan TTTTCCTTTTGAT-----------------------TCCTGTAAGTCTAGTAA-TATCAT 74183

Drosophila TTTCC------------------------------------------------------- 788

Canis TTTTTCTTTTGAC-----------------------TCTTGTAAATCTGGCAAGTATGAT 45179

Bos TTTGTTTTTAGA----------------------------GTAAATTTAACAAGCATCAT 8852

Rattus -TTTTCATATTTATTTATTTTCAGAT----ACATCAGAAGGGGGCCTCAGATTCTATTAT 62878

Danio ----TCAT-----------------------------------GCCTTGG---------- 10893

Mus CCTTTCATGTTTATTTATTTTCAGAC----ACATCAGAAGGGAGCATCAGATCCTATTAC 52949

Gallus -----TACCTTGATTTATTT---------------------GAATTACGAGTAATTTTAT 36530

Anopheles -----TA--------------------------------------TGC------------ 495

Homo ATTTTGATATTAAGATGTCATCCTGC-TAGGTATTCTGCAAATGCTTTGA-TATCAGGTC 73825

Pan ATTTTGATATTAAGATGTTATCCTGC-TAGGTATTCTGCAAATGCTTTGA-TATCAGGTC 74241

Drosophila ------------AGA----------------------------GCACCGA-TA------- 800

Canis ATTTTTATAATAAGATGTCATCCTACCTAGGTATTCTGGGAATGCTTTGA-TACCAGATC 45238

Bos -----TATAATGTGACTTC-TATCACATAGG--TTTTAGGAATGC--------------- 8889

Rattus AGATAATTTTGAGCCACCATGTGGTCGCTGGAACTTGA--------------------AC 62918

Danio ------------------------------GAACT------------------------- 10898

Mus AGATAGCTTTGAGCCACCAAGTGTTTGCTTGGAATTGA--------------------AC 52989

Gallus ACTCATGTCAGTAGACCAGTGTTTTTCCAGGGTATTTT--------------------CT 36570

Anopheles ---------------------TTCTTTCACGACGATGT--------------------GC 514

Homo AGATTTTTTTTTTAAAAAATGAACTCCCTAGGATTTCATCATCATGGCCAATTAAAAAGT 73885

Pan AGATTTTTTTTT-AAAAAATGAACTCCCTAGGATTTCATCATCATGGCCAATTAAAAAGT 74300

Drosophila AGATTTTCT----------------------------------ATAGGTAATTA------ 820

Canis A-ATTTTTT----AAAAAATGATCTCTCTAGGATTTCATCATCATGGCCAATTAAAA-GT 45292

Bos ------------------------------------------------------------

Rattus TCAGGATATGGAA-----------GAACAATCAGTGCTCTTAACCACTGA---------- 62957

Danio ------------------------AAACA-----------TAACTA-------------- 10909

Mus TTAGGACTTGAAA-----------GAGCAGTCAGTGCTCTTAACTGCTGAT--------- 53029

Gallus ACAGAATTCTTGA-----------CAATATACA-------TAATAACTGA---------- 36602

Anopheles ACGGGATGCTTG------------CAATGT------------------------------ 532

Homo TCAGAAATTAAAAATCATTTTATCCAGCAATTGATGAAATCAAGAGTCTTA--AAGAAGA 73943

Pan TCAGAAATTAAAAATCATTTTATCCAGCAATTGATGAAATCAAGAGTCTTA--AAGAAGA 74358

Drosophila --------------TCTTT--------CAATTAA-------------------------- 832

Canis TCAGAAATTGAAAATCGTTTTGTCCAACAATTGATGAAATCAAGAGTCTTAGTAAGAAGA 45352

Bos -CAGGGATTAGA------------------------------------------------ 8900

Rattus --------------------------GCCATCTCTCCAGCCATGTGTAAAGGTTTTAAAT 62991

Danio ------------------------------------------------------------

Mus ------------------------ACATCATCCCTCCAGCCCTGTCTAAAGGTTTTAAAT 53065

Gallus ---------------------------CCATTTC-------------------------- 36609

Anopheles ------------------------------------------------------------

Homo GGAAGTTACGCAGTGAAGAGGTAGATATGATTATATCCAGGATATTTTTGTTTATTTTTC 74003

Pan GGAAGTTACGCAGTGAAGAGGTAGATATGATTATATCCAGGATATTTTTGTTTATTTTTC 74418

Drosophila -----------------------------------------------------ATTTTTT 839

Canis GGAAGTCATATAAGGAAGAGGTAGATTTCATTACATCCAGTCTACTTTTGTTTATTTTCC 45412

Bos ---------------------------------------------------TTATTCTC- 8908

Rattus GATGGTGCTAAAAATTTTTTTTGACCCTTGAAGATACGGTTATAGAATGTTTCTTGTTTT 63051

Danio ------------------------------------------------------------

Mus GATGGCGCTAAAT-TTTTTTTTGATCCTTGAAGATATGGTTATAGAATGTTTTTTTTTTT 53124

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CCCAGTAATCTCTGTCTGTTGCTAGTCTCCATGTTAAATAAATACAACATACACTGTACT 74063

Pan CCCAGTAATCTCTGTCTGTTGCTAGTCTCCATGTTAAATAAATACAACATACACTGTACT 74478

Drosophila CCCATT---------------TTAGCCCCCAGG-------------ACGTGGAC-ATGCT 870

Canis CCCAGCAATC--TGTCTTTTTCCAGTCTCCTTATTAAACTAATATAAAATATATTCTACT 45470

Bos ----------------------------------------AGTATAA------------- 8915

Rattus TT---------------------------------------------------------- 63053

Danio ------------------------------------------------------------

Mus TTT--------------------------------------------------------- 53127

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTAAATATACCTAAAAATTGGCCTGGCGCGGTGGCTCACACCTGTAATCCCAGCACTTT 74123

Pan TTTAAATATACCTAAAAATTGGCCTGGTGCGGTGGCTCACNCCTGTAATCCCANCACTTT 74538

Drosophila TTC------------------GCCGAACG------------------------------- 881

Canis GTAAGAAA-------------ATCTG---------------------------------- 45483

Bos -----------------------TTG---------------------------------- 8918

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GGGAGGCCAAGGCGGGCAGATCACAAGGTCAGGAGACCGAAACCATCCTGGCTAACACAG 74183

Pan GGGAGCTCAAGGTGGGCAGATCACAAGGTCAGGAGACCGAAACCATCCTGGCTAACACAG 74598

Drosophila --------------------------------------------------------ACAG 885

Canis -------------------------------------------------------TATAT 45488

Bos -------------------------------------------------------CATAT 8923

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGAAACCCCATCTCTACTAAAAAATACAAAAAAAAA--TAGCCAGGCGCGGTGGCAGGCG 74241

Pan TGAAACCCCATCTCTACTAAAAAATACAAAAAAAAAAATAGCCAGGCGCGGTGGCAGGCG 74658

Drosophila TAGCA------------------------------------------GTAGTAGCAG--- 900

Canis AAAAAT------------------------------------------------------ 45494

Bos ------------------------------------------------------------

Rattus --------------AAATCAGTATA-T--------------------------------- 63065

Danio ----------------ACCAATATG-T--------------------------------- 10919

Mus -------------TAAATCAGTATA-T--------------------------------- 53140

Gallus -----------------TTGATGAAGT--------------------------------- 36619

Anopheles ------------------TGATG------------------------------------- 537

Homo CCTGTAGTCCCAGCTACTCGGGAGGCTGAGGCAGGAGAATGGCATGAACCTGGGAGGCGG 74301

Pan CCTGTAGTCCCAGCTACTCGGGAAGCTGAGGCAGGAGAATGGCATGAACCTGGGAGGCGG 74718

Drosophila ----------CGGCAGCTCGACAAGC---------ACAAT-------------------- 921

Canis ------------ACAGCTCTATGTACTA-------TAAATG------------------- 45516

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GGCTTGCAGTGCGCCAAGATTGCGCCACTGCACTCCAGCCTGGGCGACAGAGCGAGACTC 74361

Pan GGCTTGCAGTGAGCCAAGATTGCACCACTGCACTCCAGCCTGGGCGACAGAGCGAGACTC 74778

Drosophila ------------------------------TACCTCAGCCAGTACCAC------------ 939

Canis -------------------------------ATTTCAATTCAAG-GAT------------ 45532

Bos ---------------------------------------------GAT------------ 8926

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CGTCTCAAAAAAAAAAAAAAAACAAACAAAAAAAACCCTAAAAATCCACGTGTGTATTGT 74421

Pan CGTCTCAAAAAAAAAAAAAAAAAAAAAAAACAAA--CCTAAAAATCCACGTCTGTATTGT 74836

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -----------------CATTCTGCTTAGAGTTTTGGGAATGTTTTCATATAAAGTCAGC 63108

Danio -----------------CAT-CTG-----------------------ACACAAAGTT--- 10935

Mus -----------------CATTCTGCTTAGATTTCTTGGAATGCTCTCCTATAAGGTCAGC 53183

Gallus -----------------CATTCTC-----------AAGAATATTGA-TTATAAGGTGAGG 36650

Anopheles -----------------CAT------------------AAT------------------- 543

Homo AAATAAATTCAGGCATGCATGCACGTTCTCCTTTTCAGAATGTTTA--GACATAGTCCTC 74479

Pan AAATAAATTCAGGCATGCATGCACGTTCTCCTTTTCAGAATGTTTA--GACATAGTCCTC 74894

Drosophila ---------------------CACG----------------------------------- 943

Canis ----------------GCATACAGATTCTCATTTTCACAATGTTCACTGACATAGTCTTT 45576

Bos ----------------ACATATA------------------------------------- 8933

Rattus --------------------TTGTTAAAACT-ATCTCTC--------------------- 63126

Danio ------------------------------------------------------------

Mus --------------------TTGTAAAAAATGATCTCTC--------------------- 53202

Gallus --------------------TTG----AGGTGATCTTAT--------------------- 36665

Anopheles ------------------------------TGATCCC----------------------- 550

Homo CAAATTTCAAATATCCTAATGCATTTAAAACAACTTCTGACTTAAAAAATACAGTTTTAT 74539

Pan CAAATTTCAAATATCCTAATGCATTTAAAACAACTTCTGACTTAAAAAATACAGTGTTAT 74954

Drosophila -----------------------------ACAAC-------------------------- 948

Canis AAGTTTCCAAATATTCT---TCATTCAAGGCAGCTTTTGATTTT---------------- 45617

Bos ------------------------------------------------------------

Rattus ----------------------TAGGATTTTGTGTT------------------------ 63140

Danio --------------------------------CATT------------------------ 10939

Mus ----------------------TAGGATTTTGTATT------------------------ 53216

Gallus ----------------------CA--------TATT------------------------ 36671

Anopheles ----------------------------------TT------------------------ 552

Homo GGTGAGGTTTGGGTTTAAACAACAACATACAATTTTAAATAATATAGCTATTATGTAAAG 74599

Pan GGTGAGGTTTGGGTTTAAACAACAACATACAATTTTAAATAATATAGCTATTATGTAAAG 75014

Drosophila ----------------------CAGCAGACAATC-------------------------- 960

Canis ----------------------CAAAATTCTGTTTTAAATGGTATATATGTATTACGGAG 45655

Bos ------------------------------------------------------------

Rattus -----------------------------------------------------GCCAATT 63147

Danio -----------------------------------------------------GACGATC 10946

Mus -----------------------------------------------------GCCAAAT 53223

Gallus -----------------------------------------------------TTTAACA 36678

Anopheles -----------------------------------------------------TCTCGC- 558

Homo A---ATACACCTTTACAGTTTATTTGTTAAATCTTTTTTAAATTGACCGAACAATTGATG 74656

Pan A---ATACACCTTTACAGTTTATTTGTTAAATCTTTTTTAAATTGACTGAACAATTGATG 75071

Drosophila --------------------------------------------------GCAGTCAACG 970

Canis AGTTATACACCTTTACTGTTC-----TTAAATCATTCTCCATTTGAACATTGAGTCAGAA 45710

Bos ------------------------------------------------------TCAGAA 8939

Rattus GAGGTTAAGAAAAATATTAAACAGTTGATGAGTGATGAGTGAGATTTCCTAGTACGAAAA 63207

Danio -------------------------------------------ATTT------------- 10950

Mus AAATTAAGAATAATATTTTAACAGTTGATGAG-----AGTGAGATTTCCTAGTATGAAGA 53278

Gallus GCACTG----------------------------------GATATTT-----TAAAAACA 36699

Anopheles ------------------------------------------------------------

Homo GAGGTTATTTTTAAGAAAAAGAATTATCAGTACAGCTGTTTATGC--------AATAATG 74708

Pan GAGGTTATTTTTAAGAAAAAGAATTATCAGTACAGCTGTTTATGT--------AATAATG 75123

Drosophila C-------------------------------CAGCTGCCGTTGT--------AGT---- 987

Canis GTGGTTGTTTT-AAGAAAAATAAAAATAAGTGCAGTTCCTTAAGTTCCTTAATAATAATA 45769

Bos ----------------------------------------TAAGCCCC------------ 8947

Rattus GAAGTA-------------ATAGTTAACCACTGTACTTTAATACAGCATAATAGTACCAG 63254

Danio -------------------ATACTTA----TTGTAATTGAAT------------------ 10969

Mus GAAGTACAGTTAGGAAGTGATAGTTA-CTATTGTACATTAATACAGCATAGTAATAC--- 53334

Gallus ACGGTA-------------GCCATCAGCTTTCATCACTTATTTGAGCA------------ 36734

Anopheles --------------------CCATCAGCT--CAGCGCTTGATT----------------- 579

Homo GCCTTTATCAAAATGG-TTATTGCTAAATTTTATGTGTTAATAATTTAAAATAAAATAGT 74767

Pan GCCTTTATCAAAATGG-TTATTGCTAAATTTTATGTGTTAATAATTTAAAATAAAATAGT 75182

Drosophila GCCCGTATCCA-------------------------GTCCATA----------------- 1005

Canis GCCTTTATCAAAATGA-TAACTGGTAAATTTTA-ATGTTAAAA----------------- 45810

Bos ------------------------------------------------------------

Rattus T----------------------------------------------------------- 63255

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTAAAGGCTATTTATGTATTCTGTTTTTACTATTTTATTTATTTTAATTTTTGAGACAG 74827

Pan TTTAAAGGCTATTTATGTATTCTGTTTTTACTATTTTATTTATTTTAATTTTTGAGACAG 75242

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -------------------------------CAGTGTA---------------------- 63262

Danio ---------------------------------GTGTA---------------------- 10974

Mus -------------------------------CAGTGTA---------------------- 53341

Gallus --------------------------------AGTGGA---------------------- 36740

Anopheles ----------------------------------TGGA---------------------- 583

Homo GGTCTTAACTCTGTCACCCAGGCCTGGAGTACAGTGGCACGATCTCTACTGACTGCAGCC 74887

Pan GGTCTTAACTCTGTCACCCAGGCCTGGAGTACAGTGGCACGATCTCTACTGACTGCAGCC 75302

Drosophila --TCTTA---------CCCAG-----------AGTG-----------------TGCCGC- 1025

Canis ----TTAAA-----------------------AGTAAA---------------------- 45821

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTGACCTCCCACCTCAGCCTCCCAAGTAGCTGGGATGACAGGCGCATGCCACCACCCCCC 74947

Pan TTGACCTCCCACCTCAGCCTCCCAAGTAGCTGGGATGACAGGCGCATGCCACCACCCCCC 75362

Drosophila ---------------------------AACTGG--------------------------- 1031

Canis ---------------------------AGTTG---------------------------- 45826

Bos ------------------------------------------------------------

Rattus ------TTTTA------------------------------------------------- 63267

Danio ------ATATA------------------------------------------------- 10979

Mus ------TTTT-------------------------------------------------- 53345

Gallus ------CTCGA------------------------------------------------- 36745

Anopheles ------CTCGA------------------------------------------------- 588

Homo ACTATTTTTTATTTATTTATTTATTTATTTATTTATTTATTTATTAGTTTTTTGTAGAAA 75007

Pan ACTATTTTTTATTTATTTATTTATTTATTTATTTATTTTT----TAGTTTTTTGTAGAAA 75418

Drosophila ------------------------------------------------------------

Canis ----TTTTTTA------------------------------------------------- 45833

Bos ------------------------------------------------------------

Rattus ------------ATTTTCTCCAGTGCTG-TCTA--------------------------- 63287

Danio ------------ATATGTGCCAGT------------------------------------ 10991

Mus ---------------TTCTCCAGCGCTA-TCTA--------------------------- 53362

Gallus ------------TTACAGATCTCTGCTAATCAG--------------------------- 36766

Anopheles ------------TGGAGGA----------------------------------------- 595

Homo CAAGGTTTCATCATGTTGCCCAGGCTGATCTCAAACTGCTGGGCTCAGGCAATCTGCCTG 75067

Pan CAAGGTTTCATCATGTTGCCCAGGCTGATCTCAAACTGCTGGGCTCAGGCAATCTGCCTG 75478

Drosophila ------------ATATCGCCGGCGCTGAAC----ACT-----CCTCCGGCGA-------- 1062

Canis -AAGGT------AGGCTACCCTTGTATATTATA----------TGTAAATGA-------- 45868

Bos -------------AACTCCCCTTCCACAGCACA----------CATA------------- 8971

Rattus ----------TGAAGCCAGTACTATTTTATTTTTATACTTCCAGAAAGATACATATAC-- 63335

Danio ------------AAGC-------------------------------------------- 10995

Mus ----------TGAAGCCAATACTACCTATTTTGTCT------------------------ 53388

Gallus ----------TCAAGCTGGT---------------------------------------- 36776

Anopheles ------------------------------------------------------------

Homo CATTGGCCTCCCAAAGTGGTGGGATTACAGGTGTGAGCCACGGCGCCCAGCCTTTATTCT 75127

Pan CATTGGCCTCCCAAAGTGGTGGGATTACAGGTGTGAGCCACGGCGCCCAGCCTTTATTCT 75538

Drosophila ---------CTCGGAACCGTG----TACA----------------CCCACCCTG------ 1087

Canis -----------TAAAATGTTA----TAGAA----------------CCA--CTTAAT--- 45892

Bos ------------------------------------------------------------

Rattus --------------------------------AAATCCATTAGTGTTTAATAAATAAAGT 63363

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAAGTGGTACAGTATTTTATGAAATCACTTATGTGTACCAGAATGGTAATCTAAAATAGG 75187

Pan TCAGTGGTACAGTATTTTATGAAATCACTTATGTGTACCAGAATGGTAATCTAAAATAGG 75598

Drosophila ----------------------------------GCGCCAG------------------- 1094

Canis ------------------------------AGATACTCAAGAATAATAATCTA--ACAGA 45920

Bos ------------------------------------------------------------

Rattus CAAGAATCCATGCAGATTTTTTGCAGAATTATCATAA---------ACATATTCCAACAG 63414

Danio ----------------------------TTATCAT------------------------- 11002

Mus ------------TATATTTTTTTCAGAATTTTAAG------------TATATCCCAATAG 53424

Gallus ----------------TTTCTCTCAGTATTTAAAC------------------------- 36795

Anopheles ------------------------------------------------------------

Homo TAATAACA--AAATTTTTGCCTACAGAATTCAGTTAC--CAA----CTACTTTTCAAATT 75239

Pan TAATAACA--AAATTTTTGCCTACAGAATTCAGTTAC--CGA----CTACTTTTCAAATT 75650

Drosophila -------------------TCCACAG--CTTGGATGC--CAA----C------------- 1114

Canis TAATAATAGGAAATTTTTAATTGTAGAGTTCAATTGCTTCAAATACCTATTTCTCAAATC 45980

Bos ----------------------------------------------CTATTGATAAAAGT 8985

Rattus TTTTCATGTATCCAATTACATGTTAG-ACAACTTTATTTTACAAA-----TTCATCTAAG 63468

Danio --------------------------------------------------TTCATTCAG- 11011

Mus TTTTCATGTATCCAATTACATGTAAG-ACAGCTTGATTTTACAAA-----TTCATTTTTA 53478

Gallus -----------TTGAATTCATCATGT-ACGTCCTGCTTTTTGGAC-----TTCGTTAAAA 36838

Anopheles -----------------------------------------GGAC-----G--------- 600

Homo ATTCTTTTTACATATTTATATTTGAACACATTCTGACTCTGAAAAATGTATTTGTTGTAA 75299

Pan ATTCTTTTTACATATTTACATTTGAACACATTCTGACTCTGAAAAATGTATTTGTTGTAA 75710

Drosophila -----------------------------------AGTCTGATAG--------------- 1124

Canis ATTCTTTTT-CATGTTTGCATTTGA---CATCCTGATTCT--AAATTAAATTTATTGTAA 46034

Bos ATTCTCGTT-TATAT--------------------------------------------- 8999

Rattus GAATA------------------------------------------TAACTTTAATTTT 63486

Danio ------------------------------------------------AACTTCAG---- 11019

Mus AAATA------------------------------------------TAACTTTAATTTT 53496

Gallus CA----------------------------------------------AATATGAACAC- 36851

Anopheles ------------------------------------------------------------

Homo AAAATGGAAAAATATGGAAAAGAATAAGGAAAATAA-AAATCACTCATAATCCTAAAAAA 75358

Pan AAAATGGAAAAATATGGAAAAGAATAAGGAAAATAA-AAATCACTCATAATCCTAAAAAA 75769

Drosophila -----------------------------------------CGCTC-TA----------- 1131

Canis AAAAT---AATATGTAGAAAAGGGTAAAGAAGAAAATAAGTCACTTGTAATCTCAAAAAA 46091

Bos -AAAC---ATTGTGT--------------------------------------------- 9010

Rattus ATTTTCTACATTATTCTTTAG------------GTGATGCAACAAT-----GGCTTAAAA 63529

Danio --------CATTATTCTGTAA------------ATG-TG-AATAAT-----G-------- 11044

Mus TTTTTTTATACTATTCTTTAG------------TTGATGAAACAAT-----GGTTTAA-- 53537

Gallus --------CAGTGTTTTTTTA------------AT--TACAGCAGG-----ATTTTT--- 36881

Anopheles --------------------------------------ACAGCAG--------------- 607

Homo AAAATTTTTGGTCGTCATTGA-AGAGAGTGAGTAAAGCATAGTAGTTAAGAGCTTGTTTC 75417

Pan AAAATTTTTGGTCGTCATTGA-AGAGAGTGAGTAAAGCATAGTAGTTAAGAGCTTGTTTC 75828

Drosophila ----------------------------TGAGCAATGTAGGGCGGCTGACAGTT------ 1157

Canis G--ATTTTTGCTAATTGTTGAGAGTAGGAGGGCCTAGTATAGTAGTTAAGAGCTTGTTGC 46149

Bos --------------------------------CCT-----------------TTTGT--- 9018

Rattus GTGTAGGGGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTTTTA 63589

Danio -----------------------------------------------------------A 11045

Mus ------GGGTGTGTGTGTGT---------------------------------------- 53551

Gallus ---------------TGCTT---------------------------------------A 36887

Anopheles ------------------------------------------------------------

Homo CTGGATTAGTATCTCTGTTCCACAACTTACTGTGACTTACTGTGACTTGAAGTTATTTCA 75477

Pan CTGGATTAGTATC--TGTTCCACAACTTACTGTGACTTACTGTGACTTGAAGTTATTTCA 75886

Drosophila ---------------------ACGAC---------------------------------- 1162

Canis CTGGATTAGAATCTCTGT-CTACCATTTACT----CATACTGAAAAC---AAGTATTGAA 46201

Bos ----ATTAGTATTTTT----------------------------------AGGTAT---- 9036

Rattus ATCTTTTAAGAGTTA--TTTTTGGGCGGGATGTATTTTGAGACAGTTTTTCTGTATAGCA 63647

Danio ATC--------------------------------------------------------- 11048

Mus CTCTTCTAAGAGTTACATTTTTGGGCGGGTTGTATTTTGAGAGGGTTT----ATGTAGCC 53607

Gallus CCCTGCGAA--------------------------TTTGAAGTAATACC----------- 36910

Anopheles ------------------------------------------------------------

Homo CCTTTCAGTATCTTGGGGTCCTTATCTGTAAAGTGGA---GTTAATGTTTCCTTCCTCAT 75534

Pan CCTTTCAGTATCTTGGGGTCCTTATCTGTAAAGTGGA---GTTAATGTTTCCTTCCTCAT 75943

Drosophila ------------------------------------------------------------

Canis TCTCTCATTATTTTGGGATCTTCATCTGTAAAATGGGAGTGATAATATTACTGGCCATAT 46261

Bos ------------------------------------------------------------

Rattus CTCGCTGTCCTGGAACT----CACTCTGTTAACAACTCTGGCCT---------------- 63687

Danio ------------------------------------------------------------

Mus CTGGCTGTCCTGGAACTTGCTCGCTCTGTTGACTAGTCTGGTCT---------------- 53651

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAGGGTGTTGTGAAGATTAAATTAGTTGCTATGTGTGAAATGCT---------------- 75578

Pan AAGGGTGTTGTGAAGATTAAATTAGTTACTATGTGTGAAATGCT---------------- 75987

Drosophila ------------AGGATT------------------------------------------ 1168

Canis AAGACTGTTGTGCAAATGAAGTGAATTGGTAAATGTAAAGTGCTTAGAAGAGTGCCCTGG 46321

Bos ----------------------------------------------GAGGGGT------- 9043

Rattus -----GGAACTCAGAGATCTGCCTGCCTCCGCC-------------TCTAAAGTGATG-- 63727

Danio ---------------------------------------------------AGTGAGG-- 11055

Mus -----AGATCTCAGAGATCCACCTGCCTCTGCC-------------TCTTGAGTGCTG-- 53691

Gallus --------TTTTAAATACTTACTTAAAGCTG---------------TTTTCTATGAAG-- 36945

Anopheles ---------------------------------------------------CACGAAG-- 614

Homo -ACAAAAGTGCTATATATTATTGTTGCTGTATTCATGGAATATTTTTGTTCTATAATGCT 75637

Pan -GCAAAAGTGCTATATATTATTGTTGCTGTATTCATGGAATATTTTTGTTCTATAATGCT 76046

Drosophila --------TGCCACGCA--ATCGGCGTTGTGTTC-------------------------- 1192

Canis CACATAAGTGCTATATATTATTTTTGTGTTGTTATTGAAATATT-TTGTTTTATACTGCC 46380

Bos ----------------------TTTGTGTT---------------TTCTTTTGTCCC--- 9063

Rattus -----------------------------AGATTAAAAGCTTG---------------GC 63743

Danio -----------------------------A------------------------------ 11056

Mus -----------------------------AGTTTAAAGGCTTGTGCTACCACCTCTCAGC 53722

Gallus -----------------------------AGAACTGTAGTTGTCC--------------C 36962

Anopheles -----------------------------ACAAC-------------------------- 619

Homo ATGGTA-GGTTTTCAGA----------AAATATTTTAGAACCAATAAAA-TAACAGCAAC 75685

Pan ATGGTG-GGTTTTCAGA----------AAATATTTTAGAACCAATAAAA-TAACAGCAAC 76094

Drosophila -----------TCCAG-------------------------------------------- 1197

Canis TGGGTTTGGTTTTCAGGCAAGGTTGAAAAAAATTTTAGTACAAATAAAAGTAACAACAAC 46440

Bos ------------------------------------------------------------

Rattus AAGAGTTACTATTTTTAAGGG-AAAAAAATTAATGAGACTTCTTTTGCTTATGGCTTTTG 63802

Danio ---------------TAAGG---------TGGATGGTGTCTGTTTTGCTCAC-------- 11084

Mus AAGAGTTACTATATTTAAGGA-AAAAAAAATAATGTGACTTTCTTTGCTAATGGCTTTTG 53781

Gallus TGGAATCAATACACCTAAGC--AAAATTTTCATTTAGAAATTCGTGGTTCAATTTCTTTG 37020

Anopheles -GGG-------------------------------------------------------- 622

Homo AACAGCTAGTACTTTTAAGCACTAACTTTATGCAGGGAATTAATCTAAGCAGTTC--ATA 75743

Pan AACAGCTAGTACTTTTAAGCACTAACTTTATGCAGGGAATTAATCTAAGCAGTTC--ATA 76152

Drosophila ------------------------------CGTAG------------------------- 1202

Canis AAAAGCTAGTAGGTATATGG--TATTATTGTACAGGGAATTCATCTAAGTGCTTCGCATG 46498

Bos ------------------------------------------------------------

Rattus TGTATGGTTAGTATTAAATTT------TTGTTTTTGTTACCACA-TTTTTAAAAAGATAG 63855

Danio ---------------------------TTGTTCT-------ACA-CTTTT---------- 11099

Mus TGTATGGTTAGTATTAAATTTTATGTTTTGTTTT-GTTACCATAGTTTTTAAAAAGACAG 53840

Gallus CTTCTG--TGCCATCAAACGT------TTATTTT--------TGTTTTCTATTGAGATGA 37064

Anopheles ------------------------------------------------------------

Homo CATTAATTTATTACTATATTATTATGGTTATTTT-ACAGATGAAATAAG---AGAGGTAA 75799

Pan CATTAATTTATTACTATATTATTATGGTTATTTT-ACAGATGAAATAAG---AGAGGTAA 76208

Drosophila -----------------------------------ATAGACTGGGCAAG---AG------ 1218

Canis TATTAATTTTTGCTTAATATATCATTCTCATTTT-ATAGATGAAATTAGCAGAAAGATAA 46557

Bos ---TACTCTTTGTCTGA-----CCTTCTCCCCT-------TGAAGTTA------------ 9096

Rattus ---------------GCTACTAATGCATCATCTCAAACAAGATAATAATTTAGAAAGTCA 63900

Danio ------------------------------------------------------------

Mus ---------------GCTACTGATGCATCATCTCAAACAAAATAAGAATTTACAAAGTCA 53885

Gallus ---------------GCT--TAATG----------------------------------- 37072

Anopheles ------------------------------------------------------------

Homo AGTTGTATGTTTGC-ATTTACAATAGAACATATTGCATTGCATTACATTCTTTTGGCACC 75858

Pan AGTTGTATGTTTGC-ATTTACAATAGAACATATTGCATTGCATTACATTCTTTTGGCACC 76267

Drosophila ----------CTTC-ATTCGCA-------------------------------------- 1229

Canis AGCTACATGATTACGATTAATTATGGAACAT-------TGCAGTAAATTATTTTGGCACT 46610

Bos --CTATGTAA--------------------------------------------GGCA-- 9108

Rattus TTTTGGCAACATGGAAAATGGTCTTCTTAAATTGCTAATTTGATATTT-CACCT------ 63953

Danio -------------------------------------------------TACCC------ 11104

Mus CTTTGGCAACATTGAGAATGGTCTTCTTAAATTGCTAGTTGGACATTTTCACTT------ 53939

Gallus ---------------AAACAGACTTTGTAC---------------TGTATGCTT------ 37096

Anopheles ------------------------------------------------------------

Homo AAGGTGGGGAGCATAGAATAGAGATCAGTGGAAGTGGACAGACATGTAATATTTTATGGA 75918

Pan AAGGTGGGGAGCATAGAATAGAGATCAGTGGAAGTGGACAGACATGTAATATCTTATGGA 76327

Drosophila ----------GCGCAGAAC------CAGCGG-----------CTTCTAGTAGT------- 1255

Canis TGGGTGGGG-GAGCAGAGTGGAGATTGGTGGAGATGGACAG--ACGTAATATTTTA---A 46664

Bos TAAGTAGAG-GGACATAGC----------------------------------------- 9126

Rattus --------ACAAAATTAAGCTACCAACTAT--------TTTTAAATTATAATA------- 63990

Danio --------ACAGG--------------CAT--------GTTTA----------------- 11117

Mus --------ACAGAATTAAGCTGCCAACTAT--------TTTTAAATTATA---------- 53973

Gallus --------ACAGTAT---------ACTTAT--------TTTTACGTA------------- 37118

Anopheles ------------------------------------------------------------

Homo GAATAAAGATAAATTTGCTTCAGTTATCATTTGACATGTCTTAGGTAGAGCTAAGACTAG 75978

Pan GAATAAAGATAAATTTGCTTCAGTTATCATTTGACATGTCTTAGGTAGAGCTAAGACTAG 76387

Drosophila -----------------CTCCAG------------------------GAGCT---GCT-- 1269

Canis TAATGAAGATAAAATTGTTTCAG-TGTCATACAAAGTGTCTTAGGTGTAGCTAAGACTA- 46722

Bos ------------------------TGTCAT---------CTTCAGT-------------- 9139

Rattus ----TATGAATATATCCTAATTC---TGAAAATAAT----GAGTGTTGTTGAAAATATGG 64039

Danio ---------------CCTA---------------------------TGATGAAAG----- 11130

Mus ----TACAAATATATCCTGATTC---TGAAAATAATATGTGAATATAGTTGAAAATATTG 54026

Gallus ---------------CATAAGTC---TGAAAAT-------------TCCTGAGAG----- 37142

Anopheles ------------------------------------------------------------

Homo ATAGAACACAGGGCCTCTCAATCCTGTAGAAATTCACCACCACATCCTTTAAAAGGTT-- 76036

Pan ATAGAACACAGGGCCTCTCAATCCTGTAGAAATTCACCACCACATCCTTTAAAAGGTT-- 76445

Drosophila -----------GGCC---------------AATTCACCG-------------GGGGCT-- 1288

Canis ---TAACACATGGTCTCTGAATCCTGTAGAAAT--GACGCCAAATCCTTTAAAAGATAT- 46776

Bos ------------------------------------------------------------

Rattus AAAAACAAGAAAATCACACAAAATCCAAAAGAAAATATTATCTCTAGTTTCTTTGGAAAA 64099

Danio ----------------CACAAAA------------------------------------- 11137

Mus ATATCCAAAGAAGTCACACAAAATCTAAAAGCAAATATTATCTCTATTTTCTTTGGAAAA 54086

Gallus -----------------GTGAAA------------------------------------- 37148

Anopheles ------------------------------------------------------------

Homo -------------TTACATTGATAA-GGAGTCAGCTCTCATCTATGAATGTTAGTGGGGA 76082

Pan -------------TTACATTGATAA-GGAGTCAGCTGTCATCTATGAATGTTAGTGGGGA 76491

Drosophila -------------TTA----AACAA-GGAG--------CAGCTACGAACTTTGGAAGGG- 1321

Canis -----------AATCACATTGATAATGGAGTCTGCTCTCATTTGTGAATATGAATGAGGA 46825

Bos -------------TCACA------------------------------------------ 9144

Rattus ATAGGTAAACAATGCTCTAAATGCTTGCTCCCTGGATAAAAACCTCTCTTCTCTGAATTA 64159

Danio -----------------------------------------------CTTTTCTGG---- 11146

Mus GTAGGTAAACTGTGGGCTATAAGCTTGCTCCCTGGATTAAAACTT--CTCTTCTGAATTA 54144

Gallus --------------------------------------------------TGGTAGAGTG 37158

Anopheles ------------------------------------------------------------

Homo AAAGCTGTAGAATGCACAGTCTAAATACCAGATAACCTTTTTTTTCCCCACTTTGGAATA 76142

Pan AAAGCTGTAGAATGCACAGTCTAAATACCAGATAACCTTTTTTTCCCCCACTTTGGAATA 76551

Drosophila -------------------------------------------------------GAACA 1326

Canis AGAACTATAGGATGCATAATTTAAATACCAGATAATCATTTTTTTTC--ACCTTGGAATG 46883

Bos -GGACTTTGG---------------------------------TTTT--GCCTT------ 9162

Rattus CTATTTC---------TTAAGTTATTCGCCCTTTTATTACTTC--GAGACCATCTATAAA 64208

Danio ------------------------TTCAACCCTTCATCATTT---GAGA------ATGAA 11173

Mus CTATTTC---------TTAAGTTATTTATCCTTTTATTACTTCAAGGGACTTTCTGTAAA 54195

Gallus TTA--------------------GTCCTCACTTCTATTAC------AGAACTCTCATGCT 37192

Anopheles -------------------------------TTCCACTGC------CGAAC--------- 636

Homo CATTATA--TTTGATAAAAGCAAGTATACCTTTGGAT-GTAA---AGGTAAATATAAACA 76196

Pan CACTATA--TTTGATAAAAGCAAGTATACCTTTGGAT-GTAA---AGGTAAATATAAACA 76605

Drosophila C-----------GATAAAGACGA--------------------------------AGACA 1343

Canis CATTATACTTTTGATATAAGCAGGTTTGTCTTTGTATTATAA---GGGCATACATAAATA 46940

Bos -------------------------TTGTTTTT-------------------------TA 9172

Rattus ATGGTT----------TTAGCAGCCT----------ATCTTGCTAAGGAGTTATAGGTAT 64248

Danio --GGC---------------CAGTTC----------ACTTTG----------ATAGGCAT 11196

Mus ATGGTT----------TTAGCAGCCT----------A-CTTGCTAAGGAGTTGTAGATAT 54234

Gallus TGGGAG----------CTGAGAGCTC----------AGCTTAC-----AGCCCTAGAAAG 37227

Anopheles ----------------------------------------------------CTAGAAAG 644

Homo CTGACT---TACATCTTTAACACCTAGCCAGTTGGGAACTGGCATAAGGAAACTCAGAAT 76253

Pan CTGACT---TACATCTTTAACACCTAGCCAGTTGGGAACTGGCATAAGGAAACTCAGAAT 76662

Drosophila GT-----------------ACAC-------------AACAGGTGGACGAACAATCAGAAT 1373

Canis TTGACT-TATATTCCTTTAACACCTAGGCAGGTGGGAACTGGACGAAGGAAACTAGGAAT 46999

Bos CTGACTATATATTT-----ACA-------------------------------------- 9189

Rattus CAAATCAGTTTTAATTGTAAAGTGACCCATAAGTTTTTTATATTGTTGTTGCTGCTGCTT 64308

Danio CG---------------------------------------------------------- 11198

Mus CAGAACAATTTTAATTGTAAAGTGAGCTGTAAGTTTCATAATTTGTTGCTGCTGCTGCTC 54294

Gallus CA------------------------------------------------GTTGACATGC 37239

Anopheles C----------------------------------------------------------- 645

Homo GGATTACATGGCAATATGGAATGTTGGCCTGGTC------CCACATTTGAGCTAAGATGT 76307

Pan GGATTACATGGCAATATGGAATGTTGGCCTGGTC------CCACATTTGAGCTAAGATGT 76716

Drosophila --------CGGCG-------------------------------------GCTA--ATGC 1386

Canis GCGTTCCATGGCAATATGGGATGTTGGCGTGATGGGTAAACCACATTGGAGCTGACAATT 47059

Bos ----------------------GTTGGTGTAAT--------------------------- 9200

Rattus TTATTCCTGGAATA------CTTCTGTTTTTAAAATCTTGTGGTTAAATATTCTGACAAA 64362

Danio ----TCCTGG-------------------------------GCCTAGCTAT--------- 11214

Mus TTATTCCGGGAATA------CTTCTGTTTTTAAAATCATGTGGTTAAATATTCTAGCAAA 54348

Gallus TTTTTTTGTGTATA------ATGTGTTTCTT----TCAAGAGGTTAGCT----------- 37278

Anopheles ------------------------------------------------------------

Homo TAATTCTAATTTTAGTCTCCTCAGAATTCTGTATACTCCGTAGCTTGAAACAGGTTTCCA 76367

Pan TAATTCTAATTTTAGTCTCCTCAGAATTCTGTATACTCCGTAGCTTGAAACAGGTTTCCA 76776

Drosophila TACTGCTA--------------------CTGCA--------------------------- 1399

Canis CTGTTTTAGTT--------CTCAGCATTCTTTATTTTCTGTGGCTTGAAACAGGTTTCCA 47111

Bos -TGTTTCA--------------------TTTTGTT------------------GTTGCCA 9221

Rattus ACTGGAAATATTTATTTTCTTG---TTAGTCTTATTTTAGATAGAGAATCACTATAAAGC 64419

Danio ---------------------------------------------------CTACAA--- 11220

Mus ACTGGAAATACTTATTTACTTG---TTA-TCATATTTTAGATAGAGAATCACTATAAAGC 54404

Gallus ------------------------------------------------CCAATACAA--- 37287

Anopheles ------------------------------------------------CTAGTA------ 651

Homo ACTGAAACTATTTTTTTCCCCAAGGTTATTTTCACATCTACATTTGTTTGACTCTAGATC 76427

Pan ACTGAAACTATTTTTTTTCCCAAGGTTATTTTCACATCTACATTTGTTTGACTCTAGATC 76836

Drosophila ------------------------------------------------------------

Canis ACTGGAACTATTTTT--CCCCAAGTTTATTTTCAAAACT---TGGGACAGGCTGTAAAAC 47166

Bos GTT---------------------TTTACT------------------------------ 9230

Rattus CCTC--ATTGGACT---------------GGACTTTTGTATGTAGACATAA--------- 64453

Danio ------------------------------------------------TAA--------- 11223

Mus TCTC--ACTGGACT---------------CAGATTTTCTGTGTAGACATAA--------- 54438

Gallus ------------CT---------------GAGTCATGTTACATGGATGTGG--------- 37311

Anopheles -----------------------------------------------GTAG--------- 655

Homo TTGG-AACTAGTCT---------ATATCAAGTTCCTTT---GGGGACACAAAATTGCAAA 76474

Pan TTGG-AACTAGTCT---------ATATCAAGTTCCTTT---GGGGACACAAAATTGCAAA 76883

Drosophila ---G-AATCAGTCG---------A-ATCA-------------GAGGCGGA---------- 1422

Canis CAGATAGTGAATCTTTTGTTCAGAGATCAAAGTTGTTTTAAAAGGTTGCAACAT----AA 47222

Bos --------------------------------------------GTTGCAG-AT----AA 9241

Rattus -CTGCAGTAAACCCACTGAGTTTGAGTGCTGGGATCAAATACATGTTCGAAAATATATAA 64512

Danio -CTGCATT---------------------------------------------------- 11230

Mus -CTGCACTAAACTTACCGAGTTTGAGTGCTGGGATGAAATGCTTGTTCTATCATATATAG 54497

Gallus -TGGTAATGAA------------------------------------------------- 37321

Anopheles -TAGCAGTA--------------------------------------------------- 663

Homo TCTGTTGTTCAGAGAGCAAAACTATTTTAAAAGGTAACACTCGTTCTCATATATTCTTAA 76534

Pan TCTTTTGTTCAGAGAGCAAAACTATTTTAAAAGGTAACACTCTTTCTCATATATTCTTAA 76943

Drosophila ------GCCCGAAGAAGAGGAC----------GATGATGTGTGTTC------ATCCCAAA 1460

Canis TGTGTTATCTTAATAATATTGCCCACTC------TAGAACTAACTGTTACATATTTTTAT 47276

Bos TGT--------AGCGAT-------------------GAACAAA----------------- 9257

Rattus AAAGTTTGGAATATTTA------------------------------------------- 64529

Danio ------------------------------------------------------------

Mus AAAACATGGAATATTTA------------------------------------------- 54514

Gallus -AAGCTTA---------------------------------------------------- 37328

Anopheles ------------------------------------------------------------

Homo TAAGCCTTCACAACTTA-CAGTATGT------------------------------TGAG 76563

Pan TAAGCCTTCACAACTTA-CAGTATGT------------------------------TGAG 76972

Drosophila GCAGC------GAC---------------------------------------------- 1468

Canis TAAGCCTTCACATCTTTTCAGTATGAAGAATACTATCCCTTTTTTTTCTTTGCAGATGAG 47336

Bos --AGCTTTTATATTTTT------------------------------------------G 9273

Rattus -------AAA-TTACTA-AATG--------TACAACTGCATACTTAGAGTTAATGTTAGG 64572

Danio --------------CTG-GATG--------TGCATTTCC--------------------- 11246

Mus -------AAAATTACTAGAATGACAATACTTGCAACTTCAAACTTAGAGTTAATGGTAGA 54567

Gallus ------------TCCTTAAATCCCCTCTTCTGCCTTTTCAT------------------- 37357

Anopheles ------------------------------------------------------------

Homo GAAACTGAGGCTTAATTGAATCGC--GTGCTAAAGTTTAAAGGTTAAAAGTTATGGTA-A 76620

Pan GAAACTGAGGCTTAATTGAATCGT--GTGCTAAAGTTTAAAGGTTAAAAGTTATGGTA-A 77029

Drosophila -ACACTGG--------TGGATC-----TGCC----------------------CGGT--- 1489

Canis GAAACAGG--CTTACTAGAGTTGC--TTGCTAAAATTTTAAGTTTAAAA-----GTTA-A 47386

Bos AAAATAGT--TTTCTTAAATTTGC--ATG------------------------------A 9299

Rattus GAATTAATTTAAGTACTTCAGCTATTAATTTATTTGATACT-------GTATTATTATGC 64625

Danio ------------------------------------------------------CTATGG 11252

Mus GCATTAATTTACACACTTCACTT----ATTTATTTGATACT-------ATCTCATTATGC 54616

Gallus ---------------CTCCCAATGGTTCTTTCTTTCATCCT-------CTTCCTCTGAGT 37395

Anopheles ------------------------------------------------------------

Homo GTGAGAGTTGGGACTAGTAAGGTGAATTCTGACTGACTCTT------GGTCTTTCCATAA 76674

Pan GTGAGAGTTGGGACTAGTAAGGTGAATTCTGACTGACTCTT------GGTCTTTCCATAA 77083

Drosophila -------TTGCGACGAGTGCAGCGTCTCCT-------TTTT------GGC---------- 1519

Canis GTGATAGTTGGAACTAGCAGAATG--TTCTGTCTCAGTCTTCACAACAGTCTGTC-ACAA 47443

Bos GTGGAAGTC----CTAGC------------------------------------------ 9313

Rattus TTATTTTACATTTCAAACCAAAACAAAAAGATAGAAAATTATTTTTTAGTGGTCACAATA 64685

Danio TGATTT------------------------ACAGAAAACTAAT----------------- 11271

Mus TTATTTTACATTTCAAACGAAAGCAAAAATATAGAAAATTATTTTT-AGTGATCATAATA 54675

Gallus TTACTCTTCTTTTTTTTTTGCACAGATTCTATGTGGATTTATTTTCAGGTAGCAGTAATT 37455

Anopheles ------------------------------------------------GTAGCAGTAGT- 674

Homo CAAAACATTGTCTAAAAGTAAACTGTGTGGCCTAAAAATGATTTTGTAAATATTAGAGAT 76734

Pan CAAAACATTGTCTAAAAGTAAACTGTGTGGCCTAAAAATGATTTTGTAAATATTAGAGTT 77143

Drosophila --------TGTC-----------------------------------AAATAC------- 1529

Canis AAATAAGTTATCCTAATACAA----CTTGGCATAAAAAGGATTTTGTAAACATCAGAGAC 47499

Bos ----------TCCTA------------------------GATC----------------- 9322

Rattus GAATATACCAGAATCAGAATTTT------GGGAAA-GGGTAGAGACTGGACAGATGTATG 64738

Danio -----------------------------GGGAAA-GA---------------------- 11279

Mus GAACATACTAGAACCAGAATTGG------GGGAAAAGGGTAGAGACTGGACAGATGTATG 54729

Gallus TAA-------------GAGGTAT------GAGCTACGAGTTGAG-TTCTGCAGATGTGGA 37495

Anopheles ------------------AACAC------CAGCCACAA---------------------- 688

Homo CGGTGTTGAACAACAACAGACATTATTTAAAGCTAAAGACT--AAATTCACAGAAT---A 76789

Pan TGGTGTTGAACAACAACAGACATTATTTAAAGCTAAAGACT--AAATTCACAGAAT---A 77198

Drosophila -------GAGCTATAACGGA--------GAAGCT-------------------------- 1548

Canis CACTGTTGTACA-----GGATATTTTTTAAAGCTAAAGATTTTAAATTCACAGTATTATA 47554

Bos ------------------------------------------------------------

Rattus CTGTCTTGAATACCAACAAACCT----------TTGAATCAATAATTAACATGTTTTCTT 64788

Danio --------------AAGGAACGT----------TT------------------------- 11290

Mus CTGTCTTGAA-ACCAACAAGCCT----------TTGAATCAATAATTAACATGTTTTCTT 54778

Gallus TTCCT-------CCAGCAAGCTA----------GT---------------ATCTCTGGCT 37523

Anopheles ------------------------------------------------------------

Homo GGACCCTAAAGTTGAAGATACCCAGAAGATAATTTCAGCTAGTTTTGTCAAA--CTCTTT 76847

Pan GGACCCTAAAGTTGAAGATACCCAGAAGATAATTTCAGCTAGTTTTGTCAAA--CTCTTT 77256

Drosophila ------------------TACC--------------AGC-AGCGTTATTCAG--CTGTCT 1573

Canis GAACCCAGAAGTTGAAGATACCTA--AGATCATTTCAGCCTTTGTTCTTAAAACCTTTTT 47612

Bos ---CCCAGAA----AAGA-ACCT-----------TCAG-----GCTCTTGATAC------ 9352

Rattus ------------------AGCAGGTCG-AGAACTGG----AGAAAGTACAGTAATAACAG 64825

Danio -------------------------CG-AGACCT-------------------------- 11298

Mus ------------------AGCAAGTTG-AGAACTGGG---AGAAACCACAGTAATAATAG 54816

Gallus ------------------GGTACCTTGCAGAGTAGA----------------------AA 37543

Anopheles --------------------CACTGCGCAGAAC--------------------------- 701

Homo GACTGCAATCCCT-----AGTATTTTACATAGCATC--CCAGTACATGCTTATCCATCTG 76900

Pan GACTGCAATCCCT-----AGTATTTTACATAGCATC--CCAGTACATGCTTATCCATCTG 77309

Drosophila GACTG-------------GGTGATTTACATG---------------------------CG 1593

Canis GACTGCAGTACCAAGTAAGGTATTTTGCATAGCATAGGTACATATATGCGTATCTGTCAG 47672

Bos ------------------------------------------------------------

Rattus TATATTGTGTTGGGACTAAATTT-------------GATCTAAGATGATCATGTA----- 64867

Danio ---------------------------------------------------TGCA----- 11302

Mus TATATTGTGTTGGGACCAAATTT-------------GAGCTAAGATGATCATGGA----- 54858

Gallus TTCACT---------------------------------------------TGGAC---- 37554

Anopheles --CATT---------------------------------------------TGGA----- 709

Homo TACATCTAATTGAAACAAAAGTTTCACAAAACAGTAGGTTCCATTACTATGTGGA-ATGC 76959

Pan TACATCTAATTGAAACAAAAGTTTCACAAAACAGTAGGTTCCATTACTATGTGGA-ATGC 77368

Drosophila TACG---GATTGGGAGA-------------------GGGTCATTCACTGTCTGGTCATCT 1631

Canis TACATATAATTA------------------------GGTGCCATTACTATGTGGA-ATAC 47707

Bos ------------------------------------------------------------

Rattus -----AATTCAAGT-----------------------------GTTCAGAGTTATTCTGT 64893

Danio -----GACTC-----------------------------------------TCATCC--- 11313

Mus -----AATTTAAGT-----------------------------GTACAAAGTTATTCTGT 54884

Gallus -----AAGTC-----------------------------------------TTGTCTTGA 37568

Anopheles -----ACCTC-----------------------------------------TTGCC---- 719

Homo ATTCTGATTTTCCC-----ATTGCTGATTGCAAACCACTAAATGGATTAGACTACCCACT 77014

Pan ATTCTGATTTTCCC-----ATTGCTGATTGCAAACCACTAAATGGATTAGACTACCCACT 77423

Drosophila GCTTTGATCT----------------------AGCCACCAA------------------T 1651

Canis TTTCTGACTTTCTCCCCTGATAGTTGGTTTGAAACCACTAAATGAATTGGGCTACCCCCT 47767

Bos ----TGACCTCC------------------------------------AAGTTACCTCCT 9372

Rattus TTTAGA--ACAGGT------TTATAGCTAACACTGTTGTTGA------------------ 64927

Danio ------------------------------------------------------------

Mus CTTAGA--ACAGGT------TTCTAGCTAATGCTGTTGTTGG------------------ 54918

Gallus ATTCAG--ACAG----------CTGGAAGACAGCG------------------------- 37591

Anopheles --------GCGG----------TCGGTACAC----------------------------- 732

Homo AATGAGTTGCAGGTGACAAGTTTGAAAAAACAATGCTCTCGGGCAACCTGACCTGATGCG 77074

Pan AATGAGTTGCAGGTGACAAGTTTGAAAAAACAATGCTCTCGGGCAACCTGACCTGATGCG 77483

Drosophila AGTGAGTT------------TTTCAA---------------------------------- 1665

Canis AACAAGTTGCAGATGGCA-GTTTGAAAAA-CATTGATCTAGGACAAC-TGACTTGATTCA 47824

Bos A----------------------------------------------------------- 9373

Rattus ------TATTTTTTT-TTCTCCATTTCCAAGGCTAATTTTAAATCTATATAT-------- 64972

Danio ------------------------------------------------------------

Mus ------TATAATTTTGTTCTCCATTTCTAAGGTTAAATTCAAATCTATATAT-------- 54964

Gallus ------------------------------GGCCTCTTTTAAAT---------------- 37605

Anopheles ------------------------------------------------------------

Homo TTAATTTATGAGATTT----TATTTTTTGTAGACAGACTAGATTGTCCAAATGAGTATTA 77130

Pan TTAATTTATGAGATTT----TATTTTTTATAGACAGACTAGATTGTCCAAATGAGTATTA 77539

Drosophila --------------------------TTGTATGC---CTGGAATGT-------------- 1682

Canis TGAATTCATGATTTTTATTTTAGTTTTTATAGACCTCCAAGAATATCCAAAC-------- 47876

Bos -----TTATGGTTTT--------------------------------------------- 9383

Rattus -----TTGACCGTAAAGTATCAGACCTTCCTATTGATAGTTTTTGACGA----------- 65016

Danio ----------------------------------GGTAATCTTTGCCTG----------- 11328

Mus -----TTGGCTGTAAAGTGTCAGACCTACCTATTAAT--TTCTTGGGGA----------- 55006

Gallus ---------------------GGCTCTGCCAACTGGA-----TCAATGA----------- 37628

Anopheles --------------------------TACCAGC--GG-----CCAAT-A----------- 747

Homo TTACTTTAA-----CTACTATAGTGCTGTGTTACAGTTGTT-TCAGTGATTATTGCATTT 77184

Pan TTACTTTAA-----CTACTGTAGTGCTGTGTTACAGTTGTT-TCAATGATTATTGCATTT 77593

Drosophila ----TTCAA--------------------GTTACAGCT-------------------TTT 1699

Canis TTCATCTAAAGTCACTACTTTAGGACTGTAGTATAGTTATT-TCAATGATGTTTGCATTG 47935

Bos --------------------------------------------AATG------------ 9387

Rattus CATAAAATTATAAATTTTAAAAATCTA-------TA-TTTTGAAGGATAATATGCTAACA 65068

Danio CATA----CGT---TTTTAAAAAT------------------------------------ 11345

Mus CATAAATTTATGAATTTTAAAAGTCTA-------TAGTTTTGAAGGGTAATATGTTAACA 55059

Gallus GCTAAAACTATGACAACTAAAACC------------AGTGTGCAGATTGTTAGGCACCAA 37676

Anopheles GTAGAAACAATAACGTC-----------------------------------GGCA---- 768

Homo TTCAAAACCAT---TTTTAAAATTCTGTTTGAAAT----AGTTGGAATAACCTGAAAACA 77237

Pan TTCAAAACCAT---TTTTAAAATACTGTTTGAAAT----AGTTGGAATAACCTGAAAACA 77646

Drosophila CTCATAACC--------------------------------------------------- 1708

Canis CTCAAATCCAT---TTTTAAAATCCTAGTTGTAATCATTAGTTGCAGTAATTTGAACACC 47992

Bos --CAAATC----------ACAAACTTA-----AATTAGTGCTAGCAATAAT--GAATGCC 9428

Rattus GTTTTGCATGCTCCTTA-----------------GAAATGATATATTCTTAAGCATTTTC 65111

Danio ATTTAGCTTGCTT-----------------------AATGTT-TGTTTTTAAAAAT---- 11377

Mus GTTT----TGCTCCTTA-----------------GAAATGATATA---TTAAGCATATAC 55095

Gallus GTATTCCAGGAGCTTT---------------------ATGGTGTTCTTGTAGACTT---- 37711

Anopheles GTA---------------------------------------------GTAG-------- 775

Homo TTTAA-TATCCTGTTTTGGTAAATTTTCATCTCCAAGATTAAATTTTTTTAACCAGCCAA 77296

Pan TTTAA-TATCCTGTTTTGGTAAATTTTCATCTCCAAGATTAAATTTTTTTAACCAGCCAA 77705

Drosophila ----------------------------------------------CTTTAGCCAAT-AA 1721

Canis CTTAAATATTCTGTTC--------------CTTCAAAGTTAAAGTTTTTTAAC-AGCCAA 48037

Bos -----------------------------------AAACTAAAATC-------------- 9439

Rattus CATCTTATATGGG----------------------------------------------- 65124

Danio ------------------------------------------------------------

Mus CAT-TAGAGTAGG----------------------------------------------- 55107

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CAGATGTTTGAAGGCAAGTTAGGAGATATGATGGATACTGGATACAGTATCCATCCATGT 77356

Pan CAGATGTTTGAAGGCAAGTTAGGAGATATGATGGATACTGGATACAGTATCCATCCATGT 77765

Drosophila CAG-----------------------TGTGGTGGA--------------------CATGG 1738

Canis ATGGCATTTAAAG-----TCAGTGTATGTAGCAAATAA-----------------CGTGG 48075

Bos --GGTATTT---------------TATCT------------------------------- 9451

Rattus ---------------------------------AAGAATATTACCT--GTTCCTTTAGTA 65149

Danio ------------------------------------------------------------

Mus ---------------------------------AAGAATATTACCTCTGTTTCTGTAATA 55134

Gallus -------------------------------------AAATTGTTT---TTTTGTGTGTT 37731

Anopheles ------------------------------------------------------------

Homo ACTAGATACAGTATCCATCCATGTACTGGATACAGTCATACTGTTAGCAAATTTTAGATA 77416

Pan ACTAGATACAGTATCCATCCATGTACTAGATACAGTCATACTGTTAGCAAATTTTAGATA 77825

Drosophila ACTA------------------------------------------------TCTGGACA 1750

Canis GTGATA-----------------------GTGAGGGAATGCTGTTAGTAAATTTCAGATA 48112

Bos ------------------------------------------------------------

Rattus CATTA----------------GAAAATAGGATTGATT--TATTGAAGCTT---------- 65181

Danio ---------------------GGAAACACAAATGGTT--CACCAAG-------------- 11400

Mus CATTA----------------GAAAATAGGATTGATT--TATTGAAGCTTAG-------- 55168

Gallus CAGTT----------------GAAAATCTCAGCC-CT--TATTC---------------- 37756

Anopheles ------------------------------------------------------------

Homo CATAAAGTAAAACAAACAAAATGCAGTATAAACAGTTAATATTGGAATCTAGTGTTGATT 77476

Pan CATAAAGTAAAACAAACAAAATGCAGTATAAACAGTTAATATTGGAATCTAGTGTTGATT 77885

Drosophila ------------------------------------------------------------

Canis CATTA-----AAAAAAGGGGGGGCAGTATAAATATTTCACATTAGAAT------------ 48155

Bos ----------------------------------TTTCTCATTAG--------------- 9462

Rattus -----------------TAATTAAATGT-------------------------------- 65192

Danio ------------------------ATGT-------------------------------- 11404

Mus -----------------TAATTAAATGT-------------------------------- 55179

Gallus -------------------------TGA-------------------------------- 37759

Anopheles -------------------------TGG-------------------------------- 778

Homo TTATGATTAATCTCAATGAGGTTACTGTATATTCATAATTCTATAGGTACACAAAAATAT 77536

Pan TTATGATTAATCTCAATGAGGTTACTGTATATTCATAATTCTATAGGTACACAAGAATAT 77945

Drosophila -------------------GGGTGCTG--------------------------------- 1758

Canis ---------------------TTAGTG--------------------------------- 48161

Bos ------------------------------------------------------------

Rattus -------------------------------------TAATATTTAGTGCT--------- 65206

Danio -------------------------------------TGAGAT----------------- 11410

Mus -------------------------------------TAATATTTAGTGGTG-------- 55194

Gallus -------------------------------------CAGTATT---------------- 37766

Anopheles -------------------------------------CAGTG------------------ 783

Homo TTGGTAAAAGATTTATAGTTGAGAAAATGCTAGACACTAAAGTTTGTTAACTTACAATTT 77596

Pan TTGGTAAAAGATTTATAGTTGAGAAAATGCTAGACACTAAAGTTTGTTAACTTACAATTT 78005

Drosophila ------------------------------------CCAAAATT---------------- 1766

Canis -------------------------------------TGGATTTTTCTGATCTCT----- 48179

Bos --------------------------------------GGAGTT---------------- 9468

Rattus ---ATTTGAAACTTGTAAGAGAGTATT-TAGTTTCTTTTATATTCACCAG---------- 65252

Danio --------GAATTTGAAAGAAG-----------TCTCTTATGCTCACCAA---------- 11441

Mus -ATATGTGGAACTTGTGAAAGAACA-----GTTTCTTATATGTTCACCAAC--------- 55239

Gallus -------GATGTATGCCAGCAAGCA-----------TATGTATGGACCAT---------- 37798

Anopheles ------------GCGCCAA----------------------------------------- 790

Homo -AAGAATAAGGGCTGGGTGCAGTTGCT---CACGCCTGTAATCCCAGCACTTTGAGAGGC 77652

Pan TAAGAGTAAGGGCTGGGTGCGGTGGCT---CACGCCTGTAATCCCAGCACTTTGAGAGGC 78062

Drosophila ---------GTGCCAAGCGGCGTCGGC---CATGCCAGTG---CCGGCAC------AGGC 1805

Canis ------TAGTGACTGAGATCAGTTATTATGTATATTATTATGTATATTATTCTGT-AGAC 48232

Bos ------------CTGGGA--AATTGTT--------------------CATTC-------- 9486

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGAGGTGGGCGGATCATGAGGTCAGGAGTTCAAGACCATCCTGGCAAACGTAGTGAAACC 77712

Pan TGAGGTGGGCGGATCATGAGGTCAGGAGTTCAAGACCATCCTGGCAAACGTGGTGAAACC 78122

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus --------------------------------------------------AAAAT----A 65258

Danio --------------------------------------------------G--------- 11442

Mus --------------------------------------------------AAAGT----A 55245

Gallus --------------------------------------------------GAAAT----A 37804

Anopheles ---------------------------------------------------AACC----A 795

Homo CCATCTCTACTAAAAATAAAAAATTTAGCCAGGCGTAGTGGCGCCTGCCTGTAATCCCAG 77772

Pan CCATCTCTACTAAAAATAAAAAATTTAGCCAGGCGTAGTGGTGCCTGCCTGTAATCCCAG 78182

Drosophila ----------------------------------------GCGCCTGGCCAGGATCTGGG 1825

Canis ---------------ACAAAGAA-----------------ATATTTGGTAGAGATTT--G 48258

Bos -----------------------------------------------------ATTT--A 9491

Rattus ATGCTGAAAAAC-AAATTTTCAATAAATACTGAAC------------------------- 65292

Danio --GCTG------------------------------------------------------ 11446

Mus CTGCTGAAAA---TAAATTTCAATGAATACTGACC------------------------- 55277

Gallus CAGCTTAAGGT--------------GGTGCTTTCT------------------------- 37825

Anopheles AAACTCAAG--------------------------------------------------- 804

Homo CTACTCAGGAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAGGCGGAGGTTGCAGTGAG 77832

Pan CTACTCAGGAGGCTGAGGCAGGAGAATTGCTTGAACCCAGGAGGCGGAGGTTGCAGTGAG 78242

Drosophila CTGCTCA-------------------TTGTTC---------------------------- 1838

Canis TAGTTGAA----------------AAATGCTC---------------------------- 48274

Bos CAGATGA---------------------GC------------------------------ 9500

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Rattus ---------------------------------------TGAAAGTTATGTATGTGAGCT 65313

Danio ------------------------------------------------------------

Mus ---------------------------------------TGAAAATTGGGTATGCGAGCT 55298

Gallus ---------------------------------------GGGAAGTT----------GCT 37836

Anopheles ------------------------------------------------------------

Homo CTGAGATCGCGCCACTGCACTCCAGCCTAGGCGACAGAGTGAGATTTCATGTCAAAAAAA 77892

Pan CTGAGATCGCGCCACTGCACTCCAGCCTAGGCGACAGAGTGAGACTTCATCTCAAAAAAA 78302

Drosophila ---AGATCA----GCTGCATTC-------------------------------------- 1853

Canis ----GAT------ACTAGGGTT----------------------TTTGATAACTGTTAGT 48302

Bos ------------------------------------------------------------

Rattus AAGAAAGCAG------ATCAGCTTACAAGAAGTCCTGAGTTTAATCTTCATA-------- 65359

Danio ---------------------------------CTTTAATTTGATTT------------- 11460

Mus GAGAAGGTAG------ATCAACTTGCAAGAAGAACTGAGTTTAATCTTCAGA-------- 55344

Gallus GGGAAGTGTT------ATGACTTCATATG-----TTTAGCTAAACGATCC---------- 37875

Anopheles ------------------------------------------------------------

Homo AAAAAAAAAA----GAGTAAGGACATGAGTAAGGTTATGTCTCACCTGTTTTTAAGGAAA 77948

Pan AAAAAAAAAAAAAAGAGTAAGGACATGAGTAAGGTTATGTCTCACCTGTTTTTAAGGAAA 78362

Drosophila ---------------------------------GTT------------------------ 1856

Canis AAGAAATTAA----GAGTAAAGATATGAGCAAGCGTATGTCTCATCTGCTTTCAAAAAAA 48358

Bos ---------------AGAAAAGAC--------------------TCTTCTT--------- 9516

Rattus ---------------------AGTCTGTTAAAGGAAAGAAAATTTGAGTGGTCATT---- 65394

Danio -------------------------------------GAAAA-----------ATT---- 11468

Mus ---------------------ACTCTATTAAAGAAAAGAAACTTGAAGTGGGCATT---- 55379

Gallus --------------------------------TGGCAGAAAATGTTAGC---TTCT---- 37896

Anopheles --------------------------------CGACGGAAGAGGT--------------- 817

Homo TGTGGATATAAGATGGGTTCTAGTCCATTAAAAGGTGGTAATTTATACTAAGTCTTACTG 78008

Pan TGTGGATATAAGATGGGTTCTAGTCCATTAAAAGGTGGTAATTTATACTAAGTCTTACTG 78422

Drosophila ---------------GATCGCAGCCTGCCAGCAG-------------------------- 1875

Canis AGTGTATATGAGATGTGTTGTGATCCATTAAGTG---GCAATTTATACTAAGCACT--TG 48413

Bos -------------------------------------GCAGTTTACAACAGGCACA--GA 9537

Rattus -------------ATAGTTCTGATGCTACGC----------------------------- 65412

Danio -------------ACGATTC---------------------------------------- 11475

Mus -------------GTAGTCCTGATGCTAGGTAGGCAGGTACTGGCAGAGATGCCAGGGGC 55426

Gallus -------------AAAACTCCCATGT---------------------------------- 37909

Anopheles ------------------------------------------------------------

Homo TGAGAGACCATAAACTGCTTTAGTATTCAGTGTATTTTTCTTAATTGAAAT--------- 78059

Pan TGAGAGACCATAAACTGCTTTAGTATTCAGTGTATTTTTCTTAATTGAAAT--------- 78473

Drosophila ----------CAAATTACTCTA-----CAG-GTGCTTTT--------------------- 1898

Canis TAAGAGACCACAAATTGTTTCCCTATTGTGGTTTTTTCTCTTAATTGAGGTT-------- 48465

Bos CAGGGCACC-----------------TGTGG----------------------------- 9551

Rattus -----------------------------------------CAAGGAGAGATACTTTCCT 65431

Danio ------------------------------------------------------------

Mus CATTGACAGTCCAACCTATTGTGTTATGCAGTCTTCCAGGTCAAGGAGAGATCCTTTCCT 55486

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo --------------------------------------------ATTTTACTTATGACTT 78075

Pan --------------------------------------------ATTTTACTTATGACTT 78489

Drosophila ------------------------------------------------------------

Canis --------------------------------------------ATTTTATTTATGGCTG 48481

Bos --------------------------------------------------------GCGG 9555

Rattus GACAAACAAGGCGAACAGGTCCTGAGGAATAACATCGTAGGTGGAAGGAGATATGTACAT 65491

Danio -------------ATCAGTTCTT------------------------------------T 11486

Mus GACAAACAAGGTGGACAGATCCTGAGGAAATACATCTTAGGTGGAAGGAGACATGTGAAT 55546

Gallus ---ACTCAGGTTGGGTTGATCCAGCA---------------------------------- 37932

Anopheles -----------------------ACA---------------------------------- 820

Homo AGTAGATACTAAGACTTAACCCTTGAGTTTCTATTCTA------ATAAAGGACTACTAAT 78129

Pan AGTAGATATTAAGACTTAACCCTTGAGTTTCTATTCTA------ATGAAGGACTACTAAT 78543

Drosophila -------------------------------------------------GGAC------- 1902

Canis ATTGGATAATAGGAATTAATTCCTTAGTTTCTGTTCTATTAAACATAAAGAATTACTAGT 48541

Bos ACTAGG------------------------------------------------------ 9561

Rattus GTACATACATGAAGACATACAGATGA---------------GTTAAAGAAGACCAAC--- 65533

Danio GTACTTAAATG------------------------------------------------- 11497

Mus ATACATACATGAAGACATACAAATTA---------------GTTAAAGTAGACCAAT--- 55588

Gallus GTATCTGTGTTAGCATG------------------------ACTGAAGTAGATC------ 37962

Anopheles GTATCTGGATGAG----------------------------------------------- 833

Homo GAACAATTTTGAGGTTAGACCTCTA--CTCCATTGTTTTT-GCTGAAATGATT------- 78179

Pan GAACAATTTTGAGGTCAGACCTCTA--CTCCATTGTTTTT-GCTGAAATGATT------- 78593

Drosophila ----------GAGG--------------------------------AAT----------- 1909

Canis GAACAAATTTGAAGTTATACTTCTATACTCCATTATTTTTTGTTGAAGTGATTTAGATTG 48601

Bos ----AAAATTGAAG---------------------------------ATGAT-------- 9576

Rattus -ATAGAGATTC-------------------------TTAAGAGAATAAATTCATAGACT- 65566

Danio --------------------------------------------------TCATAATTT- 11506

Mus -ATAGAGATTC-------------------------TTTACAGAATAAATTCATAGGCC- 55621

Gallus ------------------------------------------------------TGGTT- 37967

Anopheles ------------------------------------------------------------

Homo --TAGCTGCTT------------------------TTCCATGTCCT----GTGTAGTCCA 78209

Pan --TAGCTGCTT------------------------TTCCATGTCCTAACTGTGTAGTCCA 78627

Drosophila -------------------------------------CCATG------------------ 1914

Canis AGTAGTCACTTATGTGTTTGGCTGTCATGACTTCTTTCCCTGTCCTAAACTTACAGCCCA 48661

Bos AATAGCCA--------------------------------------AAA---ATGGTCCA 9595

Rattus --TTTAG-ACCCCAAAAGATGAAGATATACAGGACATAATTTCAACCATTCTCCTCTTTC 65623

Danio --TTTAG-A-----AATCATTATAATATAC------TGATTT------------------ 11534

Mus --CTTAG-ACCCCTAAAGATGAAGATATACAGGACATAATTGCAACTATTCCCCCCACCC 55678

Gallus --GTTAA-A------AAAATAAATATATAAA-----TCCTTTCAGCTGATGTTCGTACTT 38013

Anopheles ------------------------------------------------------------

Homo GACTTA--ACACACAAGTAATAAAATCTTAA----------TTAATTGTATGTTAATTTC 78257

Pan GACTTA--ACACACAAGTAATAAAATCTTAA----------TTAATTGTATGTTAATTTC 78675

Drosophila -----------CGCGAG------------------------------------------- 1920

Canis GGTTTGTTATACAGAAGTAACAAAATATCTAATTTTAATTTTCTACTGTATGTTAACTTC 48721

Bos G-------ACACAGAA--AGGTAATTATTAAATTGTGACTATATACTGAA---------- 9636

Rattus CCACCCCAATCCAA---------CATTGTTTTAGCTATATCCTTTATTAAGAAATATATA 65674

Danio ------------------------ATTGTTT----------------------------- 11541

Mus CACCC-----CCAA---------CAGCATTTTGGCTATATCCTTTACTAAGAAATGCATA 55724

Gallus CC-----------------------TCACTT----------------------------- 38021

Anopheles ------------------------------------------------------------

Homo ATAACAAATCAGTA-----AAGTTAGCTTTTTA-------------CTATGCTAGTGTCT 78299

Pan ATAACAAATCAGTA-----AAGTTAGCTTTTTA-------------CTATGCTAGTGTCT 78717

Drosophila --AACGAATCCATA-----A-------------------------------TCAGTGTC- 1941

Canis ATGACAAATCAGTAGTTAGAAAGTAACCTTTTAATAAT-------TCTATGCTGGCTTAT 48774

Bos ------------------------AACCTT-----------------------GGCTT-- 9647

Rattus GCTTCTTAAACACAATACATACT---TGTGTGTTGAAATAAATTTTGCCAAAACTAGTAA 65731

Danio -------------AATATATATT---TGT------------------------------- 11554

Mus GCTTCTTAAACACAGTACATACTCT-TGTGTGTTGAAATAAATCTTGCCAAAAACTGTAA 55783

Gallus -------------AAGAAACACTAC-TGCA------------------------------ 38037

Anopheles ------------------------------------------------------------

Homo GTTTTGTGTCTGTCTTTTTGATTATCTTTAAGACTGAATCTTTGTCTTCACTGGCTTTTT 78359

Pan GTTTTGTGTCTGTCTTTTTGATTATCTTTAAGACTGAATCTTTGTCTTCACTGACTTTTT 78777

Drosophila --------------------------------ACCAAAGTTTT----------------- 1952

Canis --TTTCTGTCCTATTTTTCCATTATCTGTGAGACTGAATCTTTGCCTTTACTGGCTTTTT 48832

Bos --------CCATATTATTACAC-ATGTGTGA----------------------------- 9669

Rattus GTCAGTTTGCTTCTTTTTTTCCTTTCAGA--------AA--CAAAATTGATTGTTTCGTT 65781

Danio -----------TATTTTTTACCATTTAAA--------AA--CAG---------------- 11577

Mus GTCAGTTTG---CTTTTTTTCTTTTCAGA--------AA--CAAAATTCATTGTTTTCTT 55830

Gallus -------------------GTTATGCTGA--------AATTCAGGGCC------------ 38058

Anopheles -------------------GCCATGCTGA--------AA----GAGC------------- 849

Homo ATCAGTTTGC-TTTCTGTTTCCATTTACATACAAA--AAGTCAAAAATTTGTATTTGTTT 78416

Pan ATCAGTTTGC-TTTCTGTTTCCATTTACATACAAA--AAGTCAAAAATTTGTATTTGTTT 78834

Drosophila ----------------------------------A--AAG----------GTATTTGTT- 1965

Canis ACCAGTTTGC-TTCCTGTTTCCATTTAAA-ACAAATCAAGTCAGTATCTTTTATTTGCTC 48890

Bos -------------------TCTATCCAGA-A----------------------------- 9680

Rattus TCCCTATTGTTTTGTTTTTGCTACTCCTTGTTTTCTTTTACTTA---------------- 65825

Danio ---------------CTGTGCTGCTCAGTGTTTT-------------------------- 11596

Mus TCCATATTGTTTTGTTATTGCTGCTTCTTATTTTCTTCTACTTATAT------------- 55877

Gallus --------------TCTCTGATTATGTCTGTTTTCTACCAAGTT---------------- 38088

Anopheles ------------------TGACC------------------------------------- 854

Homo CCTAATCCTACTCCTTGTTTTTATTTTGTTTTTTTCCTGAT------------------- 78457

Pan CCTAATCCTACTCCTTGTTTTTATTTTGTTTTTTTCCTGAT------------------- 78875

Drosophila ------------------------------------------------------------

Canis CATAGCCCTACTCCTTATTTTTATTTTTTGCTTCTCCTTAGTTTTATTTTGCTTTCATCT 48950

Bos -----------------------------GCTTCT------------------------- 9686

Rattus ---------CGCTTTTCCTGTTCTCAATGGTCCTCTTT---ATACTTTCAACTAACAGCT 65873

Danio ------------------------------------------------------------

Mus -----CTTACATTTTTCCTCTTCTCAACTGTCCTCTTTTTTATATTTTCAATCAACAGCT 55932

Gallus ---------CCATTTTTTTCTTCTTAAGCATC---------------------------- 38111

Anopheles ------------------------------------------------------------

Homo ----ACTAGCAATCATCTTCTTTTCATGTTTATCTTTT----------CAATCACTAGCT 78503

Pan ----ACTAGCAATCATCTTCTTTTCATGTTTATCTTTT----------CAATCACTAGCT 78921

Drosophila -------------------------AGGTTTAT--------------------------- 1973

Canis TTAAACTGGCAGTCATCTTCTTTTCAC-TTTATCTTTT----------CA-CCACTAGCT 48998

Bos ------------------------------------------------------------

Rattus AGAGATGATCGCTATGGAAAATCCTGCAGACTTGAAGAAACAGTTGTATGTGGAATTTGA 65933

Danio ------------TATGGGAAG--------------------AGTTA------GACTTT-- 11616

Mus AGAGATGATTGCTATGGAAAATCCTGCAGACTTGAAGAAGCAGTTGTATGTGGAATTTGA 55992

Gallus ------------AGTTGAGAGACACGGATGTTCAGAGGAGCAGCTAAATCCGTGACTTTC 38159

Anopheles ----------------GAGAGATGC----------------------ATCCG-------- 868

Homo AGAGATGATCGCTATGGAAAATCCTGCAGACTTGAAGAAGCAGTTGTATGTGGAATTTGA 78563

Pan AGAGATGATCGCTATGGAAAATCCTGCAGACTTGAAGAAGCAGTTGTATGTGGAATTTGA 78981

Drosophila ------------TATGCAATAT------GGCTTGTA-ATGCAGTTG-------------- 2000

Canis AGAGATGATCGCTATGGAAAATCCTGCAGACTTGAAGAAACAGTTGTATGTGGAATTTGA 49058

Bos ----------------GA-------GCACATTTG------CAGTT--------------- 9702

Rattus AGGAGAACAAGGAGTAGATGAGGGAGGCGTTTCCAAAGAGTTTTTTCAGTTGGTTGTGGA 65993

Danio ----------------------------------------TTTTTGCAGT--GTT-TGGA 11633

Mus AGGAGAACAAGGAGTAGATGAGGGAGGCGTTTCCAAAGAGTTTTTTCAGTTGGTTGTGGA 56052

Gallus GGCTGAGCA--GCTTAGCAACATTGTCCTGGTTATAAAATCTTCTTCAAGAAACATTAGA 38217

Anopheles ------------------------------------------------GGAGGGATCGGA 880

Homo AGGAGAACAAGGAGTTGATGAGGGAGGTGTTTCCAAAGAATTTTTTCAGCTGGTTGTGGA 78623

Pan AGGAGAACAAGGAGTTGATGAGGGAGGTGTTTCCAAAGAATTTTTTCAGCTGGTTGTGGA 79041

Drosophila ------------GGTT----------------------AACTTCTTC------------- 2013

Canis AGGAGAACAAGGAGTTGATGAGGGAGGTGTTTCCAAAGAATTTTTTCAGCTGGTTGTGGA 49118

Bos --------------TTAAT-----------------AGAAATTTTCCA------------ 9719

Rattus GGAAATCTTTAATCCAGATATTGGTAAGTA--TTAATGATAAGACTATGATGGTGTGTTA 66051

Danio -----------------------------------------------------CATGTTA 11640

Mus GGAAATTTTTAATCCAGATATTGGTAAGTA--TTAGTGATATGATTATGATGGTGTGTTA 56110

Gallus -----CTTTGACTCAAAATACGGGTTTGT--------------------------TGGTA 38246

Anopheles -----C----GCTC---------------------------------------------- 885

Homo GGAAATCTTCAATCCAGATATTGGTAAATACATTAGTAATGTGATTATGGTGTCGTATCA 78683

Pan GGAAATCTTCAATCCAGATATTGGTAAATACATTAGTAATGTGATTATGGTGTCGTATCA 79101

Drosophila ---------------------------------------TGTGAT---------AGATTG 2025

Canis GGAAATCTTCAATCCAGATATTGGTAAATATTTTAGTGATGTGATCATGAAGTCATATC- 49177

Bos ------------------------------------------------------------

Rattus ATCTTTTGAAATG---------TGAACTTGGTTTATAAGTATTTTCAGTTATGATA---A 66099

Danio -TCTTTTAA---------------------------------TTTCTATTA--------- 11657

Mus GTCTTTTAAAGTA---------TAAACTTGGTTTATAAATATTTTCAGTTATGGTA---A 56158

Gallus ATCCTTTA------------------TCTGACTTCC------TCTCAGACATCCAG---C 38279

Anopheles --CGCTCA------------------TCCGA-----------------ACGTTGGG---C 905

Homo -TCTTTTGAGTTAGTTATTTGTTTATCTTACTTTGTAAATATTTTCAGCTATGAAGAGCA 78742

Pan -TCTTTTGAGTTAGTTATTTGTTTATCTTACTTTGTAAATATTTTCAGCTGTGAAGAGCA 79160

Drosophila -TCTTCTA-------------------------CGCGAACATTCT-GGCT---------A 2049

Canis --TTTTCGAATTAAGGATT---TTACCAGGGTTTATAGGTATTCTCAGTTATAAAG---A 49229

Bos ------------------------------------------------------------

Rattus GCTGTAAAAGAACCGAGCATACCTTACCCATAATTACAGATAACAAATA----TGTATGC 66155

Danio ------------------------------------------------------------

Mus GCAGTAAAAAAATTGAGTATGCCATATCC---------------------------CTGC 56191

Gallus ACAGT------------------------------------------------------- 38284

Anopheles GCCGT------------------------------------------------------- 910

Homo GCAAAAGAAGGATTTGGTATGGATTACCCAGAATCACACATCATGACTGAATTTGTAGGT 78802

Pan GCAAAAGAAGGATTTGGTATGGATTACCCAGAATCACACATCATGACTGAATTTGTAGGT 79220

Drosophila GCGAG----------------------CTGGAGCGAC-CGTCGTGTCGG----------- 2075

Canis GCAATAATAGGTTTTGGTACGTATTTCTTAGAGTCACAGATAATGACTGAATGTGTGGGT 49289

Bos -------------------------------AGTCACATAAAATG--------------- 9733

Rattus TTCAGGAACTG--TTCTGTTACTAATGTAATTCAAGTTATTCCATAGATTACTTAGCTAA 66213

Danio ----------G--TTTTG---CTGAAGTA--------TAGTCC--------CTTA---AA 11683

Mus TTCAGGAGCTG--TTCTATCACTCACTTAATTTAGGTTCTTCCATATATTACTTAGTCAA 56249

Gallus ----------G--TTCCAAT-CTGCCCCAGCCAGCACTGCTCAA-------CTAAG---A 38321

Anopheles ----------G--TT--------------------------------------------- 913

Homo TTTAGGAACTGATTTGTATCACTAATTTA-TTCAAATTC----TTTTATTTCTTAGAAGG 78857

Pan TTTAGGAACTGATTTGTATCACTAATTTA-TTCAAATTC----TTTTATTTCTTAGAAGG 79275

Drosophila ---------------GTGCCGCT--------------------------------GGAGG 2088

Canis TTGGGGAACTGATTTGCATCACTCGTTTA-TTCAAGTTCTCATTTAGATTACTTAGTCAA 49348

Bos -------------------------------------------TTAG----TTTAGCCAG 9746

Rattus A-TATTCTAGTAGAAAACAATTACCTTCTCGGTAAATTTCATTTGAAAAACCTTAGGATG 66272

Danio A-TGTT------------------------------TCTCAT-------ACTTT------ 11699

Mus A-TATTCTAGTAGAACACAGTTGCCTTCTAGGGAAATTTAATTTGAAAAACCTTAGAGTG 56308

Gallus G-TGCTTC----------------------------CTTCCCCTTTACTACTTT------ 38346

Anopheles -----TTC----------------------------CTCC--------TACC-------- 924

Homo AATATTCTAATGAAGGA-AATTATCTCTTTGGTAAACTGAATTGAAAGCACTTTAGAATG 78916

Pan AATATTCTAATGAAGGA-AATTATCTCTTTGGTAAACTGAATTGAAAGCACTTTAGAATG 79334

Drosophila A----TCGAACGGAAG-------------CGGCGACCGCATCTGGCAGCGC--------- 2122

Canis A-TATTTTACTACAGGA-AACTCTCTCTTAGGTAAATGAAACTGAAAAGACTTTAAAATG 49406

Bos ------------------------------------------------------------

Rattus GTGGATTTGAAAAACCTGAAGTAATGAGAATCATGGGTTATATAATTTATTCTCTGG--- 66329

Danio -------TGAAAAGT---------------------GTTGTGTA-TTTATT--------- 11721

Mus GTAGATTTGAAAACC-TGAAGTCATGAGAATCATAGGTTATATAATTTATCCTCTGG--- 56364

Gallus -------------TCTT--------------------TTATGTTGCTCGTTG-CAGT--- 38369

Anopheles -----------------------------------------GTGGCC--TAG-CGG---- 936

Homo GTATATTGGAACAGTTGGAGGGA-----------TTTCTTTGCTTTTTGTTGTCTAAAAC 78965

Pan GTATATTGGAACAGTTGGAGGGA-----------TTTCTTTGCTTTTTGTTGTCTAAAAC 79383

Drosophila ---------AGCAGT-GGAGGA-------------------------------------- 2134

Canis GTATATTAGAACAATTGAAAGA------------TTTCTTTGCTCTTTTTACTCTAAAAC 49454

Bos -----------------------------------TGCTTTGCTGCT------------- 9758

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -CATCATCAAACTCACGGTTTTCCTGACCTGTGAACTTCAAAGAACAATGGTTTGAAGAG 79024

Pan -CATCATCAAACTCACGGTTTTCCTGACCTGTGAACTTCAAAGAACAATGGTTTGAAGAG 79442

Drosophila ------------------------CGACCTAT---------------------------- 2142

Canis ATTTCGTCACACTCCTACCATTTCTGA--AACGAGTTTCATACAATAGTGGTCTTAAGAA 49512

Bos ----------------------------------------------------------AA 9760

Rattus ----------TTACTTTATAGCTTAGTTGCACTTAAGACCAAGAGCATCCA-TTGGTGTA 66378

Danio ----------------TACAGATT---TATACTATAAACT----------------TGTA 11746

Mus ----------TTAATTTATAGCTTAATTGTCCTTGAGACCAAGAGCATCCA-TTGGTGAC 56413

Gallus ----------CTAGTTCTCAGCCAAA--GAACTAAAGATAAA--------------TGCA 38403

Anopheles ----------CTAGCTTCCAG--------------------------------------- 947

Homo TATTGAGAGACTGTCTCACAAGTATGTCATGCTCAAAGTTCAGAAACACTAGCTGATATC 79084

Pan TATTGAGAGACTGTCTCACAAGTATGTCATGCTCAAAGTTCAGAAACACTAGCTGATATC 79502

Drosophila ----------TCGTCT-ACAA----------CTC-------------------------- 2155

Canis TGTTCAG----TGTCTCACAAGGGTATCATGCTCAAAGTTTGGAAATCTTGCCTGGTATC 49568

Bos TGTTCAA----------------------------------GAAAATCTT---------- 9776

Rattus A-----------------TTCTATCACATTTATTATTTGTGAACTGG------------- 66408

Danio G-----------------CT--------TTTATTGTTT---------------------- 11759

Mus A-----------------TTCTATCAGATTTATTATTTGTGAACTGG------------- 56443

Gallus A-----------------TGCT------TTTCTGACATGAGAATC--------------- 38425

Anopheles -----------------------------TTCTG-------------------------- 952

Homo ACATTAATTAGGTTTATTTGCTATAAGATTTCTTGGGGCTTAATATAGGTAGTGTTTCCC 79144

Pan ACATTAATTAGGTTTATTTGCTATAAGATTTCTTGGGGCTTAATATGGGTAGTGTTTCCC 79562

Drosophila ----------------------------TTTGTTGGAGCCGCACATG------------C 2175

Canis AAATTAAATTT-TTTATTTGCTGCAGGATTTCTTGGATCTTAATATAATA-----TTTTT 49622

Bos ----TAAA------TACTGG--GCAGG------------TTAA----------------- 9795

Rattus ---AACTTTTGATACTCCGTGGGTTTATA---ACATGGCTT------------------- 66443

Danio ---------------------------TA---ATAT------------------------ 11765

Mus ---AACTTTTGATATTACCTGGATGTATA---ACCTGGCAT------------------- 56478

Gallus -----TTTGTACTATGGCAAGAGAGTGCT---GCCTCA---------------------- 38455

Anopheles -----TCCG-----------------GCT---GCGT------------------------ 963

Homo CCAAACTTTTTGAACTCCAGAACTCTTTTTCTGCCCTAA-------------------CA 79185

Pan CCAAACTTTTTGAACTCCAGAACTCTTTTTCTGCCCTAA-------------------CA 79603

Drosophila CCAAATTC------------------------GCC------------------------- 2186

Canis ACAAACTTTTTGAACTCCAGAACCCTTTTTCCACCCCACGTCTAATAACATTTACTCCCA 49682

Bos -----------AAATTACAGAGTTCCCTT------------------------------- 9813

Rattus ------------------------------------GCAAGTAAATAAATGCACATACAT 66467

Danio ------------------------------------------------------------

Mus ------------------------------------GCAAATGA-------TACAGACAT 56495

Gallus ----------------------------------------------------ACAAAAAT 38463

Anopheles ------------------------------------------------------------

Homo GAAGAGTTGTTATTGAACACAGTTTGGGAAAGGCTGATGGG-ATTTGGAAATTTGAAAGT 79244

Pan GAAGAGTTGTTATTGAACACAGTTTGGGAAAGGCTGATGGG-ATTTGGCAATTTGAAAGT 79662

Drosophila ------------------------------------------------------------

Canis GAAATGTTTTTGATGAACA-GTTCTGAAAAACACTAATGTACATATGCCAGTCTGAAAGT 49741

Bos ------------------------------------------------------------

Rattus ACATAATTTACATATTTTT----------------CAAACTGGAACGCAAGCATGAA--- 66508

Danio ------TTTCCACATTC---------------------------AGGTAA---------- 11782

Mus ACATAACT--CACATTTTT----------------CAAGCTGGAATGCAAGTATGAA--- 56534

Gallus GCACACCCAATACCTGCTT----------------T--TTCAGAACTCAT---CAGA--- 38499

Anopheles ------CCAGCA--------------------------TTGAGAA--------------- 976

Homo GAAGGATCAGAATTTTAGTTTTTTCCCTTTTGTGATAAAGTAGAACAGGGAAAAGAT-GC 79303

Pan GAAGGATCAGAATTTTAGTTTTTTCCCTTTTGTGATAAAGTAGAACAGGGAAAAGAT-GC 79721

Drosophila -GAGGATCAG-----------------TTT------------------GAAAAGGA---- 2206

Canis GATGGATTTGAGTTTTA----------TTGATGGACAAAGTAGAATGGGTAAAAGACTGC 49791

Bos ----GATTTGAAATTTT-----------------ACAGATTGGTATGA------------ 9840

Rattus ------TTGGATACT-GTGAAACCACTAT-----------------------TCCACAAA 66538

Danio ------------------------------------------------------------

Mus ------TTGAATACTTGTGAAACCAGTAT-----------------------TCCACAAA 56565

Gallus ------ATTCATACG------------AC-----------------------TTTCCAAA 38518

Anopheles ------------------------------------------------------------

Homo AGTCTTTTGGGTAGTCTACTTAACTTCATAATTCTGAACTGGTTCAGTTTCTACTGTAAA 79363

Pan AGTCTTTTGGGTAGTCTACTTAACTGCATAATTCTGAACTGGTTCAGTTTCTACTGTAAA 79781

Drosophila ----------------------------------------------------GCTGCAGG 2214

Canis AACTTCTTGGATAGTGTTCTTAACTGGGTCAATCTGAACTGATTGATTGGGTTCCTAAAA 49851

Bos ---TTCTTAAA----GTTTTCAGTTGAG-------------------------------- 9861

Rattus TATTA--------------------------------------------------AATTG 66548

Danio -ATTA--------------------------------------------------AACT- 11790

Mus TATTA--------------------------------------------------AATTG 56575

Gallus TAGTA--------------------------------------------------ATTTG 38528

Anopheles -----------------------------------------------------------G 977

Homo TATAACCACT----TAGTAACTGAGCTTGCTTACGTTTAAAATTGAGTACATGACAATTA 79419

Pan TATAACCACT----TAGTAACTGAGCTTGCTTACGTTTAAAATTGAGTACATGACAATTA 79837

Drosophila TGT-----------CGGCAATCGA---------------------------------TTG 2230

Canis TATAACCACTAACTTGGTTACTAGGTTTGCTAATTTTTAAAACTGAATGTATGGCAATTA 49911

Bos -------------------------------AATTTTT-------------------TTA 9871

Rattus CAAGAAAAAG----------------------------------------CCTAGACTTA 66568

Danio -----AAAAG----------------------------------------C--------- 11796

Mus CAAGAAAAAG----------------------------------------CTTAGACTTA 56595

Gallus ATGGTGGTAG----------------------------------------CAAATA---- 38544

Anopheles ATGCTGG----------------------------------------------------- 984

Homo -CAGGAAAAGGTTTCCACTGAAGGTACCATCAGAATTGTGAGGAGTG-TGCATAGAATAA 79477

Pan -CAGGAAAAGGTTTCCACTGAAGGTACCATCAGAATTGTGAGGAGTG-TGCATAGAATAA 79895

Drosophila -CCGGAAA------CCACTGA---TACCACT-------TGAGGAGT-------------- 2259

Canis ATAGGAAAAGGATTCCATGAAAGGTACCGTCAGAATTGTGAAGAATGGCACATAGAATAA 49971

Bos AT---------------TGAAAGC------------------------CACAT------- 9885

Rattus AT------TTATATTCCTACAGTTCAAGG------------------------------- 66591

Danio ------------------------------------------------------------

Mus AT------TTATATTACTACAGTTCAAGG------------------------------- 56618

Gallus -----------------TACAGTC------------------------------------ 38551

Anopheles ------------------------------------------------------------

Homo TG--TATGTCATTTCCCTTCAGCTTTGAGATTTGAGCTGTTATAGCCTGTTGATTCTAAT 79535

Pan TG--TATGTCATTTCCCTTCAGCTTTGAGATTTGAGCTGTTATAGCCTGTTGATTCTAAT 79953

Drosophila ---------------TCTACAAC----------GAG------------------------ 2270

Canis TGCATATGTCATTTCCATTAACCTGTGGATTCTCAGTGTGTAC---------------AT 50016

Bos ----TATGTCATCT--------------------------------------------AT 9897

Rattus -------------------------------------------------------AGAAC 66596

Danio ---------------------------------------------------------AGC 11799

Mus -------------------------------------------------------AGAA- 56622

Gallus ----------------------------------------------------------AA 38553

Anopheles ------------------------------------------------------------

Homo TGAGTTGACCTTTCTGTTACTGTTCTTAG----TCACACACACACACACACACACACACA 79591

Pan TGAGTTGACCTTTCTGTTACTGTTCTTAG----TCACACACACACACACACACACACACA 80009

Drosophila ---------------------GCACTCAG----TGAAA-------------------ACA 2286

Canis TGGATTGACTTTTCT------GTTATTAGGTGGTCATATATATGCATATATGTAAACAGA 50070

Bos T-------------------------TAG------------------------------- 9901

Rattus TATAGGCGTACTCTGCTTTCTCATTAAAACTGAA-------------------------- 66630

Danio TGTAG---TAC-----------------ACTGTA-------------------------- 11813

Mus ---AAGTGTACTTTTCTTTTTAATTAAAACTGAA-------------------------- 56653

Gallus CAAAGGCATGGCTGGG---------AAGAAAAAA-------------------------- 38578

Anopheles CGAGGGC----------------------------------------------------- 991

Homo CACACACACACACACACACGCATCCCTTATCTA------------TAATCTAGCTAGTGT 79639

Pan CACACACACACA----CACGCATCCCTTATCTA------------TAATCTGGCTAGGGT 80053

Drosophila TTCAGATGCAC-----CACG---------------------------------------- 2301

Canis AGTAGACATGTTGA-GTTCATAATATAAATATAGTTAAGGCTATATATTTTAGCTAGCAT 50129

Bos AATAGTCAAGTTGAAGTTCACAA------------------------------------- 9924

Rattus ---AGTTAAAATGAGGAAACATTTT---------AAAATATTTCCAAAATTCTTA----- 66673

Danio ---GATCAAAAT-------------------------------CCAG------------- 11826

Mus ---AGTGAAAATAAGGAAACATT--------------------TTAAATAT--------- 56681

Gallus ---AGTAGTATTAGTGCCACTTCT-------------GTCTATCCAGCTTTCATG----- 38617

Anopheles --------------------------------------CCCGGCCGGC------------ 1001

Homo TTTATTAATAACTAAAAAGCTATGCCATTTGTATGTAGTTTGTTCTAAGTAAATC-AGAG 79698

Pan TTTATTAATAACTAAAAAGCTATGCCATTTGTATGTAGTTTGTTCTAAGTAAATC-AGAG 80112

Drosophila ----------ACTA------------------------CCTGTCCTA------------- 2314

Canis ----TTATTAATCAGAAGGC-----------TATGAAATTTGTTCAGAGTAAACCTACAG 50174

Bos -------------------------------------GTTTGTTCAG------------- 9934

Rattus -----TAAAATTAACC------------------------------------------TA 66686

Danio -----CAAGAC------------------------------------------------- 11832

Mus -----TAAAATTAACC------------------------------------------TG 56694

Gallus -----TATAACC------------------------------------------------ 38624

Anopheles ------------------------------------------------------------

Homo ATACATAAGACGACGCCCTTTTTGAGATAGAAAATTATAAACTTCATAAAGTTCTTAAAT 79758

Pan ATACATAAGACGACGCCCTTTTTGAGATAGAAAATTATAAACTTCATAAAGTTCTTAAAT 80172

Drosophila -----CAAGACG------------------------------------------------ 2321

Canis ACATCTAAAACCATGCCTTTTTTGAGA---AAATTTGTGAGCTTCA---------TAGTT 50222

Bos ---CCCTAGATTATGC---------------------------------------TAGT- 9951

Rattus AAAGTATATTTTAATGCTGTTTTATTT--------------------GTTTTTTTAATAA 66726

Danio --AGTGTGT-------------------------------------------------AA 11841

Mus AAAGTACATTTTAATGCTTTATTATTT--------------------GTTTTTT-AATAC 56733

Gallus --AGTATGATCTGAAAATTACCACTAT--------------------GTTTGTTAAATGA 38662

Anopheles -------GATTTG--------CGC------------------------------------ 1010

Homo TTGGTAAACCTTAGCTCTAGCTTTTGATGTATCTAGAAATGTTAAACCTTAGCTATAAAG 79818

Pan TTGGTAAACCTTAGCTCTAGCTTTTGATGTATCTAGAAATGTTAAACCTTAGCTATAAAG 80232

Drosophila ------------------------------------------------TTAGCCATGGAG 2333

Canis TTGGTAGACCTTAGATCTAGGTTCCTTTGTATCTCGACACATTAAACATTAGCTGTAAAG 50282

Bos -------ACCACCAATTTCAGTGTCCT-----------------AACATTAGTCGT---- 9983

Rattus TCTTGTTCCATTA---------------------GAAAAACATTTCCTAAA--------- 66756

Danio TGTTTTTCCA----------------------------AATATTTCTTAA---------- 11863

Mus TCTTGTTCCATTA---------------------GAAAAACATTTCCCAAA--------- 56763

Gallus CTGTCTTTTATT-----------------------TAGAACATGGCTTGA---------- 38689

Anopheles --------------------------------------AACATGA--------------- 1017

Homo CATACTTGCATTATATGCAGAAATACTTGTAAGA-AAAAACATAGATTAAGCAGTTCC-- 79875

Pan CATACTTGCATTATATGCAGAAATACTTGTAAGA-AAAAACATAGATTAAGCAGTTCC-- 80289

Drosophila ------------------------------------------------------------

Canis CATGCTTACGTTATATGTAGAAATACTTTTAAGAGAAAAACATTCATTAAACAGTTCCAC 50342

Bos ---------GTT------------------------------------------------ 9986

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -----AGTAAGATAACTGAAGTGATGGCAGT-AGAAGTATCAAAAAGGAGTATTTTACCA 79929

Pan -----AGTAAGATAACTGAAGTGATGGCAGT-AGAAGTATCAAAAAGGAATATTTTACCA 80343

Drosophila -----AGCGAGAT----------------------------------------------- 2341

Canis TTGATAGTAAGGTAATTGAAATGATAGCAGTTAAAACTATCAAAAAGGAATATCTTAGAA 50402

Bos ------------------------------------------------------------

Rattus -----------------GCTTTT------------------------------------- 66762

Danio -----------------GTTATG------------------------------------- 11869

Mus -----------------ACT-TT------------------------------------- 56768

Gallus -----------------GCTCTG------------------------------------- 38695

Anopheles ------------------------------------------------------------

Homo GGA-----GGTTATGGTGCTTTTCTCCCTGGAACATGAGAAAATGTGCCTAAAATGGAAC 79984

Pan GGA-----GGTTATGGTGCTTTTCTCCCTGGAACATGAGAAAATGTGCCTAAAATGGAAC 80398

Drosophila ------------------------------------------------------------

Canis GAGTCATCCTTTATGGTGCATTTCTTCCAGGGACTGGCAAAAATATGCCCAAGATGGAAT 50462

Bos ------TCCTCTATTGTGCA---------------------------------------- 10000

Rattus ------------------------------TTGATTTGCTTATTTTG--------CTTTC 66784

Danio ------------------------------TTAACATAGTTAT----------------- 11882

Mus ------------------------------TTGATTTGCTCATTTTGATTTTGGCTTTTT 56798

Gallus ------------------------------TTGTCCTGTGC------------------- 38706

Anopheles ------------------------------------------------------------

Homo TTCAGAGTTATATTCTGATTAACTTATAGCTTGTTGCTCTTGGTTCCAA---------GG 80035

Pan TTCAGAGTTATATTCTGATTAACTTATAGCTTATTGCTCTTGGTTCCAA---------GG 80449

Drosophila ----------------------------------------TGGTTCC------------- 2348

Canis C----------ACTTTGA---ACCTTAAAATTACTATCTTTGATATACATAGATGAATGT 50509

Bos ----------------------------AGTTA--ACATTTGGTGT------------GT 10018

Rattus TAGACAATCTTTT----ATACTATATAAGGACTCTGG---------GCTTAAAC------ 66825

Danio --------------------------------------------------AGAT------ 11886

Mus TAGACAATCTTTTT---ATATTGTATTAGTACTCTAA---------CCTTAAGC------ 56840

Gallus --------------------------------------------------AGAA------ 38710

Anopheles --------------------------------------------------AGAA------ 1021

Homo AAGGGCATTTGTG----ACATTTTATTAAATTCAT------TAATTTTTTAGAC-----A 80080

Pan AAGGGCATTTGTG----ACATTTTATTAAATTTAT------TAATTTTTTAGAC-----A 80494

Drosophila ---GGC-----------------------------------------------C-----A 2353

Canis AATGACCTGTGTAATTTATATTCTGATTAATTTGTAGTTTATTGCTCTTGAGACCAAAGA 50569

Bos AGTGGC----------TATAT--------------------------------------- 10029

Rattus ------------------------------------TCATGATTTTTCC----------- 66838

Danio ------------------------------------GCATGATTTTG------------- 11897

Mus ------------------------------------TCATAATTTTCC------------ 56852

Gallus ------------------------------------GCAAAATTCTTC------------ 38722

Anopheles ------------------------------------GGAAGAT----------------- 1028

Homo CACCATTGTCAGCTT---GAACAAATTTATTAATTGTAATTATTTGTCAGCTGTTCTTGA 80137

Pan CACCATTGTCAGCTT---GAACAAATTTATTAATTGTAATTATTTGTCAGCTGTTCTTGA 80551

Drosophila CGC---------------GAAC------------------TATTTTTC------------ 2368

Canis CATTTGTGTGATTTCATCAAATGTATTAATTAATTGTAATTATTTTTGA-CTGTTCTTAA 50628

Bos ------------------------------------------------------------

Rattus --------------------TGACTCA---------------TTTTACCAAGTGCTAAG- 66862

Danio ---------------------GACCC---------------------------------- 11902

Mus --------------------TTACTCA---------------TTTTACCAAGTGCTAAGG 56877

Gallus --------------------TAACACAT--------------CTATACAGTGTGTAAC-- 38746

Anopheles ------------------------------------------CTGCG------GTCGC-- 1038

Homo TCCTGTTAATACCATACTTATAACTAAA----------AGCATTTCCATGGATGTTGTAA 80187

Pan TCCTGTTAATACCATACTTATAACTAAA----------AGCATTTCCATGGATGTTGTAA 80601

Drosophila ----GTTCATGCTGTAC------------------------------------------- 2381

Canis CTCTGTTAATAACAACTTTATAACTAAGTGAAGTTTTTAGCACTTCAGTGAATCTTGTAA 50688

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TATACAGCCCACTCTCT-----------------------------------CCCCCAGC 56902

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTTGGCCTGTAAAAAAAATGTTTAGATAGAAACCATGAAACTCAAATATGAATTGTTTAA 80247

Pan CTTGGCCTGTAAAAAAAATGTTTAGATAGAAACCATGAAACTCAAATATGAATTGTTTAA 80661

Drosophila ----GCCTTTA------------------------------------------------- 2388

Canis CTTGGGGCGTATAAAA---GTTTAGCTCTTAACTCTGAAATTCAGGGAAGAATTGTATAA 50745

Bos ------------------------------------------------------------

Rattus ---TTAAACTT-------TGTTTAAAAAT------------------------------- 66881

Danio ---TCAAACT-------------------------------------------------- 11909

Mus TTGTTAGACTT-------TGTATAAAAAG------------------------------- 56924

Gallus ---TTAAAAGA-------TGTATATGGAA------------------------------- 38765

Anopheles ---TCGAAGG--------TG-ACCTGGA-------------------------------- 1054

Homo TTTTCAAACC--ATTTTGCATTCAGAAA--------------ATGTCCTAAGCTTAATTC 80291

Pan TTTTCAAACC--ATTTTGCATTCAGAAA--------------ATGTCCTAAGCTTAATTC 80705

Drosophila TCCTCACGCC--GT--------CAACAA--------------A----------------- 2407

Canis TTTTCAAACTTTATTTCATGAACATTAACTTTCACGAGAAAAATGTTCTA-GTTTACTTT 50804

Bos -----------------ATGAGCAGTAG-------------------------------- 10040

Rattus -------TAT--CCTGAGAAGCAACTGAAAATAAACT------------------TAGAA 66914

Danio ------------------------------------------------------------

Mus -------TATTTCCTGAGAAGCAACTGAAAATAAACT------------------TAGAA 56959

Gallus -------GG-----CAAGATGCAAAACTGTACTACTG------------------TGGGA 38795

Anopheles --------------CAAG------------------------------------------ 1058

Homo ATACTCCTAGTGATCAAGGAAACATGTTAAAGCTCCT--TATTTTTAA-----ACTTAAA 80344

Pan ATACTCCTAGTGATCAAGGAAACATGTTAAAGCTCCT--TGTTTTTAA-----ACTTAAA 80758

Drosophila --------AGTGG----------ATG--------CCT--TGT------------------ 2421

Canis ATACTGTTA-TGATCCAGGGGATATTTTACACTTCCTTTTGTATTTAACTTAATCTAAAT 50863

Bos ---------------------------------------TATATTTAA--TAATTTAAAT 10059

Rattus AAGTTAAAAGGCATATAAAATTTGTT---------------------------------- 66940

Danio ------ACAGGCA----------------------------------------------- 11916

Mus AAATTGAAAGGCATATACAATTAGTT---------------------------------- 56985

Gallus AACGTGATGAGAATATCAAAGA--TA---------------------------------- 38819

Anopheles -----GACGAGGATAGCAAAG--------------------------------------- 1074

Homo GTGACAATGA-CATTTTCAAAGATTTTAAAATTCTTATAAACAGGTTAAAATACTTATAT 80403

Pan GTGACAATGA-CATTTTCAAAGATTTTAAAATTCTTATAAACAGGTTAAAATACTTATAT 80817

Drosophila ---ACTATGA-CAGT--------------------------CGAATGAGGAT-------- 2443

Canis GTGAAAATAAACATTTTTAAAGCTTTCAAAAATC----ATATAAATTGATGTACTTAT-- 50917

Bos GT--ATAGAAACATTT------CTTTCA-------------------------------- 10079

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Rattus ----------TTAATTT-----------TTTTTAT--------------------GTTTA 66959

Danio ------------GGTTT-----------TTT----------------------------- 11924

Mus ----------TTGTTTT-----------ATTTTATTGTTTGA------------TGTTCC 57012

Gallus ----------GGGAATT-----------GCTGCAT-------------------GGGTTT 38839

Anopheles ------------------------------------------------------------

Homo ACTGTATAATTTGATTTCTGATTTCTAAGCTCTACTTTTCTATTGGAAATTACAGATTTT 80463

Pan ACTGTATAATTTGATTTCTAATTTCTAAGCTCTACTTTTCTATTGGAAATTACAGATTTT 80877

Drosophila ---GTATAGC----------------GAGCGCTACTCCTC-------------------C 2465

Canis -GTGTCCTA-TTGATTTCTA------AAGTTATATT--------GGAAATTGCCCGTT-T 50960

Bos -GTGTTCTACTTGATTT-----------GTTAT--------------------------- 10100

Rattus GTAAAAATAAGACAAA-------CCTCTTAATGCTTACAAAGATAAAATAAT-------- 67004

Danio -----------------------CCTC--------------------------------- 11928

Mus GTAAAAAAAGAAAAAAAAGACTATCTCTTAATGTTCACCTAGATAAAATAAT-------- 57064

Gallus ACAGAAGAGAGATTG--------TTTGTTAAA------------AACATGGT-------- 38871

Anopheles ------------------------------------------------------------

Homo TTTCAGACTTAATTCTTAAGATGTTTTCATTGTTTCACAGTAGCAACTAAACATGTAGTA 80523

Pan TTTCAGACTTAATTCTTAAGATGTTTTCATTGTTTCACAGTAGCAACTAAAC--GTAGTA 80935

Drosophila CTTCA--CTCCATCCTCAA------------------CAATATTGGCCAG----GTAG-- 2499

Canis TTTCAGACCTAATTTTTAAAAAATTTTTTTAAGATTATT-TATTCATGAGAT--GTGGTG 51017

Bos ---------TAATGT-----AAATTTATT------------------------------- 10115

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAATGATTTAAATTCAATTAAAATTTTTTTCCTTAGTCATTTAAAAGGGAAGAAATCAAT 80583

Pan AAATGATTTAAATTCAATTAAAATTTTTTTCCTTAGTCATTTAAAAGGGAAGAAATCAAT 80995

Drosophila -------------------------------------------GACAGGAAGA------- 2509

Canis AGGCAG----------------------------AGACATAGGCAGAGGGAGAAAGAGAC 51049

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTTAGTAGTACTCATTCCAAAGATTCCAATTTTCCTTTTTTTTAATCTTTTATTTTTTG 80643

Pan TTTTAGTAGTACTCATTCCAAAGATTCCAGTTTTCCTTTTTTTTAATCTTTTATTTTTTG 81055

Drosophila -------------------------------------------TAATCCTC--------- 2517

Canis TCCCTGTGGCAACCCCCATGTGGGAC----------------TCAATCCCAGGACTCCCA 51093

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTGGAGGGA----GGCAG--GATCTGGCTCTGAGGCCCAGGCTGGAGTGT-AGTGGTTCT 80696

Pan GTGGAGGGA----GGCAG--GATCTGGCTCTGAGGCCCAGGCTGGAGTGT-AGTGGTTCT 81108

Drosophila -------------GGCCG--GATCT----------------------------------- 2527

Canis AGATCAGGGCATCAGCAGATGCTCAACCACTGAG-CCAAGATCAGAGCATCAGCAGA--T 51150

Bos ----------------------------------------ATCAAA-------------- 10121

Rattus -----------------------------------GATAGGAAAAATTGCTCTTGAGTTT 67029

Danio ------------------------------------------------------------

Mus -----------------------------------GATGATAGGAA-------------- 57075

Gallus -----------------------------------GAAGTTCAAAAT------------- 38883

Anopheles ------------------------------------------------------------

Homo GTCTCGGCTCACTGCAACCTCCACCTCCCAGGCTGAAGACTCAAACCATCCCCATGCATC 80756

Pan GTCTCGGCTCACTGCAACCTCCACCTCCCAGGCTGAAGACTCAAACCATCCCCATGCATC 81168

Drosophila ----------------------------TAAGCTGACGGTGCGAA--------------- 2544

Canis GCTCAACCACTGAGCCACCCAGGCTTCCCAGACCTAATATTTAAAATATTTTCATTCAGT 51210

Bos --TCAATTACATAGTCATCCAG------------CAATATTTTGAATAAG--CATTAAAG 10165

Rattus GGCTTTGAATAATGAAGATTATGTAA---------------------------------- 67055

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ACCCTCTCAAGTAGCTGAGACTATAGGCACATGCTACCACACCCAGCTTATTTTTTGTGT 80816

Pan AACCTCTCAAGTAGCTGAGACTATAGGCACATGCTACCACACCCAGCTTATTTTTTGTGT 81228

Drosophila ----------------GGGAC----------------------CAGCTCAT--------- 2557

Canis TACCCAGTA-GCAACTGAAAAA---------------------CATTTTAGT-------- 51240

Bos AGCCCAG------ACTGAAA-------------------------TTTTG---------- 10184

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTTGTAGAGATGGGGTTTCTCCATCTTGCCCAGGCTGGTCTTGAACTCCTGAGCTCAAG 80876

Pan TTTTGTAGAGATGGGGTTTCTCCATCTTGCCCAGGCTGGTCTTGAACTCCTGAGCTCAAG 81288

Drosophila ------------------------------------------------------------

Canis --------AAATTG------------------AAAAAAGTCAGAAATTCATAAAATAACA 51274

Bos --------AAACTG------------------AGA------------------------- 10193

Rattus --------------------------------------------------AGCTGAACGA 67065

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGATCTGCCTGCCTCAGCCTCCCCAAAGTGCTGGGATTACAGGTGTGAACTACCACACCG 80936

Pan TGATCTGCCTGCCTCAGCCTCCCCAAAGTGCTGGGATTACAGGTGTGAACTACCACACCG 81348

Drosophila ------------------------------------------------------------

Canis TA------------TAACCTTTTC------------------------------------ 51286

Bos ------------------------------------------------------------

Rattus TCACAAAATATTATATTAAC---------------------------------------- 67085

Danio ------AATATT------------------------------------------------ 11934

Mus ----AAAAAATC------------------------------------------------ 57083

Gallus -------ATGTTAT---------------------------------------------- 38890

Anopheles ------------------------------------------------------------

Homo GGCCCCAATTTTCCAATGAGTGATATAAAAAAGGCCTCCACGCAGGCGCCTGTAGTCCCA 80996

Pan GGCCCCAATTTTCCAATGAGTGATATAAAAAAGGCCTCCACGCAGGCGCCTGTAGTCCCA 81408

Drosophila -------------CAACGA----------------------------------------- 2563

Canis --CTTAGATATTCTGTTCACCTAAAGGGAAGAAG-----------------GTAATTCT- 51326

Bos --TTTGAATATTGTCTTCACTTA------------------------------------- 10214

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ACTACTCCGGAGGCTGAGGCCAGAGAATGGCATGAACCCGGGAGGCGGAGCTTGCACTAA 81056

Pan ACTACTCCGGAGGCTGAGGCCAGAGAATGGCATGAACCCAGGAGGCAGAGCTTGCACTAA 81468

Drosophila ------------------------------------------------------------

Canis -----------------GCCTTAGTAATGGTATTCAGATAGGTA--------------AA 51355

Bos ------------------------------------------------------------

Rattus ----------TCTAATTTGTT--------------------------------------- 67096

Danio ----------TCTAGTCCAT---------------------------------------- 11944

Mus ----------TCTGGACTTT---------------------------------------- 57093

Gallus ----------TTTAGTCTCCT--------------------------------------- 38901

Anopheles ------------------------------------------------------------

Homo GCTGAGTGCTGCTGCACTCCAGCTTGGGCGACAGAGCGAGAC--CGTCTCAAAAAA---- 81110

Pan GCCGAGTGCTGCTGCACTCCAGCCTGGGCGACAGAGCGAGACTCCGTCTCAAAAAACAAA 81528

Drosophila ------------CGCACTT----------------------------------------- 2570

Canis ACCAAACATTCCTACTTTTTAAAATGAATGATACA------------------------- 51390

Bos -----ATGTTACTACTC---------AGTGAT---------------------------- 10232

Rattus ---------------------------------------------------ATGAACTTT 67105

Danio -------------------------------------------------------ACTTT 11949

Mus ------------------------------------------------------GGCTTT 57099

Gallus ---------------------------------------------------TAGGAGCTG 38910

Anopheles ------------------------------------------------------------

Homo -------------------------AAAAAAAAAAAAAAAAGCCTCCATGATTGGGGCTT 81145

Pan CAAACAAACAAACAAACAAACAAACAAAAAAAAACAAAAAAGCCTCCATGATTGGGGCTT 81588

Drosophila --------------------------------------------------ATTGGGGTGT 2580

Canis -----------------------------------AAAAAGATCTCCAAGCTCGGGTTTT 51415

Bos ---------------------------------------------------------TTC 10235

Rattus AAGTAACTTAAAGTTAATCAACTTTTCTCC------------------------------ 67135

Danio AAAT-------------------------------------------------------- 11953

Mus GAAT-------------------------------------------------------- 57103

Gallus AAATAGTTCA-------------------------------------------------- 38920

Anopheles ------------------------------------------------------------

Homo GCATAGTGAAGACCATGTGAAATTGAAAGA---CTACGAA-----ACTACTTTTCTTTTA 81197

Pan GCATAGTGAAGACCATGTGAAATTGAAAGA---CTATGAA-----ACTACTTTTCTTTTA 81640

Drosophila GTACA---------------AATGG---------------------------TTCTTTAG 2598

Canis AAATAGCGAAGGCCATGTGAAATTGAAAGAAGACTACAGATACAGACTACTTTTGTTTTA 51475

Bos AACT-----------------------------CTACAG--------------------- 10245

Rattus ----------------------------------------------------------AG 67137

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CGTATTGGCCCATAATTAACATGTGTATTGAATAGCTTTGTTTATCTAAGTTCATCAGAT 81257

Pan CGTATTGGCCCATAATTAACATGTGTATTGAATAGCTTTGTTTATCTAAGTTCATCAGAT 81700

Drosophila TGT-------CCTAGTTAACAGGCGTAATTAATA-------------------------- 2625

Canis CATACTGGCTCATAATTAATGTGTGTATTAAATAGCTTTGTGTTTT------------AT 51523

Bos -----TGG---------------------------------------------------- 10248

Rattus ATTTTTGTACTTAATCATGCATTTGCTTTATAACATAATGAACCTTTTATTAGTCAATAA 67197

Danio ------------------------------------------------------TGATAA 11959

Mus -------------------------------------------------------AATGA 57108

Gallus --------------------------------------------------TTGCCAGTAA 38930

Anopheles ---------------------------------------------------CGCCGGTA- 1082

Homo TTATCCAGGTTTATGTATTTCAGA----TCATCTGATTTTATTAG-GAAAATGCTAGAAA 81312

Pan TTATCCAGGTTTATGTATTTCAGA----TCATCTGATTTTATTAG-GAAAATGCTAGAAA 81755

Drosophila -----CACGTTTA---ATTCC-------CCA---------------------GCTGGAAA 2649

Canis TTATTTA--TTTATTTTTTTTAAAATTTTTATTTATTTATGAGAGAGAGAGAGAGAGAGA 51581

Bos -------------------------------------------------------GGAAA 10253

Rattus AGATTGATAAACC----------------------------------------------- 67210

Danio AGA--GATAA-------------------------------------------------- 11967

Mus AGAT-CATG--------------------------------------------------- 57116

Gallus TAGTCGAT---------------------------------------------------- 38938

Anopheles ------------------------------------------------------------

Homo AATTTCATGGCACCATTGTCTAATTTTGAAAAAACGAACCTTTCTTTACTGTGATTAAAA 81372

Pan AATTTCATGGCACCATTGTCTAATTTTGAAAAAACGAACCTTTCCTTACTGTGATTAAAA 81815

Drosophila ------------------------------------------------------------

Canis GAGGCAGAGACACAGACACAGGCAGAGGGAGAAGCAGGCTCCATGCACCGGGAGCCTGAT 51641

Bos GTGACAG----------------------------------------------------- 10260

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATTGTTTTTTAGGCCAGGTGTGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTG 81432

Pan ATTGTTTTTTAGGCCAGGCATGGTGGCTCACGCCTGTAATCCCAGCACTTTGGGAGGCTG 81875

Drosophila --------------------TGGTGGC-CATG-----------AGCA------------- 2664

Canis GTGGGACTCGATCCCGGGTCTCCAGGATCGCGCC------CTGGGCC-----AAAGGCAG 51690

Bos ------------------TCT--------------------------------------- 10263

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AGGCTGGCAGATCACGAGGTCAAGAGGTTGAGACCATCCTGGCAAACATGGTGAAACCCC 81492

Pan AGGCTGGCAGATCACGAGGTCAAGAGATTGAGACCATCCTGGCAAACATGGTGAAACCCC 81935

Drosophila ----------ATC-------CAAAGGAT-------------------------------- 2675

Canis GCGCTAAACCACTGCGCCACCCAGGGATCCC--CTAGCTTTGTGTTTTAGATATAATCTG 51748

Bos ------------------------------------------------------------

Rattus -------TTGAATTTAATAAAACTATAGAACAAACTT--------------TACAGAAAT 67249

Danio --------TGCATT---------------------------------------------- 11973

Mus --------TGAAGCT----------------------------------------GAAAG 57128

Gallus --------TGAATACT------------------------------------------GT 38948

Anopheles ---------GAAT----------------------------------------------- 1086

Homo TTCTCTACTAAAAATACAAAAATTAGCTGGCGTGGTGGTGCACACCTGTAGTCCTAGCTA 81552

Pan TTCTCTACTAAAAATACAAAAATTAGCTGGCGTGGTGGTGCACACCTGTAGTCCTAGCTA 81995

Drosophila ------------------------------------------------------------

Canis A-CTTGACCAAATTTACGTAGGCTTACATGCTTGGC-----------TTTATCTGACTTT 51796

Bos -----------------GTAGGTTTAC--------------------------------T 10274

Rattus ATCACCCA------------------------------------CATTTT---------- 67263

Danio ATGAGCAG------------------------------------CATTTC---------- 11987

Mus ATCACAAAA-----------------------------------TATTTTTTA------- 57146

Gallus ATGGGGAGAG----------------------------------TGCTTT---------- 38964

Anopheles ------------------------------------------------------------

Homo CTCAGGAGGCTGAGGCAGGAGAATTGTTTGAACCTAGGAGGCAGAGGTTGCAGTGAGCTG 81612

Pan CTCAGGAGGCTGAGGCAGGAGAATTG----AACCCAGGAGGCGGAGGTTGCCGTGAGCT- 82050

Drosophila CTCAAGAAGC-----------AGTTG-----------GTGGTGGAGTTTGTCG------- 2706

Canis GTTAGAAAGGTGCTAGAAAAACTTTATGGGATC----ATTGTACAGTTTTGAA------- 51845

Bos GTGAGAAAG-------------TTT-------------------AGTT------------ 10290

Rattus ---------------------------------------GATTTTATTTTGTTGTG---- 67280

Danio ---------------------------------------AGCTTTATT------------ 11996

Mus --------------------------------------AAATTATATT-------A---- 57157

Gallus --------------------------------------AGATGGTACC------------ 38974

Anopheles -----------------------------------------CGGTGCC------------ 1093

Homo AGATCGTGCCACTCCAGCCCACCCTGGGTAACAGAGCGAGACTCCATCTCAAGGAAAAAA 81672

Pan --ATCGTGCCACTCCGGTCCACCCTGGGTAACAGAGCGAGACTCCATCTCAAGGAAAAAA 82108

Drosophila -----------------------------------GCGAG---------CAGGGGA---- 2718

Canis --------------------------------AAAACAAAAGCTTCCTTGAAATTAAAAA 51873

Bos -------------------------------------AAATGACCTCTCAGGGTTAAGAA 10313

Rattus ------------TTTTCCACATTGTATAACACG---------AATGAACACATTTTTGAT 67319

Danio ------------------ACAT-GTA-------------------------GTTATGCAT 12012

Mus ------------GCTTAGATTTGATATGA----------------------ATTTTAAGT 57183

Gallus -------------TATCTAAATTACA-----------------------ACATTCCATGT 38998

Anopheles -------------GG--------------------------------------------- 1095

Homo ATGAAAAATTGTTTTCAAAAATAGTACGTGTGGTACAGATATAAGTAATTATATTTTTAT 81732

Pan ATGAAAAATTGTTTTCAAAAATAGTACGTGTGGTACAGATATAAGTAATTATATTTTTAT 82168

Drosophila -------------------------------------------------------TCGAT 2723

Canis TTGT-------TTTTTGAAAATAGCACATATAG--------------ATTAAATCTGTGT 51912

Bos CCTA-------TT----AAAACAGTA---------------------------TCTG--- 10332

Rattus GATC---AGATC-TCACGTGTA-----TGACATAGAAAAAAATATATATCTA-------- 67362

Danio GTCC---AGTTC-TCA------------GTCATGC-------TGTGTATCG--------- 12040

Mus AACTTAAAGTTAATCAACTTTC-----TCCAATTG-------TTTTTTTTTT-------- 57223

Gallus AGAA---GAATCTTAA--------------------------TATATATCTC-------- 39021

Anopheles -------------------------------------------ATGTACCAG-------- 1104

Homo AAATGAAACACTTTGGAAATGTAGCCATTTTTTGTTTTTTTATGTTTATTTTTCAGCTAT 81792

Pan AAATGAAACACTTTCGAAATGTAGCCATTTTTTGTTTTTTT-TGTTTATTTTTCAGCTAT 82227

Drosophila GAAGGCGGCGTATCCAAAGAGT--------------------------TCTTCCAGCTAA 2757

Canis TAAT-AAGTTTTTATAAAGCTT---TTTTCCCTTCAATTTTACATTTATTTTTCTATCAT 51968

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -------GGGTGGATAAAGCATGAATATAACTTTTCTTATGTGTTAGTAGAAAATTAGAA 81845

Pan -------GGGTGGATAAAACATGAATATAACTTTTCTTATGTGTTAGTAGAAAATTAGAA 82280

Drosophila -------TCGTGGA-----------------------------------GGAGAT----- 2770

Canis ATCATTTGTATGAATACA------AATTAATTTATCATTTGTATTAGTAGGAGATAAGAG 52022

Bos -------GTATG------------------------------------------------ 10337

Rattus -------CTTTATTTAAAT---TC------------------------------------ 67376

Danio --------TCTATCTG------TC------------------------------------ 12050

Mus -------TTTTACTTAA------T------------------------------------ 57234

Gallus -------ATCTAGTAATCTGACCT------------------------------------ 39038

Anopheles -------ACCCAG---------CC------------------------------------ 1112

Homo AGCTTGAATTTAATTAACGTATTTTTCTACCCGATGCCACCAAATTACTTACTACTTTAT 81905

Pan AGCTTGAATTTAATTAACGTATTTTTCTACCCGATGCCACCAAATTACTTACTACTTTGT 82340

Drosophila -------ATTTAA----------------CCCGG-------------------------- 2781

Canis AACTTGAATTTAGTAAACATTTTC-----CCTAAC------------------------- 52052

Bos ----------TGGTAA---------------TAAC------------------------- 10347

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCCTTTGGCTTCATAAAATTACATATCACCATTCACCCCAATTTATAGCAGATATATGTG 81965

Pan TCCTTTGGCTTCATAAAATTACATATCACCATTCACCCCAATTTATAGCAGATATATGTG 82400

Drosophila -CTTTTGG--------AAT---------------------GTTTATA-CAG--------- 2801

Canis -TTCTTGG------AAAAT-------------------------GCAACCGA-------- 52072

Bos -TTTGTGG------A--------------------------------------------- 10355

Rattus -------------------------------------------------------CATAT 67381

Danio -------------------------------------------------------TACAC 12055

Mus -------------------------------------------------------CATGC 57239

Gallus -------------------------------------------------------CACTC 39043

Anopheles -------------------------------------------------------CACAC 1117

Homo GACATTGTTTTCTCAAGTGCTAATATAATAGAAATCAATGTTGCATGCCTAATTACATAT 82025

Pan GACATTGTTTTCTCAAGTGCTAATATAATAGAAATCAATGTTGCATGCCTAATTACATAT 82460

Drosophila -------------CAAGAG-----------GAGACCAACA----------------ATAT 2821

Canis --------------AATTGCTTTT--------TGCCACTAC-------------GTACAA 52097

Bos -------------------------------------------------------TATAA 10360

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Rattus GTGATT----TTGTTAAAAATT-GTATT---------------------TAAATTGTTAG 67415

Danio ----------TTGTTCAGAAT--GCA-----------------------------GGCAG 12074

Mus AT--------TTGTTTCATAT--GTA--------------------------ATTTTCAG 57263

Gallus AC---------TGTGGGTCTTC-ACG-----------------------------GCTAA 39064

Anopheles ---------------------C-ACG-----------------------------GTCGA 1126

Homo ATTT---TAAATGTTTTATATGCATAATTATTTTAAGTTTATATTTGTATTATTCATCAG 82082

Pan ATTT---TAAATGTTTTATATGCATAATTATTTTAAGTTTATATTTGTATTATTCATCAG 82517

Drosophila GTGG---TGGGTATTCAATTGGGATAA---------------ATCTGT--------TCAG 2855

Canis GTTTGTGTAATTATTTTATATTTATA-----------------TTTGTATCGTTCATCAG 52140

Bos -----------TATGTTAT-----------------------------------CATCAA 10374

Rattus TCTTTC-AAAAAGTATAAATTA------TATTTTAATTATTTCTTTATAGGTATGTTC-A 67467

Danio TTTT-----AGATCAGAGATTA------TGTCT--------------------------- 12096

Mus TCATT---AAGTGGATAAAATG------ACTTTTAATTATTTCTTTATAGGTATGTTC-A 57313

Gallus CCTCC----ATTTCTTTAACTG------TGCTTTA-----TAATCAGTGGAGCTACCCTA 39109

Anopheles T---------------------------------------------GTGGAGTCGCTC-- 1139

Homo TCCTTAATAAAATACAAAAGTAATGTATTTTTAAAAATCATTTCTTATAGGTATGTTC-A 82141

Pan TCCTTAATAAAATACAAAAGTAATGTATTTTTAAAAATCATTTCTTATAGGTATGTTC-A 82576

Drosophila T------TGAACTATATAAATA-----------------------TATA--TATATAC-A 2883

Canis TCTTT-----AATATTACTGTA------TTTTTTAAATCATTTTTTATAGGTATGTTC-A 52188

Bos CC----------------------------------ATCATT------------------ 10382

Rattus CATACGATGAAGCTACAAGATTATTTTGGTTTAATCCATCTTCTTTTGAAACTGAGGGTC 67527

Danio -----------GCTGGGAGATT----TAGGCAGACACATC--------------AG---C 12124

Mus CATATGATGAAGCTACGAAATTATTTTGGTTTAATCCATCTTCTTTTGAAACTGAGGGTC 57373

Gallus TATAT----AGGCTATATAGGTACCCTGTATCTACCCTTCCT------------GATACT 39153

Anopheles ------------------AGGAGCTC---------------------------------- 1147

Homo CATACGATGAATCTACAAAATTGTTTTGGTTTAATCCATCTTCTTTTGAAACTGAGGGTC 82201

Pan CATACGATGAATCTACAAAATTGTTTTGGTTTAATCCATCTTCTTTTGAAACTGAGGGTC 82636

Drosophila TATGCA---------------------GGTTCAATGCCACACCATTTGAGAACGGAGCGC 2922

Canis CATATGATGAATCTACAAAATTATTTTGGTTTAATCCATCCTCTTTTGAAACTGAGGGTC 52248

Bos -------------------ATTATT----------------------------------- 10388

Rattus AATTTACTCTG---ATTGGCATAGTCCTGGGTCTGGCTATTTACAATAACTGTATACTGG 67584

Danio ACTTTGCT---------GGCGGAGTCC--------------------------------- 12142

Mus AGTTTACTCTG---ATTGGCATAGTCCTGGGTCTGGCTATTTACAATAATTGTATACTGG 57430

Gallus AATTTTCTATACCTGTTGATGTGATGCTTTCCCCA------------------------- 39188

Anopheles -----------------GATG--------------------------------------- 1151

Homo AGTTTACTCTG---ATTGGCATAGTACTGGGTCTGGCTATTTACAATAACTGTATACTGG 82258

Pan AGTTTACTCTG---ATTGGCATAGTACTGGGTCTGGCTATTTACAATAACTGTATACTGG 82693

Drosophila AATTCACTCTG---ATTGGTATAATTATTGGCCTGGCGATCTATAACAACGTCACCCTGG 2979

Canis AGTTCACTCTG---ATTGGCATAGTGCTGGGTCTGGCTATTTACAATAACTGTATACTGG 52305

Bos ----------------------AGCACTGAGT---------------------------- 10398

Rattus ATGTCCATTTTCCCATGGTTGTGTACAGGAAGCTAATGGGGAAAAAAGGAACGTTTTGTG 67644

Danio -----------------GTCGTGAA----------------------------------G 12151

Mus ATGTCCATTTTCCCATGGTTGTATACAGGAAGCTAATGGGGAAAAAAGGAACCTTTCGTG 57490

Gallus -----CATGCTCC-----TTTTGTATGAGGAGCTTCAAAG-----------TCTTCACCC 39227

Anopheles --------------------------AAGGAACTGTA----------------------- 1162

Homo ATGTACATTTTCCCATGGTTGTCTACAGGAAGCTAATGGGGAAAAAAGGAACTTTTCGTG 82318

Pan ATGTACATTTTCCCATGGTTGTCTACAGGAAGCTAATGGGGAAAAAAGGAACTTTTCGTG 82753

Drosophila CCGTAAACTTCCCCATGGTGGTCTATCGCAAGTTGATAGG-------------------- 3019

Canis ATGTACATTTTCCCATGGTTGTCTACAGGAAGCTAATGGGGAAAAAAGGAACTTTTCGTG 52365

Bos ------------------------------AATTTATGAGGTAAAGACAAATTGCT---- 10424

Rattus ACTTGGGAGACTCTCACCCAGTAAGTTTTTTGTCCTTCATTAA---TAGTCTTTAAGATT 67701

Danio ACTTTAG-------CACACGGTGA------------------------------------ 12168

Mus ACTTGGGAGACTCTCACCCAGTAAGTT----GTCCTTCGTTAA---TAGTCTTTAAGATT 57543

Gallus ACCTTGAGCTCTGTCACTCATCTGCCCTG------------------------------- 39256

Anopheles -----------CGCCGCCCGTCCGGCC--------------------------------- 1178

Homo ACTTGGGAGACTCTCACCCAGTAAGTTCTTTGTCATTTTTTTAATTCAGTCTCTTAGATT 82378

Pan ACTTGGGAGACTCTCACCCAGTAAGTTCTTTGTCATTTTTTAAATTCAGTCTCTTAGATT 82813

Drosophila ------------------------------------------------------------

Canis ACCTAGGAGACTCTCACCCTGTAAGTC---TGCTATTTTTTTTATTTGATGTTGTAGATT 52422

Bos ------------------------GTT---TGGTATCTGT--------ATG--------- 10440

Rattus GTATCTAAATACAAAAGTGTATCTTAATTTATATAAAAACATGATTTTATTTGTAAACTT 67761

Danio ------------------------------------------------------------

Mus GTATCTAAATACAGAAGTTTATCTCAGTTTATATAGGAACATTATTT-ATTTGTAAACTT 57602

Gallus ------------------ATGTCTCAGTCACT-------CATGT-----------AACTC 39280

Anopheles ------------------GTGT-TCGGTCC------------------------------ 1189

Homo TTATTTAAATGCA-----AAAATTTAATTTATGTCAAAATTTTAAAGTTTTTGTTTAGAA 82433

Pan TTATTTAAATGCA-----AAAATTTAATTTATATCAAAATTTTAAAGTTTTTGTTTAGAA 82868

Drosophila ------------------------------------------------------------

Canis TTATTTAAACGTA-----AAACTATAGTTTATGTAAAA------AAGTTTTCATTTGGAA 52471

Bos ----------GCA-----AAATCAAAGTTTAT---------------CTTT--------A 10462

Rattus TTGTTATTATCTACTTTTATCTACTACAGTAAAGTAC-----TTTTAGTCTGGTT-AAGT 67815

Danio ----------CTGCT-----------CATCAAAATAA-----TTTGGGGCAGGTT-AA-- 12199

Mus TTGTTGATA-CTGCTGTT---TAGTAAAGTAAAATAC-----TTTTAATCTGGTT-AAGT 57652

Gallus CTTTCTTTATCTTCTTTCTTCCTGTTTTCCTTTACAC-----TCCCAGGTGTGTT-GGTG 39334

Anopheles ------------------------------------------------------------

Homo TC-------TTTGTTGATACTCTTATCAATAAGATAAAAATGTTTTAATCTGACCGAAGT 82486

Pan TC-------TTTGTTGATACTCTTATCAATAAGATAAAAATGTTTTAATCTGACCGAAGT 82921

Drosophila ------------------------------------------------------------

Canis TTATTTTCATTTGTTAATATTATACCTAGTAAGATACAGTTGTTTTAATTTG-TTGAAGT 52530

Bos TGACTTGCATTAATGTGTAGTGTGCTTTGCAA---------------------------- 10494

Rattus ATAGTAAACACT------------------CATAATTTTGTATATATTGCATCAAGTATG 67857

Danio ------------------------------------------------------------

Mus ATAATAAACA----------------------TCATTTTTTATATATCCTATCAAGTATG 57690

Gallus GCTGTGGA---------------------------------------------------- 39342

Anopheles ------------------------------------------------------------

Homo ACCAGAAACACTTAAAAACTCAAAGGGGGACATTTTTATATATTGCTGTCAGCACGAAGC 82546

Pan ACCAGAAACACTTAAAAACTCAAAGGGGGACATTTTTATATATTGCTGTCAGCACGAAGC 82981

Drosophila ------------------------------------------------------------

Canis ACCATGGACACT-AAAAACTCAAAGGAGAAATTTATTGTA----ACTATCAGCAAGCAGA 52585

Bos ACCAT-------------CTCAA-------------CGTA----TATACCA--------- 10515

Rattus TTTTG----ATTGACCTCCTAAAAAATG--TTATAAACA--------------------- 67890

Danio ---TG----CTTGCCCTT------------------------------------------ 12210

Mus TTTTG----ATTGACCCCATAAAAAATG--TTGAAAACA--------------------- 57723

Gallus ----G----ATAAACTGGGGTAGTGAAA--TAGAAAAGA--------------------- 39371

Anopheles ----G----ATCAAT--------------------------------------------- 1196

Homo TTTTGTAAGATTGATTTCATAGAGAAGTGTTTCTAAAC---------------------- 82584

Pan TTTTGTAAGATTGATTGCATAGAGAAGTGTTTCTAAAC---------------------- 83019

Drosophila ------------------------------------------------------------

Canis TTTTGTAGTATTGATACTGTAGAAAAGGGCTTTTAAACATGTTTTGGTTTTTTGGTTTTC 52645

Bos -------------------------------TCTAAA----------------------- 10521

Rattus --------TCATGTTTTCAGTGTCACATGTGAGTCTGCTTAGTAGAATGAC--------- 67933

Danio --------------------TGTCACATAGCAGT-------------------------- 12224

Mus --------TCATGTTTTCAATGTCCCATATGAGTCTATGTAGTAAA-------------- 57761

Gallus --------AATGGTTTTGCATGCTAAGAATACAT-------------------------- 39397

Anopheles ------------------------------------------------------------

Homo --------ATTTTGTTTGTGTTTT---AGTGAAATCTTAAGAGATAGGTAA---AAATCA 82630

Pan --------ATTTTGTTTGTGTTTT---AGTGAAATCTTAAGAGATAGGTAA---AAATCA 83065

Drosophila ------------------------------------------------------------

Canis GGTGTGGGATTTTTTTTTTCTTTTTTAAATGAAACCACATGAGATCGCCAGGTGAAATCA 52705

Bos ---GTAGGAT-------------------------------------------------- 10528

Rattus ---------CATTGCCTGGTCCTTGATAGGTATAGTTGATACGTGTGT--------TGTT 67976

Danio -------------------TATTTGATGGG------------------------------ 12235

Mus ------------------GTTGTTGATAGGTACAGTTGATATGTGTGTGGCTTTTTTGTT 57803

Gallus ---------------------ACTGGTAAATACAATTGG--------------------- 39415

Anopheles ----------------------------AATGCGCTCG---------------------- 1206

Homo GAGTAGCCCTGGCTAAGGGTCTT-GGTAGTTACAACGAGTGTGCCTGCTCCTA------- 82682

Pan GAGTAGCCCTGGCTAAGGGTCTT-GGTAGTTACAACGAGTGTGCCTGCTCCTA------- 83117

Drosophila ------------------------------------------------------------

Canis GAGCTACTCTGGATAAGGGGCTTCGGTGGCTACAGTTAGTATGTCTGTTTCTGT------ 52759

Bos --------------------------------CATTTAGTA------------------- 10537

Rattus TTTTGTTTTTCGTTTTGTTT---------------TGTTTTTCCT--TTTCCTGTGTCCT 68019

Danio ------------------------------------------------------------

Mus GTTTGTTTTCCTGTTTGTTTGTTTGTTTGTTTGTTTGTTTTTCCTCATTTCCTGTACCCT 57863

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------CCACCCCCACCCCCACCT 82700

Pan ------------------------------------------CCACCCCCACCCCCACCT 83135

Drosophila ------------------------------------------------------------

Canis ----------------------------------------CTCCAACCCCTCCATTACTG 52779

Bos ------------------------------------------------------------

Rattus GCCACCAGCATGGAGACAGAGTGTATATTCTAGAGCACAGTATGAACTCTGTTGCCGAAC 68079

Danio -----CAG---------------------------------------------------- 12238

Mus GCCACAATCATGGAGAGAAAGTGTATATTCTAGACCATGGTATGAAATCTGTTGCTGAAC 57923

Gallus -----CAG-------------------------------------------TTACTG--- 39424

Anopheles ------AG-------------------------------------------CTGCT---- 1213

Homo TGAGACACCACAGAA--------TTTCTCATAGAGCACAGTGTGAATTCTATTGCTAAAT 82752

Pan TGAGACACCACAGAA--------TTTCTCATAGAGCACAGTGTGAAATCTATTGCTAAAT 83187

Drosophila ------------------------------------------------CTATTGC----- 3026

Canis TTAGACACCTCTGAGGT------TCTCTCATAGAGCACAGTGTAAAATCCATTGCTAAAT 52833

Bos ----------CTGAG-------------CATA---------------------------- 10546

Rattus TGATGATTTAAAGAATTTTTAAGTAAAGATTGACACATTACCTGTGATAGCCT----ATT 68135

Danio ----GATTAGAGAAATCTCTA--------------------------------------- 12255

Mus TGATCATTTGAAGAATTTTTAAG-----ATTGACCCATTGCCTGTGACAACCTTTCTATC 57978

Gallus ---TCATACGTAGAATTCTTCA-------------------------------------- 39443

Anopheles --------CGGGAAATCGCTC--------------------------------------- 1226

Homo TGGTGGTATGGGG--TTTCTCAGCAGAGAATGGGACATCACAGTGACTGACAATCTTTCT 82810

Pan TGGTGGTATGGGG--TTTCTCAGCAGAGAATGGGACATCACAGTGACTGACAATCTTTCT 83245

Drosophila ----GGCACG------TTCGCAG-------------ACCTCAGCGACTGG-AGTCC---- 3058

Canis CGATGCTGTGAT---TTTCTTAGCAGAGAATTGGACAGATCAGTGACTGTCAATGTCAAT 52890

Bos ---------------TCTCCCA---------------------TGACT------------ 10558

Rattus --------TTATTACATTACTTGAGAGATGTAGA-----ATATTTATG------------ 68170

Danio --------TCAGTGCATCTCTGGAGAAA-----------ATGATTATA------------ 12284

Mus --------TTATTAAACTACTTGAGAGATGTGGA-----ATATTTATG------------ 58013

Gallus --------------------TAGAGGAATGTAGAGGTTCATCTTTGTGT----------- 39472

Anopheles --------------------TCGAGGGAT------------------------------- 1235

Homo -TTTATAGGTTGGAAACTATTTGGGGGACTGGAGGGATACTGTCTACAC----------- 82858

Pan -TTTATAGGTTGGAAACTATTTGGGGGACTGGAGGGATACTGTCCACAC----------- 83293

Drosophila -----------------------------------GGCGCTGT----------------- 3066

Canis CTTTCTGTATTGTAAACTATTTGAGGGACTGAAGGGATACTTTCTGTGCTTCAGGGTTTT 52950

Bos -------TATTGT---------------------------------------------CC 10566

Rattus -----------GCTTTGTTTTTGTTGGCA--------------------AGTTGTTTCCA 68199

Danio -----------A---TGGTGCTGTTCGT-----------------------CTGTTTTTA 12307

Mus -----------GCTTCATTTTTGTTGACA--------------------AGTTGTTTCTA 58042

Gallus ----------AACTGTACTGCTGTTGA----------------------ATTTTCTTCTG 39500

Anopheles ------------CTGCGC----GTTGG----------------------GCTT------- 1250

Homo --TTTTTACAATTTTTATTGATAAGATTT-------------------TTGTTGTCTT-- 82895

Pan --TTTTTACAATTTTTATTGATAAGATTT-------------------TTGTTGTCTT-- 83330

Drosophila --------------------ACAAGA---------------------------GTCT--- 3076

Canis TGTTTTTTCTTTTTTTTTTGTTGTTGTTTGTTTTCTGTGCTTTAGTTCTTATTGTCTCTT 53010

Bos TGTTTTTCCCCTTTCTCTCTATATAGGTT------------------------------- 10595

Rattus ----------CA---AAGAATGAACAAT---TTATTTTTAT-------TTGTTTTAGTGA 68236

Danio ----------CA---GG------------------------------------------- 12311

Mus ----------CA---AAGAATGAACAATCTATTATTTTTAT-------TTCTTTTAGTAT 58082

Gallus ----------CATGTAGATATGTTTAATGTCATAATACTGCACAGGTGTAGCATGTTTAC 39550

Anopheles ------------------------------------------------------------

Homo ---------CTAAGAAGAGTGATATAAATTATTTGTTGTAT------------TTTGTAG 82934

Pan ---------CTAAGAAGAGTGATATAAATTATTTGTTGTAT------------TTTGTAG 83369

Drosophila -------------GAAG------------------------------------------- 3080

Canis TTTTTCTTCCTAAGAAGAGGGAAAC----------TTGTAT------------TTTATAG 53048

Bos -----------------------AC----------CTACAT------------CTCATAC 10610

Rattus TTATTTGGTAACCTCACTTCTC--TTTCTGGTTGTTAGATCTTATA-TCAGAGTTTAAAG 68293

Danio -----------------TTCTT--TTTC---------------------AGAGTCTGAAA 12331

Mus TTATTTGGCAACCTCACTTCTC--TTTCTGGTTGTTAGGTTTTATA-TCAGAGTTTAAAG 58139

Gallus TCTTCAAGTAGCATTA--TTTC--TTGCCAGGTATAAAACCTCTAACTTGTAGTTTAATG 39606

Anopheles --------------------------------------ACCTCGAA---------TGACG 1263

Homo TTCTATGGTGGCCTCAATTTACCATTTCTGGTTGCTAGGTTCTATA-TCAGAGTTTAAAA 82993

Pan TTCTATGGTGGCCTCAATTTACCATTTCTGGTTGCTAGGTTCTATA-TCAGAGTTTAAAA 83428

Drosophila -TCCATGCTGGACT-------------------------------A-TCAGGGCC----- 3102

Canis TTTTGTGGTAGCCT-AATTTTTCATTTCTGGTTGTTAGGTCCTCTA-TCAGAGTTTAAAA 53106

Bos TT----------------------------GCTTTAATGTCCTTT--------------- 10627

Rattus GA----------TTTATTGGAA----TATGAAGGGAATGTGGAAGATGATATG-----AT 68334

Danio GA----------TCTCATGGAG----TATGAAGGCAATGTTGAAGAAGACATG-----AT 12372

Mus GA----------TTTATTGGAA----TATGAAGGGAGTGTGGAAGATGATATG-----AT 58180

Gallus AAAGGACAAATTTCTGTTGGAAAGAGTGTTACAGCCCTGTAACAGTTTGTATATAGAAGT 39666

Anopheles A--------------GCTGGAA------TCG----CTTGTGACCGTGT------------ 1287

Homo GA----------TTTATTGGAG----TATGAAGGGAATGTGGAAGATGACATG-----AT 83034

Pan GA----------TTTATTGGAG----TATGAAGGGAATGTGGAAGATGACATG-----AT 83469

Drosophila ---------------------------------AGGATATGGAGG--------------- 3114

Canis GA----------TTTATTGGAA----TATGAAGGGAATGTGGAAGATGACATG-----AT 53147

Bos ------------------------------------------------------------

Rattus GATCACTTTCCAGATATCACAGACAGATCTTTTTGGTAACCCAATGAT-----GTATGAT 68389

Danio GATTACCTTCCAGATCTCGCAAACAGACCTGTTTGGAAACCCATTAAT-----GTACGAT 12427

Mus GATCACTTTCCAGATATCACAGACAGATCTTTTTGGTAACCCAATGAT-----GTATGAT 58235

Gallus GAAACCCTTTCTTATA----AAACATCTCTTTGTTATGAAGAGATGTCCTCCCTTATGCT 39722

Anopheles ---------------------------------TCGTGA--------------TTGCGTT 1300

Homo GATCACTTTCCAGATATCACAGACAGATCTTTTTGGTAACCCAATGAT-----GTATGAT 83089

Pan GATCACTTTCCAGATATCACAGACAGATCTTTTTGGTAACCCAATGAT-----GTATGAT 83524

Drosophila -----------AGGTATT-CGAACAGACCTTC---------------------------- 3134

Canis GATCACTTTCCAGATATCTCAGACAGACCTCTTTGGTAATCCCATGAT-----GTATGAT 53202

Bos ---TACTTCCGGAATAT-TCAAGCAAA--------------------------GAAAAAC 10657

Rattus CT--AAAAGAAAATGGTGATAAAATTCCAATTACAAATGAAAACAGGAAGGTAATAAAAT 68447

Danio TT--AAAGGAAAGCGGTGATAAAATCCCTGTTACCAATGAGAACAGAAAGGT-------- 12477

Mus CT--AAAAGAAAATGGTGATAAAATTCCAATTACAAATGAAAACAGGAAGGTAATTAAAT 58293

Gallus TCCCAGGGAGAAATGCAGTAGATCTGCTTAAGGCCACTGAAGGCAAAAGAACAAGAGAAT 39782

Anopheles C--------GAAACGCTGCTGGTCGGATC--GGCC------------------------- 1325

Homo CT--AAAGGAAAATGGTGATAAAATTCCAATTACAAATGAAAACAGGAAGGTAATAAATG 83147

Pan CT--AAAGGAAAATGGTGATAAAATTCCAATTACAAATGAAAACAGGAAGGTAATAAATG 83582

Drosophila -----AAG---------------------------------------------------- 3137

Canis TT--AAAGGAAAATGGTGATAAAATTCCAATTACAAATGAAAATAGGAAGGTAATAAGTG 53260

Bos TT--AAAGAGAGAT--------------------------------------------TG 10671

Rattus TTTTGTCATTGT------TTTGTAAGTATGTAATTTCAAAGCAGTATTCTTACAAAGTTT 68501

Danio ------------------------------------------------------------

Mus TTTTGTCATTGT------TTTATAAATATATAATTTCAAAGCAGTA---------AAGTT 58338

Gallus T----------------------------------------------------------- 39783

Anopheles ------------------------------------------------------------

Homo TTTTTATGTCACATTTTGTCTCTTCATTAACACTTTCAAAGCATGTATGCTT--ATAATT 83205

Pan TTTTTATGTCACATTTTGTCTCTTCATTAACAATTTCAAAGCATGTATGCTT--ATAATT 83640

Drosophila -------------------------ATTAGC----------------------------- 3143

Canis TTTA-ATATCAT-CATTGTTTCTTTATTAACAGTTTTAAAGCATATATGCTT--GTAATT 53316

Bos TTGA-AGGCCAT-CACT----------------------------TATGCC--------- 10692

Rattus TCAAAAGAATTATCTAATATGGTTTGAAGCAGTAACAAAATCTTTA-------------- 68547

Danio ------------------------------------------------------------

Mus TTCAAAGAATTACCTAGTATGGTTTGAAGCAGTTATAAAAACTTTACATAAACAAATTTA 58398

Gallus ----GAGATTTCTTCAGTTAGGGT------------------------------------ 39803

Anopheles ------GATTGTCTC--------------------------------------------- 1334

Homo TTTAAAGAAGTATCTAATATAGTCTGTACAAAAAA-----AAAACAAGTAACTAAGTTTA 83260

Pan TTTAAAGAAGTATCTAATATAGTCTGTACAAAAAA-----AAACCAAGTAACTAAGTTTA 83695

Drosophila -----------------TATAGC------------------------------------- 3149

Canis TTTAAAGAAGTATCTAAACTAGTTCATACAGAAAATCAAGAAATCAGGTAATCAAATTCT 53376

Bos ---AAAGGA--------------------------------------------------- 10698

Rattus TCCAAATAGTAAAGCTACAATTTTCTAACTCTTAGATAAGAGCTCATGTGATTTTTACAC 68607

Danio ------------------------------------------------------------

Mus TCTAAATAGTAAAGCTACACTTTCCT----CTTAGATAAGAGCTTATGTGATTGT----- 58449

Gallus --CAGGAGGAAAGGAGATTCGTTTCA----CTGATATTGGTGTCTTTTTATTTTTG---- 39853

Anopheles -----GAGGGA-------TCGTTCC----------------------------------- 1347

Homo TGTAAATGCTAGAGTC-CACTTTTCTAAATCTTGGATATAAGTTGGTATGAAAGCACACA 83319

Pan TGTAAATGCTAGAGTC-CACTTTTCTAAATCTTGGATATAAGTTGGTATGAAAGCACACA 83754

Drosophila ----------------------------------GATGT--------------------- 3154

Canis TATAAGTG--AAAGCCACAGTTTTCTAAATCTTTGGTGTAAGCTAGTATGA--GTCTGTA 53432

Bos -------------------------------TTTGGCAT--------------------- 10706

Rattus AATTAATTATTAATTCTCCTTTAGGGAAAGACTAAACAGACTAGAAAAGAATGAAGGGGT 68667

Danio ---------------------CAGGGAA-------------------------------- 12484

Mus ACAGAATTGTTAATTCCCCTTTAGAGAAAGACTAAACAGACTACAAAAGATTGAATGGGT 58509

Gallus ----------TTCCTCTCGTCTCTACACTTAGTGAGCATGCCTTA------TAAAGACAT 39897

Anopheles -------------CTCGCATCTGTGCA--------------------------------- 1361

Homo GTTGGGCACTAAAGCCCCTTTTAGAGAAAGAGGACATGAAGCAGGAGATAGTTAATAGCT 83379

Pan GTTGGGCACTAAAGCCCCTTTTAGAGAAAGAGGACATGAAGCAGGAGATAGTTAATAGCT 83814

Drosophila ------------------TTTCGGTGA--------------------------------- 3163

Canis GTTGGGCTAAACTTGCCCTTTTTAAGAAAAAGGACA-GGAGTAGGAGATAGTGA----CA 53487

Bos ------------------------------------------------------------

Rattus AAATATTACTATA---------------CAGGGC-CTTACCATATTAAACCTA------- 68704

Danio ------------------------------------------------------------

Mus AAATATTACTATAATGTAACGCTAGAAACAGGGC-CTTACCATATTAAACCTA------- 58561

Gallus GTCTTCTGCTATAAG---------------------TTATCACGTGAAGCTTC------- 39929

Anopheles -------GCGGTA----------------------------ACGCGA--CTGC------- 1377

Homo AAGTGTGGTTGTAGTATAAAGCAAGAAGCAGGGTGTTTCTTGTATTAAGCTGT------- 83432

Pan AAGTGTGGTTGTAGTATAAAGCAAGAAGCAGGGTGTTTCTTGTATTAAGCTGT------- 83867

Drosophila ---------TGTGGTACAA----------------------------------------- 3173

Canis CAATGTGGCTGTAATAAAAAGCA-GAAACAATGTATTTATGATACTGAACTGTAAAGGGG 53546

Bos -------GCTGTAAAAAAAAACA-AAAA--------------------------ATGGGA 10732

Rattus AGAGGTATACAGAACTCAGTGATTGAGATCT------------------------GATGT 68740

Danio ------------------------------------------------------------

Mus AGAGGTATACAGAGCCCAGTGATTGACATCT------------------------GGTTT 58597

Gallus CAAAAAATA----------TATCTGTGTATT------------------------CACAA 39955

Anopheles C------------------CGTCTGGGC-------------------------------- 1387

Homo ----AAGCAGGAACCTCA-TGATTAAGGTCTTTATCACAGAACAAATAAAAATTACATTT 83487

Pan ----AAGCAGGAACCTCA-TGATTAAGGTCTTTATCACAGAACAAATAAAAATTACATTT 83922

Drosophila -------CACGAACT--------------------------------------------- 3181

Canis AGAGAAACAAGGACCTCA-TGATTAGGATCCTTATCACCCAACAAATTATCATTGCCTTT 53605

Bos AGAAAAAGAA------------------------------AATAAATT------------ 10750

Rattus AGTGTTTAAAAGTATTTTCCATT-GAAGTCTAATTATACTTATGAAATTATCCACATTAG 68799

Danio ------------CATTTT------------TAAT----------AAATGATC-------- 12502

Mus AGTGTGTATATACATTTTCCATTTGAGATCTAATTATGCATATCAGATTATTCACATTAG 58657

Gallus AACATGT-----CGTTGTCAGTT---AAGTAGATCACGC---TGCAGTCTTCTGTTGTCA 40004

Anopheles ------T-----CAGTGCCGGTT---GG--------------TGCG--CATCTG------ 1411

Homo AATTTACACATGTATATCCTGTTTGTGATAAAAATACATTTCTGAAAA-GTATACTTTAC 83546

Pan AATTTACACATGTATATCCTGTTTGTGATAAAAATACATTTCTGAAAA-GTATTCTTTAC 83981

Drosophila ------------------------------------------------------------

Canis AATATATATATATATATATATATATATATATATATATATATATATATACACATATGTGAC 53665

Bos ------------------------------------------------------------

Rattus ATTTGATTTCT--------GTTAACTTTAAAAGGTATTCACTTG--------GCAACAGA 68843

Danio -----------------------------------ATTCATT------------------ 12509

Mus ATTTGGTTTTT--------ACTAACTTTAAAAGCTATTTACTTG--------GCAATAGG 58701

Gallus GATGAATT-------------CAATTATCACAGCAGTACACTTT--------GTTTTCGT 40043

Anopheles -------------------------------GGCGGAACACT------------------ 1422

Homo GTCAGATTT--------GGGTTTCTATTGACTAAAATGTGTT-----------CATCGGG 83587

Pan GTCAGATTT--------GGGTTTCTATTGACTAAAATGTGTT-----------CATCGGG 84022

Drosophila ------------------GGTGCCGAACGGCCAGGATGTACT-----------GGTGGGG 3212

Canis TTAAAAATACTAGTGAAAAGTGTTTTTTAAGTTAGATACATGTTTTCTGTAAGCATCTGG 53725

Bos -TAAAA------------------TTTTAA--TAAATATA-------------------- 10769

Rattus A----------GATAACTGTGAGCATAAAAA----------------------------- 68864

Danio ------------------------------------------------------------

Mus A----------AATAACTTAGCTTAAAAAGAAAATATTACATAGTATAATTTTAAGAAAT 58751

Gallus A----------TTTGTTTTTGAG------------------------------------- 40056

Anopheles ------------------------------------------------------------

Homo A-----ATGGGAATAACCCAGAACATAACAAGCAAAAA---------------------- 83620

Pan A-----ATGGGAATAACCCAGAACATAACAAGCAAAAA---------------------- 84055

Drosophila ------------------CAG--CACAACAAGGAA------------------------- 3227

Canis AAACAGAGGGGAATAACCCGGAACGTGACAGGAAAC------------------------ 53761

Bos --ACAAGAGGGA------------------------------------------------ 10779

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ATATTAATTTATACTTATTTTTGGTGAAATATTGTACTGTCATGAGATCTAATTATGCAT 58811

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -------------CATTA------------------------------------------ 68869

Danio -------------CATT------------------------------------------- 12513

Mus ATCAGATTATTCACATTAGATTTGGTTTTTACTAACTTTAAAAGCTATTTACTTGGCAAT 58871

Gallus --------------ATTT------------------------------------------ 40060

Anopheles ------------------------------------------------------------

Homo --------------ATTATGACAAA----------------------------------- 83631

Pan --------------ATTATGACAAA----------------------------------- 84066

Drosophila ------------------------------------------------------------

Canis ---------------TTAAGGTAAAC---------------------------------- 53772

Bos ------------------------------------------------------------

Rattus ---------------------------CAATAAGTAGTATAATTTTAAGAACTATATTAA 68902

Danio ------------------------------------------------------TATTCA 12519

Mus AGGAAATAACTTAGCTTCAAAAGAAAATATTACATAGTATAATTTTAAGA--TATATTAA 58929

Gallus -----------------------------TTATCCAACATAA------------TGCTAA 40079

Anopheles -------------------------------------------------------GC--- 1424

Homo ------------------------------TATATAGTATACCTTTAAGAAACATGTTTA 83661

Pan ------------------------------TATATAGTATACCTTTAAGAAACATGTTTA 84096

Drosophila ------------------------------------------------------------

Canis ------------------------------TATATAGTAAACCTTTAAAAACCATAGTTT 53802

Bos ---------------------------------------------TAAAA---------- 10784

Rattus TTTATTCTATTATTTCTTGGTGAAATATTATACTGTCAG-----GATACAGGCTACATTT 68957

Danio TTCATTC----------------------------------------------------- 12526

Mus TTTATACTATTATTT-TTGGTGAAATATTGTACTGTCAT-----GATACAAACTACATTT 58983

Gallus CTTACTTGAAGTAAGTGTTTAAAAGAATGGCAATAGAGA-----GCTCTAGCA------- 40127

Anopheles ----------------------AAGGACAGCA---------------------------- 1434

Homo TATTGAT-ATAATTTTTTGATTAAATATTATACACACTA---AGGGTACAAAGCACATTT 83717

Pan TATTGAT-ATAATTTTTTGATTAAATATTATACACACTA---AGGGTACAAAGCACATTT 84152

Drosophila ------------------------------------------------------------

Canis TAT-AAT-ATAATTTTT-GATAAAATACTATAATCTCTAGTTAGGATACAAAATGCATTT 53859

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus GTACTATAACAAATTTTATAATTTGTAAAGTTTTCAAAGAATTACCTAGTATGGTTTGAA 59043

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -----------------------TTATAATTTGGTATTATGGCTTAGTTTACTACCAAG- 68993

Danio ------------------------------------------------------------

Mus GTAGTTATAAAAACTATAAAATTTTATAATTTGTTATAATAGCTTAGTTTACCAACAAA- 59102

Gallus ----------------------------------------GACTTAACTGGCTAACAGA- 40146

Anopheles ------------------------------------------------------------

Homo ------------------TCCTTTTATGATTTGATACAGTAGTTTATGTGTCAGTCAGTA 83759

Pan ------------------TCCTTTTATGATTTGATACAGTAGTTTATGTGTCAGTCAGTA 84194

Drosophila -------------------------------------------CTGTTTGTCAACCTGT- 3243

Canis ------------------AGCGTTTATGATTTGGTAC--CAACTTCTTTATCAAGTAAAA 53899

Bos ------------------------------TTGGT------------------------- 10789

Rattus ---TACCATATTTGCTGAACTGAAT-ACAGTAGCCAGCATACCAACACCAAACTTTCCAG 69049

Danio ------------------------------------------------------------

Mus ---TAACATTTTTGCTGAGCTGGAT-ACAGTAGCTAACTTACCAGTACCATAATTTCCAG 59158

Gallus ---TCTCATCTTTGGTAAGTTTCTT-CC-----------------TACAGAAATCTCCAA 40185

Anopheles -------------------------------------------------------TCCAT 1439

Homo CTTCCACATTTTTGCTGAACTGGAT-ACAGTAGGCAGCT------TACCAAATATTCTAT 83812

Pan CTTCCACATTTTTGCTGAACTGGAT-ACAGTAGGCAGCT------TACCAAATATTCTAT 84247

Drosophila --------------------------ACAGT----------------------------- 3248

Canis CACCAACATTTTGGCTGAACTGGATAACAGTAGGCAACT------TCCCAAATATTCTAG 53953

Bos ----------------------GGTGATAGTG-------------TCCCA---------- 10804

Rattus ---AGGAAACCTGAGACATTCTGGTTTATTCAGATTCAGTA-----------TTCATAGC 69095

Danio ---------------------------------ATTCAACA-----------TTTA---- 12538

Mus ---AGGAAACCTGAGACATTCTGGTTTTCTCAAGTTCAGTA-----------TTCATAAC 59204

Gallus ---ATG----CTACTACAT----GTTTAAAATGATTTAGCA-----------TTAATATT 40223

Anopheles ---CCG----CTGCTGCA------------------------------------------ 1450

Homo GGTAGAAAACTTGGGACTTCCTGGTTTGCTTAAATCAAATATATTGTACTCTCTTAAAAC 83872

Pan GGTAGAAAACTTGGGACTTCCTGGTTTGCTTAAATCAAATACATTGTACTCTCTTAAAAC 84307

Drosophila --------------GATTTCCTG-----------------------------CTTAACAC 3265

Canis CATAGACAACATGAGGCTTCCTGGTTTGCTCAGATCTAGTACATTGCAGTTGTTCGTTTT 54013

Bos --------------------------------------GTACA----------------- 10809

Rattus TT---------------AAATTTATATTGTATATTAGAGTTTCTCTTATTATGTA----- 69135

Danio -----------------AAA---------------------------------------- 12541

Mus -----------------AAATTTATATTGCATACTAGAGGTTCTGTTGTTATATATATAT 59247

Gallus G---------------------------GTATATTTTAAGTTGTGAT-TTATACAT---- 40251

Anopheles ------------------------------------------------------------

Homo GGTTGGCATTTATAAATAGATGGATACATGGTTTAAATGTGTCTGT--TTACATACCTAG 83930

Pan GGTTGGCATTTATAAATAGATGGATACATGGTTTAAATGTGTCTGT--TTGCATACCTAG 84365

Drosophila G----------------------------------------------------------- 3266

Canis G-----------CAAATAGATATATACATGATTTAAATGTCTCTGTGTTCACACACCTGG 54062

Bos ------------------------------------------------------------

Rattus --AAGTCCTTTGTAATTTTCATATTAAT--------------------ATTACTATTAGA 69173

Danio ------------------------------------------------------------

Mus ACAGTCTTTTTAAATCTTTTATTTTAATCTTACTGTTTACATTATTTCATTATTATTACT 59307

Gallus --------------GCTTTCTTCTTAG------------------------------ATC 40267

Anopheles ------------------------------------------------------------

Homo TTGAGAGAACCTAAAGAATTTTCTGCGTC------------------------------- 83959

Pan TTGAGAGAACCTAAAGAATTTTCTGCGTC------------------------------- 84394

Drosophila ------------------------------------------------------------

Canis TTGACGGACTCAAAATTGTATTGAGG---------------------------------- 54088

Bos ------------------------------------------------------------

Rattus TAAATTTATATTTTATATTAATTTCTCTTTTATTTATTCTTGGAATCATACTGTATGGCT 69233

Danio ------------------------------------------------------------

Mus ATTAATTACATTTTATAT-AATTTCTCTTTGATTTACTCATAGAATCATAATGTATAACT 59366

Gallus TGGAGGGTGATTTTGCTTTAGTTACTTGATGTTCTACTGA---------GATGTACTAAT 40318

Anopheles ------------------------------------------------------------

Homo ----TCCAGCATTTATATTCAGTTCTGTTTAATACATTATCGAAATTGACATTTATAAGT 84015

Pan ----TCCAGCATTTATATTCAGTTCTGTTTAATACATTATCGAAATTGACATTTATATGT 84450

Drosophila ------------------------------------------------------------

Canis -----CCTGCTTTTATATTCAGTCTTACTTAATATAAAATCAAAATTGAAACGTAC---- 54139

Bos ------------------------------------------------------------

Rattus TTTATCCACATG-ACTTGCAGCTCTAATATCTGTCAGTAGTGA---------GAGATTAT 69283

Danio -------ACACA-ACATGCA---------------AGTA--------------------- 12557

Mus ---ATGCATATG-A-ATACAACTTTTATATCTGTCAGAAGTGA---------GAAATTGT 59412

Gallus -------GCAAT-AATTACATCTGT----TCACTCAATAGCTA---------GAGATGAT 40357

Anopheles -----------------ACAGCT----------TCAGCAGCT---------------GAT 1468

Homo ATGACAGTTTTGTGTATATGGCCTTTTCATAGCTTAATATTGGCTGTAACAGAGAATTGT 84075

Pan ATGACAGTTTTGTGTATATGGCCTTTTCATAGCTTAATATTGGCT--------------- 84495

Drosophila -----------------------------------AATATCG------------------ 3273

Canis ATAATTAGTTTATGTACATGGCCTTTTTAGAGTTCAATATTTGCTATTGCAGAGAGCTGT 54199

Bos --------------------------------------------------AAAAGGCTGT 10819

Rattus GAAAATAATT---------------------------------------TTCTTTTTACA 69304

Danio ------------------------------------------------------------

Mus GAAAATAATT---------------------------------------TTCTTTG---- 59429

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GAAATTGTAA-------------------------------------------------- 84085

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis GAAATTGTTAAAGGTACAGATATACCTTGTTTTATTGTACTTTACTGCACTTTGCAGATG 54259

Bos TAAAT------------------------------------------------------- 10824

Rattus TAGAACATTTTATTAATTTTTTAAGACTTATGTTTATCTTATATGTATGATGCTTTGCCT 69364

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis TTGCATTTTTTTATAAAGTTTTATGGCAACCCTGTATTGAGCAAATCTGTCAGCACCATT 54319

Bos ---------------------------------------AGTGAACC------------- 10832

Rattus GTATATTGGCACTTGCATATATTGCTCATGGTGTCCAGAAAAGGGT-------------- 69410

Danio -------------TGCATATA--------------------------------------- 12565

Mus -------------TACATATA--------------------------------------- 59437

Gallus -------------TGC-------------------------------------------- 40360

Anopheles -------------CAC-------------------------------------------- 1471

Homo -----GAAGTAGTTTTCTTTGTAGGTGTAAAATTG------------------------- 84115

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis TTCTAACAGCATTTGCTCAC-TCTGTGTCTCTTTGTCACACTTGGTTAATTCACATTTTT 54378

Bos -----ACAGTAGTCACCTATGTCTGTGCCTCCCT-------------------------- 10861

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis CAAACTTTTTCATCATTATTGTATTTATTATGACCTATGCTCAATGACTCTGACTCATTG 54438

Bos ------------TCTTTATTG--------------------------------------- 10870

Rattus ---------------------------------ATTTAGTTCCCTGGAAACTACATGGTT 69437

Danio ----------------------------------------------------ACATG--- 12570

Mus ----------------------------------------------------ACATG--- 59442

Gallus -----------------------------------------------------CATGG-- 40365

Anopheles -----------------------------------------------------CGT---- 1474

Homo ----------------------AATTTTTAAGAATATTCTTGACAGTTTTATGTATATGG 84153

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis AAAACTCAAAATGATGGTTAACAATTTTTAGCAATATTTTAAAAATTAAGGTACATACAT 54498

Bos ------------------------------------------------GGG---ATATAT 10879

Rattus GTTAGCTACTGTGTTAATGCTGGAAATTGAATATAAGTCTTCTCCAAGAGTTGCTAATG- 69496

Danio ------------------------------------------------------------

Mus --TGATTAATTTTTTAAGACT----------TATGTTTATTCTTCAAGAGTTGCTAATG- 59489

Gallus ------------------------------------AAAATCCTGCAGACTTGAAGAAG- 40388

Anopheles ------------------------------------------------------------

Homo CCTTTTCATAGC-------TT--------AATATTGGCTATAACAGAGAATTGTGAA--- 84195

Pan ---------------------------------------ATAACAGAGAATTGTGAA--- 84513

Drosophila -----------------------------------------AACAG-------------- 3278

Canis TTTTTGAGACATACTATTATT--------ACAAACATCAGTTACAGTGTAGTATAAACAT 54550

Bos GGGCTGGAACA------------------GCAGATTTCAGCTAC----TTATATGAACA- 10916

Rattus ----------------------------------------------------------CT 69498

Danio ------------------------------------------------------------

Mus ----------------------------------------------------------CT 59491

Gallus ----------------------------------------------------------CA 40390

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis AACTTTTCTGTGCACTGAGAAACCAAAAACTTCATTTGACTCGCTTTATTGCAGTATTCA 54610

Bos --------------------AATC------------------------------------ 10920

Rattus CTT--AAGTACTGAACAAA---------------------------------CTCTCCAA 69523

Danio -----AAGTG-------------------------------------------------- 12575

Mus TTTTTAAGCACTGAACCAA---------------------------------CTCTCTGA 59518

Gallus ATT--GTATGTTGAA----------------------------------------TTTGA 40408

Anopheles -------------------------------------------------------TTCGA 1479

Homo ----ATTGTTAAGAA--------------------------------------------- 84206

Pan ----ATTGTTAAGAA--------------------------------------------- 84524

Drosophila ------------------------------------------------------------

Canis CTTTATTGTAATGAACTGAAACCAGCCTCACAATATCTCTGAGGTATGCCTGTATTTTCC 54670

Bos CTTTATTATTAT----------------------------------------TATTTTTT 10940

Rattus AATCTACTTTTAAAATATTTTAACGAGAAA--TACTGCTGAAGGTTTTCTTGGGGTGGAG 69581

Danio ------------------------------------------------------------

Mus AATCTAATTTTTAAACATAGTAACAAAAAAAATACTGCTGAAGGTTTTCTTGGGGTGGAG 59578

Gallus AGGAGAGC-----AAGGGGTAGATGAAGGAGGTGTTTCCAAAGAATTTTTTCAACTGGTT 40463

Anopheles --------------------------------CGCTTTCGATGCACTCCTTC-------- 1499

Homo ---GTAGGTGTAAAAT-TGAATTTTTAAGA-ATATTCTTGAATGTTTTTTTCTT-----G 84256

Pan ---GTAGGTGTAAAAT-TGAATTTTTAAGA-ATATTCTTGAAT-TTTTTTTCTT-----G 84573

Drosophila ------------------------------------------------------------

Canis TTTCTATGTGTAAAATATGAATCTTTAAAA-ATATTCATGAATGTTCATTCCTTCTC-TG 54728

Bos TTTTTTTGCGTGAAA----------------GTGTT-------ACTTATTC--------- 10968

Rattus GGTGAGTGTATTAAAACTATGTAGCCCAATAGCTAATTGTGTTTCAATTGTATAGCATTT 69641

Danio ------------------------------------------------------------

Mus GGTGGGT--ATTAAAACTA----GTCCAAAAGCTAATTGTGTTTCATTTGTATAGAATAT 59632

Gallus GTGGAAGAAATC------------------------------TTCAATC---CAGATATT 40490

Anopheles ------------------------------------------------------------

Homo GAAAAATTAAAA--AGCTATGCAGCCCAATAACTTGT---GTTTTGTTTGCATAGCATAT 84311

Pan GAAAAATTAAAA--AGCTATGCAGCCCAATTACTTGT---GTTTTGTTTGCATAGCATAT 84628

Drosophila ------------------------------------------------------------

Canis GGAAAATAAAAACAAGCTATGCAGCCCAGTATCTTGTTGTGTTTTACTTGTATAGTATAT 54788

Bos -----------------------------------------TTTCACTTGTAT-GTACA- 10985

Rattus ------GATTTCTTGTTAATA----TTCCTACAGGAATTTGTCAGTCTCTATTCAGACT- 69690

Danio ----------TCTTGT------------CTGCAGGATTTTGTGGCGCTCTATGCAGAGT- 12612

Mus ------GCTTTCTTGTTAATA----TTCCTACAGGAATTTGTCAATCTCTATTCAGACT- 59681

Gallus ------GGTATGTTGTC--------------TAATAACTTACTGGG---TATTCAGAAGT 40527

Anopheles -----------------------------------------CGAGG---CATCCGGA--- 1512

Homo TATAAGAAGTTCTTGTGATTAATGTTTTCTACAGGAATTTGTCAATCTTTATTCTGACT- 84370

Pan TATAAGAAGTTCTTGTGATTAATGTTTTCTACAGGAATTTGTCAATCTTTATTCTGACT- 84687

Drosophila ------------------------------------------------------------

Canis TATAAGAAGTTCTTGTGGTTAATGTTTTCTGCAGGAATTTGTCAATCTCTATTCTGACT- 54847

Bos ---GAGAGGTTTTTCTG---AATATTTATTTTAAGGGTT--------------------- 11018

Rattus ----ACATTCTCAATAAATCTGTAGAAAAACAATTCAAGGCATTTCGCAGAGGTTTTCAT 69746

Danio ----ACATGCTGAACAAAAGTGTGGAGAAACAGTTTAAGGCCTTTAGAAGAGGATTCCAC 12668

Mus ----ACATTCTCAATAAATCTGTAGAAAAACAATTCAAGGCATTTCGCAGAGGTTTTCAT 59737

Gallus GAAGGTATTTGTAGTGCCTTTCTACATCTGCTGCTT----CTTTTCCCTGAAG---CCAC 40580

Anopheles ---------------------------------------------------------TAC 1515

Homo ----ACATTCTCAATAAATCAGTAGAAAAACAGTTCAAGGCTTTTCGGAGAGGTTTTCAT 84426

Pan ----ACATTCTCAATAAATCAGTAGAAAAACAGTTCAAGGCTTTTCGGAGAGGTTTTCAT 84743

Drosophila ------------------------------CAGTTCAATGCTTTCCGCAAGGGCTTCGAA 3308

Canis ----ACATTCTCAATAAATCAGTAGAAAAACAGTTCAAAGCTTTTCGGAGAGGTTTTCAT 54903

Bos ---------------AAATCA-------------------CTTTT-------GCTT---- 11033

Rattus ATGG--TGACTAATGAATCACCCTTAAAATACTTA-----TTCAGACCAGAAGAAATTG- 69798

Danio ATGG--TCACTAATGAGTCTCCACTGAAATATCTG-----TTTCGACCGGAGGAGATTG- 12720

Mus ATGG--TGACTAATGAATCGCCCTTAAAATACTTA-----TTCAGACCAGAAGAAATTG- 59789

Gallus ACGGATTGATTTCTTGGT-GTCGTGAGAGTACTTAACTCATTGAGGGTTCAGCATTTTGC 40639

Anopheles ACGA---------------------------------------------CAACAA----- 1525

Homo ATGG--TGACCAATGAATCTCCCTTAAAGTACTTA-----TTCAGACCAGAAGAAATTG- 84478

Pan ATGG--TGACCAATGAATCTCCCTTAAAGTACTTA-----TTCAGACCAGAAGAAATTG- 84795

Drosophila ATGG--TTACGGACGAATCGCCACTGAAGCTGCTC-----TTCCGTCCAGAGGAGATTG- 3360

Canis ATGG--TGACCAACGAATCTCCTTTAAAGTATTTA-----TTCAGACCAGAGGAAATTG- 54955

Bos ----------------------------GTGTTTA-----TT------------------ 11042

Rattus ----AATTACTTATATGTGGAAGCCG-GGTAAGAAAGACA--TCTATAAA----AAAGGT 69847

Danio ----AGCTGCTTATATGTGGCAGCAG-GGTGAGTTAGATA--TACAT------------T 12761

Mus ----AATTGCTTATATGTGGAAGCCG-GGTAAGAAAGACA--TATACAAA----AAAGGT 59838

Gallus CGTCAGTCGTCCTTCTG-AGAAGCAGTGATGAGAGGCATAACTGTGCAGTTACTGAGAGC 40698

Anopheles ----AGTCGTC---------------------------------TGCAAT--------GC 1540

Homo ----AATTGCTTATATGTGGAAGCCG-GGTAAGAAAGCAG-GTGTCTGCA----AAAAGT 84528

Pan ----AATTGCTTATATGTGGAAGCCG-GGTAAGAAAGCAG-GTGTCTGCA----AAAAGT 84845

Drosophila ----AAATGCTGGTCTGCGGCAGTCG-TGTGAGTAGCTAA-AT-TC----------AAAT 3403

Canis ----AATTGCTTATATGTGGAAGCCG-GGTAAGAAAGCAAAGTGTCTG-------AAAAA 55003

Bos -----ACTGCTT-------GAGGTTG-AG------------------------------- 11058

Rattus CATAATTTA---------------------TTTTTTTATTTTTTAA-------------- 69872

Danio CATTACTCA---------------------TTTTTCATCGGTGTGG-------------- 12786

Mus CTTTTTTTTGTTTGTTTGTTTTTGTTTGTTTTTTTTTTTGTTTTGGGTGTTTTGTTTTGT 59898

Gallus CATCATTTG---------------------CTTAAATATGAATCAG-------------- 40723

Anopheles CACCA------------------------------------------------------- 1545

Homo CATGTATCG-------------------ATTTATTGTTTGTAATGA-------------- 84555

Pan CATGTATCG-------------------ATTTATTGTTTGTAATGA-------------- 84872

Drosophila TACGAA----------------------ATTCATT------------------------- 3416

Canis CAC--------------------------CCTATTGTTTG-------------------- 55017

Bos --C--------------------------CTTTTTG------------------------ 11066

Rattus ---------TTGTGTACTATAGATGTTAAGGTGCATTTTTTTTTC--TATAATTTT-CAG 69920

Danio ---------TAAAG--CTATACATACAAGCGCATGATTTTTGTGT--TGTGCTTTTATAG 12833

Mus TTTTTGTTTTGGTGTACTATGGATGTTAAGGTGCTTTTTTTTCCCCCTATAATTTT-CAG 59957

Gallus ----TAGGATAGGGTTCCTC---TGCAGGGTTCCTTTGTTTGTTCTCTCACCTTTTTCCT 40776

Anopheles ------------------------------------------------------------

Homo ----TACAGTAGTATAGCAGATA-ACTAAGACATATTTTCT--------TGAATTTGCAG 84602

Pan ----TACAGTAGTATAGCAGATA-ACTAAGACATATTTTCT--------TGAATTTGCAG 84919

Drosophila ------CGGTTGCTGAACT------CTGAAACCT-------------------TCGGCAG 3445

Canis ------TAATGGTGTGATATATATGTTAAGACATATTTTCT--------TGAATTTGCAG 55063

Bos -------------------------------CATATTT---------------------- 11073

Rattus AATCTCGATTTCCAGGCACTAGAAGAAACTACAGAGTATGATGGTGGCTATACGAGAGAA 69980

Danio AACCTTGACTTCCAAGCACTTGAAGAAAGCACCGAATATGATGGAGGATACAACAAAGAC 12893

Mus AATCTAGATTTCCAGGCACTAGAAGAAACTACAGAGTATGACGGTGGCTATACGAGGGAA 60017

Gallus CACTTTGCTTTGTGATTAGCTTCTAGAATTAGTAAGCA-------AACCAAAGAGGAAGA 40829

Anopheles ----------------------------------AG------------------------ 1547

Homo AATCTAGATTTCCAAGCACTAGAAGAAACTACAGAATATGACGGTGGCTATACCAGGGAC 84662

Pan AATCTAGATTTCCAAGCACTAGAAGAAACTACAGAATATGACGGTGGCTATACCAGGGAC 84979

Drosophila GAATTCGACTTTGTGGAACTGGAAAACTCCACTGTGTACGAGGGCGGCTACAC------- 3498

Canis AATCTAGATTTCCAAGCACTAGAAGAAACTACAGAATATGACGGTGGCTATACCAGGGAC 55123

Bos ------------------------AAAAATACA--------------------------- 11082

Rattus TCTGTTGTGATTAGGTGAGGTGTTTAATTCTTAAAAAGGAAGACTTT--TCATCAAAGAA 70038

Danio TCGCGCATTATTAGGT-ATGTGGATGTTTCTTTA----------TTT--T--------AA 12932

Mus TCTGTTGTGATTAGGTAAGGTGTTTAATTCTTAAAAAGGAAGATTTTATTCATCAAACAT 60077

Gallus ACTTCTGCAATAAAACCAGA-GTAGGACTAT----------------------------- 40859

Anopheles ------GCAATGAA---------------------------------------------- 1555

Homo TCTGTTCTGATTAGGTGAGGTACTTAGTTCTTCA-GAGGAAGATTTGATTCACCAAAGGG 84721

Pan TCTGTTCTGATTAGGTGAGGTACTTAGTTCTTCA-AAGGAAGATTTGATTCACCAAAGGG 85038

Drosophila -----------------------------------GGAGAAGA--------GCCAG---- 3511

Canis TCTGTTCTGATTAGGTGAGGTACTTAATTCTTAA-AAGGAAGATGAAATTCATCAAAGGG 55182

Bos --------------------------------------------------CACCAA---- 11088

Rattus GTGCATGTGTGCTTT-----TGTGTCATGTATCTGTTGGTACTGGTTACCGAACAAGTAA 70093

Danio AT-----TGTGACTT-----TGTGT-----GTTTGTTG---TTGTTCATC---------- 12964

Mus GTAGATGTGTGCTTT-----TGTGTCCTGTATCTGTAGGTACTGGTTACCAAACAAGTAA 60132

Gallus -----GGTGAGTTCT-----TGAGT--------TGTTTCCTCCCTTTCCC-------TCA 40894

Anopheles -----GGTGTGTTGT--------------------------------------------- 1565

Homo GT----GTGTGATTT-TGCTTCAGACCTTTATCTCTAGGTACTAATTCCCAAATAAGCAA 84776

Pan GT----GTGTGATTT-TGCTTCAGACCTTTATCTCTAGGTACTAATTCCCAAACAAGCAA 85093

Drosophila -----------------------------TACATCCAGG--------------------- 3521

Canis GT----GTGTACTTCATGCTTTAGACCTTCATCTCTAGGTATTACTTAGCACATAAGCAA 55238

Bos ---------------------CAGACTCCCCTCCCAAGGAA------------------- 11108

Rattus GCTCAAAAGT-----------------AGGCTCGTATT---AATATTACTAATTTTCATG 70133

Danio ---------------------------AGGCC-----------------------TCATC 12974

Mus GCTCAAAAAT-----------------AGACCTGTATT---AATATTTCCAATTTTCATG 60172

Gallus GCTTAAGAAA-----------------AATCTCATTCT---AAAA------AGTCTCAGT 40928

Anopheles ------------------------------------------------------------

Homo ACTCACAAATTGTCA-TCTATATACTTAGATTTGTATTTGTAATATAATCACCATTTTTC 84835

Pan ACTCACAAATTGTCA-TCTATATACTTAGATTTGTATTTGTAATATAATCACCATTTTTC 85152

Drosophila ------------------------------------------------------------

Canis ACTCACAAATTCTTAATCTATAT---TAGAAGTGTATTTATAATATCACCAGTTTTTATT 55295

Bos -----------------------------------------AATATTACCA--------- 11118

Rattus CAG-----TCTAATGCTTTATTTCATGAATTAAATG-------ATTTATGTCTCCTATTT 70181

Danio CA--------CAATGC-------------------------------------------- 12982

Mus CAG-----TCTAATGCTTTATTTCATGAATTAAATG-------ATTTAAGTCTCATATTT 60220

Gallus TCT-----TCTAATGGGTTAAT------ATAAAATG-------GCTACAGC--------- 40961

Anopheles -----------AATGG-------------------------------------------- 1570

Homo AGAGCTAATCTTGTGATTTATTTCATGAATGAAGTGTTGTTATATATAAGTCTCATGTAA 84895

Pan AGAGCTAATCTTGTGATTTATTTCATGAATGAAGTGTTGTTATATATAAGTCTCATGTGA 85212

Drosophila -------------------ACTTCTGGAGCATAGTG-----------------CATGCGA 3545

Canis A---------TTATGATTCATTTCTTGATTGAAGTGTT---TTATGTAAGTCACATGTTT 55343

Bos -----------------CCATTT----------------------GTAGGCCATGT---- 11135

Rattus TCTCTTGCCTTTGGTTTATTTTTGGTAATATATAA-ATGGTAGATTATTTAGTCTTTAAG 70240

Danio ---------------------------ATATA------GGCA------------------ 12991

Mus TCTCAACCCTTTGCCTTATTTTTGGTCATGTGTAAGATGGCACATTATTTAGTCTTTAAG 60280

Gallus ---------------------------ATACCAGTAGTGTCAGATTTGCTTGT-----AG 40989

Anopheles -----------------------------AGCCGTAGTGTCG----CGCT---------G 1588

Homo TCTCCTGCATTTGG------------CGTATGGATTATCTAGTATTCCTCA--------- 84934

Pan TCTCCTGCATTTGG------------GGTATGGATTATCTAGTATTCCTCA--------- 85251

Drosophila TGCCCAGC---------------------------------------------------- 3553

Canis TATTCTGCATTTGG------------GGTATAAATGACCTAACATTCCTAGTGATT---- 55387

Bos ----------------------------------------AACCTTC------------- 11142

Rattus ATACTTGGGAAGAACCATGTGTACTTGTGATTCTGAACAGTTCTTGGGACAGT----ATT 70296

Danio ----TTGGCAA--------------------------------TTGCGAGAAT----GTT 13011

Mus ATACTTGGGAAGAACCATGTATACTAGTGATTCTGAACAATTCTTAGGACAGT----ATT 60336

Gallus TTGATTAAGAAGAAC------TACAAATAATTTG------TCATAGTCAAAGT----TTT 41033

Anopheles TTG------------------TAC---TAATTT--------------------------- 1600

Homo CTGGTTAGAGTATGCT-----TACTGCTGGTTAGAAG-----ATAATTAAAATAAG-GCT 84983

Pan CTGGTTAGAGTATGCT-----TACTGCTGGTTAGAAG-----ATAATTAAAATAAG-GCT 85300

Drosophila ---------------------------------GAGG-----ACAAGCACAA-----GCT 3570

Canis CTGATTAGCATGTGCT-----TACTGCTGGTTCGAAA-----ATGATGAAAATCATCGCT 55437

Bos ------------------------------------------------------------

Rattus ACCACT-----AATATTGTTCTCTAGTCAAATGCCCTTGTTTTCTACTTCTCTGTAATA- 70350

Danio ATCA---------------------GTCAAACACTCAT--------------TGTAAAA- 13035

Mus ACCACT-----AACATCGTTCTCTAGTCAAATGCCCTTATTTCTA---CTTCTGTAATA- 60387

Gallus TACAT----------TTGTGTGTTAATCACATTTACTGTTTTTCCATTTTTTTTTAATGC 41083

Anopheles ------------------------------------------------------------

Homo ACCATGTCTGCAATTTTTCCTTTCTTTTGAACTCTGCATTTGTGAACTGTTACATGGCT- 85042

Pan ACCACATCTGCAATTTTTCCTTTCTTTTGAACTCTGCATTTGTGAACTGTTACATGGCT- 85359

Drosophila GC------------------------TCGAATTC-------ACGA--------------- 3584

Canis GA--------AAGTTTCTCTTTTCTTTTGAACCCTGTGTTAGTGAGCTGTTAT-TCTTG- 55487

Bos ----------AAGTCTGTGCTATTTTTTTGTCCCTGTAT--------------------- 11171

Rattus TGCTACTATCCAAC----TCTGAAAGATCTTTTTCCCTTGTCTTATAA----TCTGAATG 70402

Danio T-CTAC-ATCCTAT----GTTGAAAGG----------------------------GAA-- 13059

Mus TGCTACTATCCAAT----TCTGAAAGATCTTTCCCCCC-ATCTTCTAA----TGTGACTG 60438

Gallus TACTATATTCTGCT----TTTAATACGCAGCTTGCTTGCAGCTTTTAAAGGATTAAAATG 41139

Anopheles ----ATGTTCTGTT----CT---------------------------------------- 1612

Homo TCCCAGGATCAAGCACTTTTTGAGTGAAA-TGGTAGTCTTTTATTTAATTCTTAAGATAA 85101

Pan TCCCAGGATCAAGCACTTTTTGAGTGAAA-CGGTAGTCTTTTATTTAATTCTTAAGATAA 85418

Drosophila ---CGGGATCG-GCGC-------GTG---------------------------------- 3599

Canis ACCCTATTTGAAATACCCTTTGTGTGAAATTTACATTCTTTTATTTAATCTTTATAATCA 55547

Bos ---CTAACTCAAAT----------CAGGAGCTGTATTTTTTT------------TAAACA 11206

\*

Rattus ---GTCAAAATGC--------CCTTTTGGCATCCACTGTGATGTCAGGGGCATTTAATCA 70451

Danio ------AAACTAT--------ATTTTTGC--TTCTCT------TCAGGGA---------- 13087

Mus ---ATCAAAATGCAGAGTAGTCTTTTTGGCATCCACTATGATGTCATAGGTATTTAAACA 60495

Gallus ---GTTTAAATGT---------TATTGGGAATGCAGTGTGTCAGTATAGAAATC---AAA 41184

Anopheles ---GTCTAAA---------------------------------------AAA-----AAA 1625

Homo TATGTCCAGATACATACTAGTATTTCCATTTTACACC-------CTAAAAAACTAAGCCC 85154

Pan TATGTCCAGATACATACTAGTATTTCCATTTTACACC-------TTAAAAAACTAAGCCC 85471

Drosophila -----------------------TTCCGGTTGGCGGC-------CTGAAA---------- 3619

Canis CATGCCAAGATACATATTAGTATTT--GTTTTACACC-------TGAAGAAACTGAGCCC 55598

Bos ---------------------ATTT--GCTTTT---------------GAAACT-----T 11223

Rattus GATATTTTTCTGGAAGATCGTTTGAGCTATAAGACTCAAGTATGTGGACAATAGAATGAA 70511

Danio ------TTTCTGGGAGACGGT----GC------ACTCA----TTTGAGCAGGAGAA---- 13123

Mus GTTATCTTTTTGT-AGATCACTTGAGCTATAAGACTCAAATATGTTAACAATAGAATGAA 60554

Gallus GACTTTTACCTGG-TTACCGTGCTAATT-TCATAGTAATTTCCTTTAA-GGCCGAACAGC 41241

Anopheles AACCC---CCT------CCGT---------------------------------AACAGC 1643

Homo TGAATTCTCACAGAAAGATGTAGAGGTTCCCAGTTCTATCTGCTTTTA------AGCAAA 85208

Pan TGAATTCTCACAGAAAGATGTAGAGGTTCCCAGTTCTATCTGCTTTTA------AGCAAA 85525

Drosophila ------------------------------------------------------------

Canis CAGATTTTCACAGAAAAATGTAGAGATTCCCAATCTTACGTGATTCCA------AACAGA 55652

Bos GAAGTCTT----GAAAA-------------CAGTGTGATGCAATTGC------------- 11253

Rattus TATTAACTATGTCTAGTAA-TGATAAATTACCATT---ATATTTATATCATAGTATTATT 70567

Danio ------------------------------------------------------------

Mus TATTAACTGTGTCTAGTAA-TGATACATTATCATTGTTATATTTATATTACAGTATTACT 60613

Gallus T------TGTGGCTGGTAGGTAACTTGTGTTCATCAAACTCACTTTTTTAAAAAGCCATT 41295

Anopheles T------GGT-----------------------------TTACTAT--------GCCAAC 1660

Homo T---------------------GCCCTTAC-TACTCTACTGTCTACTTCTGTGTACTACA 85246

Pan T---------------------GCCCTTAC-TACTCTACTGTCTACTTCTGTGTACTACA 85563

Drosophila ---------------------------------------TGCCTGCGTCTG----CTA-A 3635

Canis T---------------------GCTGTTCAATACCATACTATCTCCTTTTCTGTACTATA 55691

Bos T---------------------GCTGTTC------------------------------- 11261

Rattus TTATTATTCATTTCAGTTTGTAGA-GACTACTCTTGCTTTGCACTTTCTAATACCAGTCA 70626

Danio -------------------GAAGA-GACT------------------------------- 13132

Mus TTAT---TCATTTAAGTTTGTAGAAGATTACTCTTGCTTTGCCCTTT------------- 60657

Gallus GTACTGAGCTTTGTGGTT--TAGAAAATTGACACAGAAACAGGTATT------------- 41340

Anopheles ATACTG------GCGG------GAGAGCTAGAACCAAAGC-------------------- 1688

Homo TCATC--------CAATT-CTGAAAGACATAGGCTTCCCCATCCCCTGCTAAG------- 85290

Pan TCATC--------CAATT-CTGAAAGACATAGGCTTCCCCATCCCCTGCTAAG------- 85607

Drosophila TCAC----------------------------GCGTCAC--------------------- 3646

Canis CTATT--------CAATC-TTAAAAGACA--GACTTCTTCCTCCCTTGTGGAG------- 55733

Bos -------------TAGTC-CCCAAAGA--------------------------------- 11274

Rattus CAAAGGTGTTTTCTCATGGCAGCCATTATATTGCTGTTCATTTTTTCTTTTTTTT----- 70681

Danio -------GTTTCTCCA-------------------GTTCA-------------------- 13146

Mus --------TTTTTTTAATAGAAAAGCAAATATGTTATTTATTCAGCTTTTAGGT------ 60703

Gallus --------CATTTTTGACCAGACAAGAAAGGAAGTTCCCA-------------------- 41372

Anopheles ---------ACTATCG-------------------------------------------- 1695

Homo -------ACTGGTTCAAGTGGCAGCTACTGATGGATTGCAGTGAGAAGGCATGCAAACAC 85343

Pan -------ACTGGTTCAAGTGGCAGCTGCTGATGGATTGCAGTGAGAAGGCATGCAAACAG 85660

Drosophila ----------GGTCCGGATAGC-------GATCGGTTGC--------------------- 3668

Canis -------ATTGGT--AAACGGG-------------------------------------- 55746

Bos ------------------------------------------------------------

Rattus -------CTTTTTGAGTGAATAGAAGGAACATATACTTAATTTTTTTTTGTTTTTTTTCT 70734

Danio ------------------------------------------------------------

Mus --------------AATTAAATAACAAAATTCAGAGTAAA-------------------- 60729

Gallus --------------GAAGAGGTAAAAGAAT------------------------------ 41388

Anopheles ------------------------------------------------------------

Homo GTACCTTCCTGGAAGTTGTCTCCAAAGGCTATTGCTCTAAGACTCAAGTATATAAACACT 85403

Pan GTACCTTCCTGGAAGTTGTCTCCAAAGGCTATTGCTCTAAGACTCAAGTATATAAACACT 85720

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TGGATATTTTATGTATTTACATTTCAAATGTTATCCACTTCCCCCACTCTCCCATACTCC 70794

Danio ------------------------------------------------------------

Mus -GCAAAACAAAAACCATAACATGTCATATGATATATCATTTCTAAGCACAATGGCAAT-- 60786

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AGAATGAATATCAACTCTATCTAGCAATAAATGTTATTTTTATATTACAGTTGACCCTTG 85463

Pan AGAATGAATATCAACTCTATCTAGCAATAAATGTTATTTTTATATTACAGTTGACCCTTG 85780

Drosophila ----------------CTACCTCGCA---------------------------------- 3678

Canis ----------------------GACAA--------------------------------- 55751

Bos ------------------------------------------------------------

Rattus A----TCCCACTGT-------------------TTCTATGAGGATACTTTCACTCTCACC 70831

Danio -------CCACTG----------------------------------------------- 13152

Mus -----TATTAATGA-------------------ATATAAAAATTTATCATTCATATTTGC 60822

Gallus ----------CTGA-------------------ATCTTGGGACTTGCCCTTCAGCGCA-- 41417

Anopheles -----------TGA-------------------GTT---GGACTT--------------- 1707

Homo AACAACACAGCTGTGAACTTCATGGGCCCTCTGACATGCAGATTTTTTTTCTCAACTAAG 85523

Pan AACAACACAGCTGTGAACTTCATGGGCCCTCTGACATGCAGATTTTTTTTCTCAACTAAG 85840

Drosophila -------CACCTG----CTTCA-------------ACG-----TTCTCCTCCTGCCCGAG 3709

Canis --------AGGTG------------------------------CTTTTTTGTTGCCTACT 55773

Bos -------------------------------------------GTTTTCTGT-------- 11283

Rattus CATCCACTCCATCCTCAGGGACCTGGCATCACCCTAC----ATTGGGGAAACAAGCCGCT 70887

Danio ------------------------------------------------------------

Mus TTCTAACACCAGTCACAAAAG--TGGCAACC------------------ATTATATTGCT 60862

Gallus --------------------------------------------------------TGCA 41421

Anopheles ------------------------------------------------------------

Homo AGCAGATTCAGTATTGGTGGGACTCAGAACCTGCATATACAGAGGGCTGACTTTCATACA 85583

Pan AGCAGATTCAGTATTGGTGGGACTCAGAACCTGCATATACAGAGGGCTGACTTTCATACA 85900

Drosophila TACAG---CAGCCGCG---------AGAAGCTG--------GAGGAGCGCCT--GATGAA 3747

Canis AGTGGGATAAGTTGAG----------GAA--TGC--------AAACATAACTTC--TGGA 55811

Bos --------------------------------GC--------AAAAAT--CTT------- 11294

Rattus GCTCAGTTTGTAAGT--TGATT-------CATAACAGGGATCAACATGGTAATAGGAAAG 70938

Danio GCACAG---------------------------------------------ATAG---AG 13164

Mus GCTCAGTTTTAAAGG--TAATT-------CATAACAGGGATAAACATGGTAATACAGAAG 60913

Gallus AGCCAGATCTT--GT--TAACA-------AGTGGCACGGATC--------CATAGACAAG 41462

Anopheles -----------------------------------ACGG---------------GACACG 1717

Homo TGCCAGTTTCACAGGGCCAACTGCAGAACTTGAGCGTGCATGGATTTTGGTATACACACG 85643

Pan TGCCAGTTTCGCAGGGCCAACTGCAGAACTTGAGCGTGCATGGATTTTGGTATACACACG 85960

Drosophila GGCCA-----------TCAACT-----ACTCGAA-------GGGCTTCGGCATGC---TG 3781

Canis GGTTGTTTCTGAAGG--TAATT-----GCTCTAA--------GACTCCAGTAT------G 55850

Bos ------------------------------------------------------------

Rattus CCTCAATGGGAATATCCTAGCATTATCTCTACAATATGGCAAAGTAATATTTTAGATT-- 70996

Danio CTCCAGTTGGAGG--------------TTTA------GGCAAACT--------------- 13189

Mus CCTTAATGGGAATATCCTAGTATTATCTCTACAATATGGCAAAATAATGTTTTAGATTGA 60973

Gallus TCTTACTCAGAAAA--------------CTGCAGTTGGAGAGATTTAGAATCTAGGTT-- 41506

Anopheles TC-----------G--------------CTGC---------------------------- 1724

Homo TGGTC-CTGGAACCAATCCCTGTCACATATAC-CAAGGGATGGCTG-TATGTTACTTTAT 85700

Pan TGGTC-CTGGAACCAATCCCTGTCACGTATAC-CAAGGGATGGCTG-TATGTTACTTTAT 86017

Drosophila TAGAC-TATGGTCCAAAC--TG-----------CAAG-------TG-CAAGT-------- 3811

Canis TGAACACCAGAATTGAG---TATCAGCTGTAT-CTAGAGATGAATAACATTTTATATTAC 55906

Bos --------AAAATCAA------------------TAAAGATGGA---------------- 11312

Rattus --------AATGTATGCGATTTGCTTATTTATTCTCTTATTATTGGCAATAGGATTATCA 71048

Danio ----------------------------------------------CAAGATGATTAT-- 13201

Mus TTATGATTAATGTATGCATTTTGATTATT-ATCCTTTTGTTATTGGCAATAGAATTATCA 61032

Gallus -----------------------------------------------AGCAAGTCTA--- 41516

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------ATTCATTTGTTC 85712

Pan ------------------------------------------------ATTCATTTGTTC 86029

Drosophila -----------------------------------------------------------C 3812

Canis ------------------------------------------------ATTA--TTTTTC 55916

Bos ------------------------------------------------------------

Rattus TGAGATTAGAGCTATTAAAAATAAAATTTTCATTCTTACTGTTGAAGTGTTTTCATTTCT 71108

Danio ------------TGCCAAAAATGG-----------------------------------T 13214

Mus TGACAGTGGGGCTGTTACAAATAAAGTTTTCATTCTTAGTGTTGAAGTGTTTTCATTTCT 61092

Gallus ----------GTCAGCATATATTGG------------AGTGTATGAAAGTATTAGTACTT 41554

Anopheles ------------CATCCTAC-------------------------------------CTT 1735

Homo T---------GTTATTTTATAAGGTTGTTCGTCGTGGTATGTGGGAATTCACCAGTATTT 85763

Pan T---------GTTATTTTATAAGGTTGTTCGTCGTGGTATGTGGGAATTCACCAGTATTT 86080

Drosophila T---------GTCATCT--------------------------GGAACTGA--------- 3828

Canis T---------GTTATTTTAT--------TCTTCCTGCTATGTAGGAGGATACTTGTATTT 55959

Bos ------------------------------------------AGGGAGA-ACTTGGAATG 11329

Rattus CCTGAAGAAGCACTTTAAGTAGAGGTTTGTGGATGTGTAGTAGATAACATTTTTAACTTT 71168

Danio CCCGA--------CTCAGACAG-----------------GTAAACTCAATTATTACC--- 13246

Mus CCTGAAGAAGCACTTTGGAGGA----TTGTGGTTGTGAAGTAAATAACATTTTTAACCTT 61148

Gallus TCTCA-----------AAATAA-----------------GGAAGTCTTATTTCCAAA--- 41583

Anopheles TCGC------------------------------------------TCATCCCCGA---- 1749

Homo CTTCT-------TTCT-GGTGC----------------ACCGTTGGTCATTTCTGGCAGC 85799

Pan CTTCT-------TTTT-GGTGC----------------ACTGTTGGTCATTTCTGGCAGC 86116

Drosophila ------------------------------------------------------------

Canis CTTCT-------TTTTTAGTAC----------------ACCCTAAGTCATTTCTAGTAGC 55996

Bos TTT--------------------------------------------------------- 11332

Rattus AAGAAGCACTGCAAGTATGCTTTTGCAAAACGGTACTGTCATTTTACCCTAAGATGACCA 71228

Danio ------------AAATAT------------CTGCACTGTCATTTCAT------------- 13269

Mus AAGAAGCACTGCAAGAATGCTTTTGTAAAATGATACTGCCATTTTACC-TAAGATGACAA 61207

Gallus ----------GTAAAATTCCTTT-------------TTTTTTTTAACATTGGGTCAGTGA 41620

Anopheles ---------------------------------------------------GGACGACGA 1758

Homo AGTGGTGAATGTATTTACTCTTAGCAACCTCTGTGCTGCTACCTGTTCTGAGTTTCAAAG 85859

Pan AGTGGTGAATGTATTTACTCTTAGCAACCTCTGTGCTGCTACCTGTTCAGAGTTTCAAAG 86176

Drosophila ---------------------------------TACCACCACCT-CTCTGGG-----AAG 3849

Canis AATTATATAA---------CTAAGCAACTGCTAATATGCTACTTACCTGAAGTTTC-AAA 56046

Bos -------------------------AACTGC----------------------------- 11338

Rattus ACAATGCTATAACTCAGTTTTATATC----------TCTATTAGTCTTTGGTCATGTTGT 71278

Danio ----------------------------------------TTAG--------CATTGTGT 13281

Mus GCAGTGCTAGAACGTA-TTCTGTATC----------TCTTTTAATCTTTGGTCATGTTGT 61256

Gallus A--------------AGTCTTGTGG-----------------GGTTTTTCTTCATTCAGT 41649

Anopheles --------------------TGTG----------------------------CGCCCAG- 1769

Homo GTGATTCATTAA---AGGGTTGGGATAACATGGTGATAGGAAAAACCCCCCTCATC-AGT 85915

Pan GTGATTCATTAA---AGGGTTGGGATAACATGGTGATAGGAAAAACCCCCCTCATC-AGT 86232

Drosophila AAGATT--TCGA---AGACTT------------TGATCGG-------------------- 3872

Canis TTGACACATGAA---AGGGTTGAG----------GACAAGATAAAACCTCACTGTG-AGT 56092

Bos ---------------------------------------------------------AGC 11341

Rattus CTTGGAGTATTAAATAAAATTTCATCT--GTTTAAATTTGTTTATCACTGATGACTCATG 71336

Danio CTTG---------------CTCCATCT--TTTTG-----GTACAGTATTG---------- 13309

Mus CTTGGAGTGTGAAATAAAATTTTACCTTAGTATAAATTTGCTTATCACTGATGACTCAGG 61316

Gallus GCTGTATACTGAAATAGCCCTATGTCAGAATTGAAGTCTGGTT-CAGCTAGTAA------ 41702

Anopheles ------------------CCGATG------CGGAGGTGCGGTC-GCGCCAG--------- 1795

Homo CACAAGGAGTATAACAGCAATATCT----CTGTAATATGATTGATCATAGATATAATTTC 85971

Pan CACAAGGAGTATAACAGCAATATCT----CTGTAATATGATTGATCATAGATATAATTTT 86288

Drosophila ---------------------------------------------------------TTT 3875

Canis CCCAAGGACT-TCACAGTAGTATTT----GT-TAGTGATGTTAATCACAGATAGG--TTT 56144

Bos CCTCAGAACT-TTACTTTAGTA------------------------ACAG---------- 11366

Rattus ATC--------------------------------------------------------- 71339

Danio ------------------------------------------------------------

Mus ATCATGAGCTGTCTTTTAGGTATTTATCTTTTTTTAAAATATTTTTATTACATATTTTCT 61376

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAGTAGGAAA-------------------------------------------------- 85981

Pan TAGTAGGAAA-------------------------------------------------- 86298

Drosophila GAGT-------------------------------------------------------- 3879

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TCAATTACATTTCCAATGCTATCCCAAAAGTCCCCCATACCCTCCCCCCCTCAACTTCCC 61436

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TACCCACCCATTCTCATTTTTTTGGCCCTGGCGTTCCCCTGTACTGGGGCATATACAGTT 61496

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TGCGTGTCCAATGGGCCTCTCTTTGCAGTGATGGCCGACTAGGCCATCTTTTGATACATA 61556

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TGCAGCTAGAGACAAGAACTCCGGGGTACTGGTTAGTTCATAATGTTGTTCCACCTATAG 61616

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus GGTTGCAGATCCCTTTAGCTCCTTGGGTACTTTCTCTAGCTCCTCCATTGGGAGCCCTGT 61676

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus GATCCATCCAATAGCTGACTGTGAGCATCCACTTCTGTGTTTGCTAAGCCCCAGCATAGT 61736

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus CTCACAAGAGACAGCTACATCTGGGTCCTTTCAGCAAAATCTTGCTAGTGTATGCAGTGG 61796

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TGTCAGCGTTTGGAAGCTGATTATGGGGTGGATCCCCAGATATGGCAATCACTAGATGGT 61856

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus --------TTAACCATTACTTTGTGAATTGTCTTTTCCACTTTTC-----ACTGATA-TA 71385

Danio --------------------TTGTG--------------------------CTAGT---- 13319

Mus CCATCCTTTTAACCATTACTTTGTGAATTATCTTCCCCACTCTTCTTTCCACTGATTATG 61916

Gallus -------------------TATCTGG-------------------------CTAGTG--- 41715

Anopheles ------------------------------------------------------------

Homo ----------AAAAGTCATATCTTGATGCATCTCT---------------GAGAATAGTT 86016

Pan ----------AAAAGTCATATCTTGATGCATCTCT---------------GAGAATAGTT 86333

Drosophila ---------------TCGT-------------TTT---------------GGG------- 3889

Canis --------------GTCACCTCTTAGTTTTTCTTT---------------GAGAATAGTT 56175

Bos ----------------CAC----------------------------------------- 11369

Rattus AACTATTTCTTTTAGAATGTATTCTTTTTAAAG-GGTAATTTACAA-ACAT--------- 71434

Danio -------------------TATCCTTATTAAAG-GG------ACAA-AACA--------- 13343

Mus AACTATTTCTTTTGGAATGTATTCTTTTTAAAG-GATCATATGCAA-ACAT--------- 61965

Gallus ----------TTTGG---GTGTTCCCTTCAGAT-AAAGATGTATAATACATTA------- 41754

Anopheles ----------------------------------AAAAAGGTAGAAGAC----------- 1810

Homo GAACATATCTTGTGC----TATTCTTTATAGAGAAATTATCTTTGAAATTAAAGTCTTAA 86072

Pan GAACGTATCTTGTGC----TATTCTTTATAGAGAAATTATCTTTGAAATTAAAGTCTTAA 86389

Drosophila ---------TTCTGC----CATT--------------TATTTTTGA-------------- 3908

Canis GGAAATAT-TTTTG-----TGTTCTTTATAGAGAAATTATTTTTTAAAGTT--------- 56220

Bos ------------------------------AACAAATTA------AAAAC---------- 11383

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Rattus -GTTATATATGTGCTCTTCTAGT-CTGCAGCTTTTTTTGTCC-ACTGAATTTTATTTTTG 71491

Danio -GGGGTGTATGG-----TACAGT-CAGC------------------------TATTTT-- 13370

Mus -GTTATACATGTGTTATTCTAGT-CTGCAGCTTTCTTTCCCCCACTGAATTTTATTTTTG 62023

Gallus -GCTGTGCACGCATGGTTTAAATGTTGCGG-------------------TTGTATTCGAG 41794

Anopheles --CCGTTCA---------TAA----CGGAG-------------------CTGGAC----- 1831

Homo TTTTACTTCTAGCTTTTTATAACAACATAATCCCTACT-----------TGGTATGTATC 86121

Pan TTTTACTTCTAGCTTTTTATAACAACATAATCCCTACT-----------TGGTATGTATC 86438

Drosophila ---TACGACCTGTTCAATGAGACAATATA-TACATACC-----------CAATATATGT- 3952

Canis -TTTATTTCTAGCTT------ATAACATAATTCCTACT-----------TGATACTTA-- 56260

Bos ----------AACTC------ATGCCACAGT----------------------------- 11398

Rattus TTGAAATGGAGTTTTGCATGAGTTACTTCTAGACCTGCTTCTTCTCTGCTTATTCCTGTG 71551

Danio ---------------------GCTACTTCTGA---------------------------- 13381

Mus TTGAAATTGAGTTTTGTGTGAGTTACTTCTAGACTTGGTTCTTCTCTGCTTATTCATTTG 62083

Gallus TACAAATAATTACATGCTCTTATTTCATGTATA------TCAACTTTACT---------- 41838

Anopheles ----------------------------GTAAA------TCCGCTCGACT---------- 1847

Homo TTAAGATCATTTTTAA-ATGTATGATTTGAAGG------GCAAACTAGTGTTATGTGAAA 86174

Pan TTAAGATCATTTTTAA-ATGTATGATTTGAAGG------GCAAACTAGTGTTATGTGAAA 86491

Drosophila ----GCTCAATTT------ATATGGTGCGACGG------CGAAGCGAG------------ 3984

Canis ---AGATCATATGTTA-ATGTGTGATTTGAAAG------GCAAATGAA------------ 56298

Bos -----ATGTTGTCTTC-ATGTGT--CTTGCAA------------TGAA------------ 11426

Rattus TTCTTTGATCAAAATCACACCTTGTTGATTCTTTTACCTTTTTTTTTTTTCCTTTTTTTT 71611

Danio ---------CAAA----------------------------------------------- 13385

Mus TTCTTTGATCAAA----------------------------------------------- 62096

Gallus -------GGCAAA----------------------------------------------- 41844

Anopheles -------GCCGGA----------------------------------------------- 1853

Homo A----ATGACAGAT---------------------------------------------- 86184

Pan A----ATGACAGAT---------------------------------------------- 86501

Drosophila ---------CAGAC---------------------------------------------- 3989

Canis -----AAGATGGGT---------------------------------------------- 56307

Bos -----CTGTTTG------------------------------------------------ 11433

Rattus TTTTTCAGGGGCTGGGGATGGAACCCAGGACCTTGCGCTTCCTAGGCAAGCGCTCTACCA 71671

Danio -----CAG----TGGAAACAAA------------------TTTAGATGTATACTGTACTA 13418

Mus ----------------ATCACA------------------TCTTGATGACTCCTTTACC- 62121

Gallus ----------------AGCTAA----------------CTTATCTGCTTATGCCATAGG- 41871

Anopheles ----------------AGCC-------------------------GCTGGTGCCATA--- 1869

Homo --------------AAAGTAGC------------------TTCCAACTCATCCTCAAGAG 86212

Pan --------------AAAGTAGC------------------TTCCAACTCATCCTCAAGAG 86529

Drosophila --------------CGAACGG------------------------ACACGC--------- 4002

Canis --------------GTAGTAGC------------------TTCCAAATCATTCTCACCA- 56334

Bos ----------------AGTAGC------------------T----AATC---CTC----- 11447

Rattus CTGAGCCAAATCCCCAACCCCGATTCTTTTACCTTTATAG--AACAAAGAACAAGTCTTT 71729

Danio -----------------------------TGCTTTAGTAGTAAACTAGCGATCAGTGTTT 13449

Mus ---------------------------------TTGATAG--AACAAAGAGCAAGTCTTT 62146

Gallus ---------------------------------TATGTAG-AAGCAGAAACTATAGCTTG 41897

Anopheles ------------------------------------------------------------

Homo ---------------------------------TTGATGATATTCT--AAACCTTTTCTA 86237

Pan ---------------------------------TTGATGATATTCT--AAACCTTTTCTA 86554

Drosophila -----------------------------------GATTTTGTTTC-----CCTTCTTTA 4022

Canis ---------------------------------TTAACGGTATTCTTAAAACCTTTTTAA 56361

Bos ------------------------------------------------------------

Rattus ATGTCAGATGGGGTGAAATCCTTTACTTTTTCATTGATCTCAATGTTTTCACTAATTTTA 71789

Danio --------------------CTTTTCCCCTCCAT-AACCTCCATGTTTT----------- 13477

Mus ATATCAGATGGTGAGAATCCCTTTACTTTTTCATTGTTCTTAATGTTTTCACTAATTTTA 62206

Gallus TTTTCA-------------CGTTTTATTTTGCACCTATTAACATGCACTGT--------- 41935

Anopheles ------------------------------------------------------------

Homo ACTAAA---------------TTCAGCTTCTTAATTTTCTCAATATAAATATGAT----- 86277

Pan ACTAAA---------------TTCAGCTTCTTAATTTTCTCAATATAAATATGAT----- 86594

Drosophila GCC--------------------CAG----TTAATTGT----ACATAAACAC-------- 4046

Canis ACAAAA---------------TTCAAACTTCTTATTTTGTCAACATATATAAGA------ 56400

Bos ---------------------------CTTCTTA----------GTATATGGAA------ 11464

Rattus ATTCCATATAGATATTAAAATCTGTTTGTTGAATTTTACATGGAT---TAATTTT-CTGT 71845

Danio -----------------AAAT----------------ACA-------------------- 13484

Mus CTTCCATGTAAATATTAAAATCTGTTTGCTGAATTTTACATGAAT---AACATTT-ATTT 62262

Gallus ----------AGTATAACAGCTTACACACTGTGTATACCAAGCAT---GACATCTGATTT 41982

Anopheles ------------------------------------------------------------

Homo ---------GAAAATATTAATTCATTAAATAG--TCTACAAGTATTCGGTAGTTGAAGAC 86326

Pan ---------GAAAATATTAATTCATTAAATAG--TCTACAAGTATTCGGTAGTTGAAGAC 86643

Drosophila -------------------------------------ACACATA---------------- 4053

Canis -----------AAATATTCACTGATTAAATAGAATCTACAACTACTAGAAAGTTGAAGAC 56449

Bos -----------GGA---------------------------------------------- 11467

Rattus TTGAGGTTTTGATTTGGGTT------------GAATTGATTGAA--------------TA 71879

Danio ------------------------------------------------------------

Mus TTGATGTTTTGATTTGGGTT------------GAATTGATTGGA--------------TA 62296

Gallus GTAAATGCTTTATTT-------------------ACCAGTAGAA--------------AA 42009

Anopheles ------------------------------------------------------------

Homo TTAAAGTAGTGCTTGTAATAACAGAAGAGAAAAAAGACATTACAGGCGTATCTCACTTTA 86386

Pan TTAAAGTAGTGCTTGTAATAACAGAAGAGAAAAAAGACATTACAGGCATATCTCACTTTA 86703

Drosophila ---------------------------------AACACGCCACA--------------TA 4066

Canis TTACAATAGTTATTATAATACCAGGA----AAAAATTGGCGATA-------------TTG 56492

Bos ---------------------CAGG---------------GAT--------------TTG 11477

Rattus AATCAATT-GAGAATTGTCATTT-CATCAGTCTGGAATCTCTAAACCTCAAGCATGACAG 71937

Danio ---CAGTT-GAGA----------------------------------------------- 13493

Mus AATCAATTTGAGAATTGTCATTTTCATCACTTTGGATTTTCTAAATCTCAAGCATGGCAT 62356

Gallus AATTCCTTTGAAGATAATTAGCT------------------------------------- 42032

Anopheles --------CGAAGA---------------------------------------------- 1875

Homo TTGCACTTTGCAGATACTGAGTTTTTTTGGTGGCAACCCTGCATCAAGCAGGTCTACCAG 86446

Pan TTGCACTTTGCAGATACTGAGTTTTTTTGGTGGCAACCCTGCATCAAGCAGGTCTACCAG 86763

Drosophila CTACATTATG-------TGAACTT-----------ACCCT---------AGG---AACAA 4096

Canis TTAT-CTTGGTTGATATTTATTTC-----------ATTTT---------AAGTGTTCAGA 56531

Bos TTGT-TGTTGTTG-----------------------TTTT---------AAGT------- 11497

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Rattus A--ACTTTCTATTTAGTTATATCAAAGTCTCCTCCAGCATTGTTTTGTAATTGATGTATT 71995

Danio ---------------------------------------------------TGTTACACT 13502

Mus AGCACTTTCCATTTAGTTATACCATAGTTTCATCCAGCATTGATTTGTAATTTTTGTGTT 62416

Gallus -----------------------------------------GTCTCCTGATAGTTACG-T 42050

Anopheles ------------------------------------------------------------

Homo CACCATTTTTCCAACAAAATGTGCTCACTTCATTAGCATTTTTAGCAATGATTTTAAATT 86506

Pan CACCATTTTTCCAACAAAATGTGCTCACTTCATTAGCATTTTTAGCAATGATTTTAAATT 86823

Drosophila CACC-------------------------------------------------------- 4100

Canis TGTTATT------------------------------------------------GAATT 56543

Bos --TTATT------------------------------------------------GGG-- 11505

Rattus GAGATAATATATGCTTTAGTTTGAATAAATTAGAATATTATGCTTCTTATATATTATTTC 72055

Danio GTAACAATATATAC----------------------------------ATATA------- 13521

Mus GAAATAATGTATGCTTTAGT--GAATAAGTTTAAATAATATGTTTCTTATGCATTATTTC 62474

Gallus GAAGTGATGTTTGT-----------------------------------TGTTCTAATC- 42074

Anopheles ------------------------------------------------------------

Homo AAGATAATGTACTTATT----------------------------TTTAGACAATGCT-- 86536

Pan AAGATAATGTACTTATT----------------------------TTTAGACAATGCT-- 86853

Drosophila ------------------------------------------------------------

Canis GAAATGAATAAAACACT----------------------------TTGAAACTGT----- 56570

Bos GAAA-------------------------------------------------------- 11509

Rattus ATCTTTATATTTCTGAGACCAAGCTCATAATTACTTCTATTGCTTTAAAAAGCCTTGTCA 72115

Danio ---------------ACAACAAGCT-ATGGTTGACCCGA--GCTTAAACAAACCTTGTC- 13562

Mus ATTGTT-CATTTCTGAGAATAAGCTTATAATTACTTTCATTGCTTTAA-AAGCCTTGTCA 62532

Gallus ----------------------GTTCATTTGCAAGTACATTGCT-----AAGGCTTTTCA 42107

Anopheles ----------------------GTTC---------TACA--------------------- 1883

Homo ---------------GTTACACACTTG-ACTACAGTATAATGTAAACGTAACTTTTATAA 86580

Pan ---------------GTTACACACTTG-ACTACAGTATAATGTAAACGTAACTTTTATAA 86897

Drosophila -------------------CACATTTA-AAAACAGTAC---------------------- 4118

Canis ---------------TTAATACATTTAAGCTAAAAATTAGT---AGCATAACACTT-GAT 56611

Bos -----------------AGTGCATTTG-GCCAAAA----------------------GAA 11529

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Rattus G-AAAATTCAAACAAATTTTTAATCTC----------AGTTATTTTAA---TTTCCTTGT 72161

Danio --------------------------------------GTCAT------------CTTGT 13572

Mus GTAAAATTCAAACAATTTTTTAATTTCTGTTGGCATGAGTTGTTTTAA---TTTCTTTGT 62589

Gallus T---------------------ATTAC---------AAGCTACCTTAA---AGATTTTGT 42134

Anopheles -------------------------AC---------GAGCTGC--------------TGT 1895

Homo GCACTGGGAAACAAAAAAATTTGTGTGACTCA--CTTTACTGCCATAA---TCACTTTAT 86635

Pan GCACTAGGAAACAAAAAAATTTGTGTGACTCA--CTTTACTGCCATAA---TCACTTTAT 86952

Drosophila GCGCTG-----------AAT-----------A--TTTTCCTA----AA---TAAATTTA- 4146

Canis GTAATAGAAAA-AAACCAATAAAGGTATTTTAGTTTTTATTGTTAAAAATATAATTCTAT 56670

Bos ATGATAGTCAA-ACCCT----------------------TTGCAAGAAAGATAAGTTTGT 11566

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Rattus TCTTGGTATGATAGCTTCTTTTTTTTTTTCATTTTTTGAGGGCTTT-TAAAAAATAGATC 72220

Danio T----------------------------------------------------------- 13573

Mus TCTTGGCATGATAGTTTCCGTTTT------ATTTTTTGAGGGCTTTCTTAAAAATGGATT 62643

Gallus TCAAGG------------------------------------------------------ 42140

Anopheles ------------------------------------------------------------

Homo TTGCCATGGTCTGA---------------------------------------------- 86649

Pan TTGCCATGGTCTGA---------------------------------------------- 86966

Drosophila ------------------------------------------------------------

Canis T----------------------------------------------------------- 56671

Bos T----------------------------------------------------------- 11567

Rattus TTTTTTCCATATAATATATTTATTATGGTTTCCCTCTCCCTGTACCCCTTCCAGATCCCC 72280

Danio ------------------------------------------------------------

Mus GTTTTTCCATATAATATATTTATTGT--TTTCCCTGTCCTCCTACCCCTTCCAGATTGCC 62701

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CATACCTCCCTTCCCATCTGGATCCATGCCTTTTCTGTCTCTTGTAAGACAGCAAATGAG 72340

Danio ------------------------------------------------------------

Mus TACACCTCCCCTCCCATCTGC-TCCCTGCCTTTTCTGACTCTTATAAGGAAGCAAACAAG 62760

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TATCTAAGGAATAATAAAATAAATTATGATAAACAGCA-CACAGATAGGGATGATCCAAC 72399

Danio ------------------------------GAACAGC--TACAGA-------------GC 13588

Mus CATC-AAGGAATAATAAAGATAA-----ACAAACAACA-AACAAATTAGGATAACGCAAC 62813

Gallus ------------------------------AAGCAATAACACAGACAAAGTTG-----GG 42165

Anopheles --------------------------------GCGATG---------------------- 1901

Homo -------------------------AACTGAACCGGCAGTATCTCTGGGGTATGCCTGTA 86684

Pan -------------------------AACTGAACCGGCAGTATCTCTGGGGTATGCCTGTA 87001

Drosophila -------------------------AAGTAGTTCGGCG---------------------- 4159

Canis --------------------------AC--AATTGTTACCACTGATAAAGTTAATGAAAA 56703

Bos --------------------------GT----TTATTA---------------------- 11575

Rattus AGCTAAGCAAGAAAAAGAGTCA--------AAGGAAAATGGTTAAAAGAACCTTCTATAG 72451

Danio TGTTGCGCAAAAAAA-----CA--------AAGGGAGA---------------------- 13613

Mus AGCCAAGCAAGAAAAAGAACCA--------AAGAGAAA---------------------- 62843

Gallus GATTTACTACCAGTAATTTTCA--------TGGTAAAA---------------------- 42195

Anopheles ------------------------------TGGTCGAA---------------------- 1909

Homo TAGATATTTTGGTTGGTATTTATTTATTGTATGCAGAAT--------------------- 86723

Pan TAGATATTTTGGT-GGTATTA--TTAT-GTATGCAGA----------------------- 87034

Drosophila ------------------------------------------------------------

Canis TAAATTTTTCAAAAACAACTAA--------ATGTAAAA---------------------- 56733

Bos -------------------TAA--------GCGTAAAG---------------------- 11586

Rattus ATGTAGAGACACACATTTGTATATTAGATAATCTCATAAAAAATGCAAAGCTGTAATACA 72511

Danio ------------------------------------------------AGCCGGAA---- 13621

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ---------------------------------------------------------TCA 86726

Pan ---------------------------------------------------------TCA 87037

Drosophila ------------------------------------------------------------

Canis ----------------------------------------------------------CA 56735

Bos ----------------------------------------------------------CA 11588

Rattus TAATCAGAGGACCTTTAAGGTATGGGGGGAGAAACACCATGACTTAACATTATGAGACCA 72571

Danio -AAACAAAGGA------------------------------------------------- 13631

Mus -AATT------------------------------------------------------- 62847

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAAAAATAAAAACTGCGAG-------------------------------GCTGTTTAAT 86755

Pan TAAATA----AACTGCA---------------------------------GCTGT---AT 87057

Drosophila ------------------------------------------------------------

Canis TGAACAT----------------------------------------------------- 56742

Bos TG---------------------------------------------------------- 11590

Rattus TGATCCTCTGTAGATG--CCTTGAGTTAGTTTTATGTTGGCCATTTACTGGTGGACATGG 72629

Danio ---------GTAAATG--ATT-------GTTTCA-----GCAACCTA-----AAACATGA 13663

Mus --------TCTAGATG--ATT--------CTATA-------GATGTA----GAGACACAC 62878

Gallus ---------GTAGGTGTAATTTC------CTATA----------GTACTGCTAGCTACGT 42230

Anopheles ---------ATGGAT--------------------------------------------- 1915

Homo ACATTTCAACTAAAAGTTGCCAGCATCATTAATA-------TGTAAACCACTAGAAAT-- 86806

Pan ACATTC--ACTAAAG--TGC-AGCATCAT--ATA-------TGTAA--CACTAGAA---- 87097

Drosophila ------------------------------------------------------------

Canis ---------TTAAGAGTC--TAGCATTAAT-AAA-------AATAAAGTGTTAAATGT-- 56781

Bos ----------TGAAAGT-----GCACT------------------------TAAAT---- 11607

Rattus CCCCACACATAAGAGTGGCATGTTTCTTCAGTGAGACTTGCTTATAGAAAACTAATGTT- 72688

Danio AC----------------------------------------------AAACTGCTGT-- 13675

Mus AT------------------------------------------------ATTTGTGT-- 62888

Gallus TG-----------------------------------------------TACAGTTGT-- 42241

Anopheles -------------------------------------------------CACGACTAT-- 1924

Homo ------------------------------------------------AAGATTTTGTT- 86817

Pan ------------------------------------------------TAGATTGT---- 87105

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------TGATTCTTAAGG 56793

Bos ------------------------------------------------------------

Rattus TCATTTACAAGTGTCTGTGAATTGGTGATAGCCTCTGGATTAGGAATTGGGTATATATGT 72748

Danio --GTTTA--AGTAT-------------------------------------TATAT---- 13690

Mus --ACTAGAGAATCT-------------------------------------CATAAA--- 62906

Gallus ---TTTCCCTTTAT---------------------------------------------- 42252

Anopheles ---CTC------------------------------------------------------ 1927

Homo AATTTTTTGTTTGTTTGTTTAAACAGTCTTGCTCTGTCACTGAGGCTGGAGTGCAGTGGC 86877

Pan -ATTTTGTGTT-GTANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87163

Drosophila ------------------------------------------------------------

Canis AAGTTTTTGTGTATATGT------------------------------------------ 56811

Bos ---TTTTTAT-------------------------------------------------- 11614

Rattus TCACTTT----------------------------------------------------- 72755

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GCAGTCTCAGTTCACTGCAACCTCCGCTTCCTGGGTTCAAGTGATTCTCCTGCCTCAGCC 86937

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87223

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCCTGAGTAGCTGGGGTTACAGGTGCACACCACTACACCTGGCTAATGTTTGTATTTTTA 86997

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87283

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTAGAGATAAGGGTTTTGCCATGTTGGCCAGGCTGGTCTCAAACTCCTGACCTCTGGTGA 87057

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87343

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TCCGCCCGCCTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCATACCTAGCA 87117

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87403

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAATCAACTCTGAATCTGAATCAAACCTTTGAAACAAAAATTACCAATCAAAAAAACGTG 87177

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87463

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CAATCCCTGCTCCTAACTTTGAAAAAGTGACAAGGAAGGACATTTGGAAAGATGTCTCTA 87237

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87523

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AGCAGTCAACAAGAAATGAA---------------------------------------- 87257

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87583

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87643

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87703

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87763

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87823

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87883

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN 87943

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -----------------------------TCACTTCTAGCACTGCGTCTGTTACAGATCA 72786

Danio -----------------------------TCACTTCTAGA-------CTATTATGAACC- 13713

Mus -------------------------------AAATGCAAAAC--------TCACAAAAC- 62926

Gallus ----------------------------------TTCAGCTTCCCTTTTTTTCTGGTGT- 42277

Anopheles ------------------------------------------------------------

Homo ------------------ATCAGGGAGA-GCTTTTTCAGCACC-------TGAAAAAATA 87291

Pan NNNNNNNNNNNNNNNNNNATCAGGGAAAAGCATCCTCAGCACC-------TGAAAAA-TA 87995

Drosophila ------------------------------------------------------------

Canis --------------------------------TTTCTAGTTGC-------TGATAAAGCA 56832

Bos ----------------------------------TCT--TTGC-------TTATTAACCA 11631

Rattus ATGCAGGATCTGTGCATGTTGCCACAGTCTCTGAATTCATACATGCAATATTTGGTTGTG 72846

Danio ---CAGAAT-----------GACGGAATTACT-----------------------TTCTA 13736

Mus ---TAGAA------------GCTCTAATACATA--------------------------A 62945

Gallus ---TATAAT-------------TGTGATTTTAA-----------------------TGCA 42298

Anopheles ------------------------------------------------------------

Homo CATGCAAAAACGCCCGAGGCGGGCAGATCACCG------------------------GAA 87327

Pan CATGCAAAAACGCCCAAGGCGGGCAGATCACCG------------------------GAA 88031

Drosophila ------------------------------------------------------------

Canis CTCCCT-------------------GATTTCAT------------------------TTA 56849

Bos C-------------------------ATTTTA---------------------------A 11639

Rattus TCAAAAAGGCATTGATTCCTTAGTGTGTGCCCTCCACCCCCGCTCCCCATTCTTACATGA 72906

Danio TCAAGAGG--------------------------------------------TTACATG- 13751

Mus TCAGAGGA-------------------------------------------CCTTTAAGA 62962

Gallus TGGTAG-----------------------------------------------TCCTAGT 42311

Anopheles ------------------------------------------------------------

Homo GCCAGGAGTTTGAGACCA--------------------------------GCCTGGCAAA 87355

Pan GCCAGGAGTTTGAGACCA--------------------------------GCCTGGCCAA 88059

Drosophila ------------------------------------------------------------

Canis CTAAGAGACTTAGAGGTA--------------------------------TCTTTTTAAA 56877

Bos ATAGACAATCCAAAG-----------------------------------TCTT------ 11658

Rattus CTTCCCCGTTTTCCACAGAGTTCATGCAGCCTAGAGGGGAGATAGTCTCACTCTCTTCCT 72966

Danio ------------------------TGCTGGTGAAATTAAAGATA---------------- 13771

Mus ------------------------TATGG---GGGGGAGAAACACC-------------- 62981

Gallus ------------------------TTTGGTCAATGAATAAAATGG--------------- 42332

Anopheles ----------------------------------GAGTACAA------------------ 1935

Homo CATGGGGGAAACCCCGTCTCTACTAAAAATACAAAAATTAGCTGGGTTTGGTGGCAGGCA 87415

Pan CATGGGGGAAACCCCGTCTCTACTAAAAATACAAAAATTAGCTGGGTTTGGTGGCAGGCA 88119

Drosophila ------------------------------------------------------------

Canis T--------------GGCCCTCCTTAGTGTTTTGGGGTGAG--------AGTCGAGGACT 56915

Bos -----------------CCCTTCTT-------------------------GTCG------ 11670

Rattus ATTTTGTGGCTGTGAGTCTCTGTATTTGTTCCATCTGCTTTAGGAAGAAGCTCTCAGATG 73026

Danio ------------------------------------------------------CAGATG 13777

Mus ---------------------------------------------------------ATG 62984

Gallus -----------------------------------------------------------G 42333

Anopheles ------------------------------------------------------------

Homo GCTGTAA--------------------------------TCCCAGCTCCTCGGGAGGCTG 87443

Pan GCTGTAA--------------------------------TCCCAGCTCCTCGGGAGGCTG 88147

Drosophila ------------------------------------------------------------

Canis ACTA--------------------------------------CAGTTTCTTTGTAG-TTG 56936

Bos ------------------------------------------------------------

Rattus ATGGCTGAGTAGGGCATAGCTCTAGAAATGAAGCAGGATGCTTTTGGAGTCATTTTACTG 73086

Danio A-----------------------GAGAT------------------------------- 13783

Mus A--------------------------AT------------------------------- 62987

Gallus A----------------------------------------------------------- 42334

Anopheles ------------------------------------------------------------

Homo AGG-------------------CAGGAGAATCGCTTGAACCTGGGAGGCGGAGGTTGCAG 87484

Pan AGG-------------------CAGGAGACTCGCTTGAACCTGGGAGGCGGAGGTTGCAG 88188

Drosophila ------------------------------------------------------------

Canis ATA-------------------CTGACTTTCTGTTTAAA--------------------- 56956

Bos ------------------------------------------------------------

Rattus TAACATTCCATTAAAAAGAAAACAGTAGTATTTGGTTGCCTCTGGGTTCCTGGGCTATCT 73146

Danio -----TTGCACTGA---------------------------CTG------TGAGCTAT-- 13803

Mus -----TAACATTA-----------------------------TGAGACCAAGAACCTCTG 63013

Gallus -----TTTCATTTT------------------------------------AGAGCCTTTT 42353

Anopheles ---------------------------------------------------GAGC----- 1939

Homo TGAGCCTAGATCGTGCCACTG-----------CACTCCAGCCTGGGCAACAGAGTGAGAT 87533

Pan TGAGCCTAGATCGTGCCACTG-----------CACTCCAGCCTGGGCAACAGAGTGAGAT 88237

Drosophila ------------------------------------------------------------

Canis --AGGCTTGATCAAGCAAC--------------------ACCTGGGTGGCTCAGTCAGTT 56994

Bos ------------------------------------------------------------

Rattus GATCTCAGGTTCTTAGTCCTACAAGCAATGTTAGATA----------CAAGTTTAGCTCA 73196

Danio ---------------------------ATGTTG--------------CAAGTT------- 13815

Mus CA------------------------GATGCCA------------------TT------- 63024

Gallus CA------------------------GAGGTGA-----------------ATCTGGGAAA 42372

Anopheles --------------------------------------------------ATC------- 1942

Homo TC------------------------CATCTCAAAAAAACGAAAAACAGATTCAGAGTTT 87569

Pan TC------------------------CATCTCAAAAAAACGAAAAACAGATTCAGAGTTT 88273

Drosophila ------------------------------------------------------------

Canis AT------------------------GCCTTCAG----------------CTCAGG--TC 57012

Bos ---------------------------CCATCAT----------------CTTA------ 11681

Rattus TAGAGTTGGTC--TTAACT--CAAATTGAATATTGGTTACCCCTACCAGCTTTGTGCCAC 73252

Danio ----GTTTTTT--TTAACC--CAAAT---------------------------------- 13833

Mus --GTGTTGGTCAACTAACTGTTGGAT---------------------------------- 63048

Gallus -AATGTTAGTCC-TTCGTTATTAAAC---------------------------------- 42396

Anopheles --GCGTCGGCC------------------------------------------------- 1951

Homo ATTTCCTTCCCAAATACTTCATAGAT---------------------------------- 87595

Pan ATTTCCTTCCCAAATACTTCATAGAT---------------------------------- 88299

Drosophila ------------------------------------------------------------

Canis ATGTCCCAGTCAGTTATGCC---------------------------------------- 57032

Bos ----TCCAGTCAGCCAT------------------------------------------- 11694

Rattus TATTGCACCAGCTTATCTTGCAAGCAGATCACTCTTGTAGATCAAAGGACTTGTAAATGG 73312

Danio --------------------------------------------AAAGACT--------- 13840

Mus --------------------------------------------ATGGGCCC-------- 63056

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GTTAATGTTACCTTTCTCCTTTGGTATAGTACAAAGTACATACTATGAATAGGATTTTGT 73372

Danio ---------------------------------AAACATATGCTGCGTGTAG-------- 13859

Mus ------------------------------------CACACA-TAAGAATGGCATG---- 63075

Gallus -------------------------------------ACTTGTTGTAAGCAGTGGA---- 42415

Anopheles --------------------------------------------GTAAACGGTGCG---- 1963

Homo -------------------------------------GTTGGTTTGTAGGAATAACTTAA 87618

Pan -------------------------------------GTTGGTTTGTAGGAATAACTTAA 88322

Drosophila ------------------------------------------------------------

Canis --------------------------------------TTCAGCTCAGGTCATGTCCCAG 57054

Bos --------------------------------------TTTA--TCAAGGCACAT----- 11709

Rattus CATTACCTTTAATGCTTCAGCTGTTAAGTCAAGAGACTCAGAATCCTATTAAAATGTTTA 73432

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAG--------------------------------------------------------- 87621

Pan AAG--------------------------------------------------------- 88325

Drosophila ------------------------------------------------------------

Canis AG---------------------------------------------------------- 57056

Bos ------------------------------------------------------------

Rattus ATAATCAGTCATTATTATGTTCTCAGACTTTGGTTTTCATTTGTACTATTTTGCTATCTC 73492

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ATTCTGCCCAGGTTTCCCTACTTTTTTCTGGTGCTGATTATAAGGACTTTTCTCAACTGA 73552

Danio ----------------------TTTTTCTG-----------------------TAACTG- 13873

Mus ----------------------TTTCTCCAGTG--------------------AGACTCA 63093

Gallus ----------------------CTTCATAAGGG---------------------GATTAA 42432

Anopheles ----------------------CT------------------------------------ 1965

Homo ----------------------TCTCACTCGCTTTCTG---------TCTTTTCTAGTAA 87650

Pan ----------------------TCTCACTCGCTTTCTG---------TCTTTTCTAGTAA 88354

Drosophila ------------------------------------------------------------

Canis ------------------------TCCCAGAGTCCCAG---------AGTCCTGGATCAA 57083

Bos ------------------------------------------------------GATCAG 11715

Rattus ACACACTCTGTCTCTCTGTCTTTGTCTCTCTCTCTCTCTGTCTCTCTCTCTGTCTCTCTG 73612

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TT---------------------------------------------------------- 87652

Pan TT---------------------------------------------------------- 88356

Drosophila ------------------------------------------------------------

Canis CC---------------------------------------------------------- 57085

Bos ------------------------------------------------------------

Rattus TCTCTGTCTCTCTCTGTCTCTCTCTGTCTCTCTCTCTCTCTCTCTCTGTCTCTCTCTCTC 73672

Danio ------------------------------------------------------------

Mus -----------CTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTC 63142

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -------TTTATCGTGGATTCTGATTGCCTAGATCTGCTAATTCATTGAGGGTTACAAAA 87705

Pan -------TTTATCATGGATTCTGATTGCCTAGATCTGCTAATTCATTGAGGGTTGCAAAA 88409

Drosophila ------------------------------------------------------------

Canis -------CTCACATCGGGCTCCGA--GCCT----CCTCTCTCTCACTCTG---------- 57122

Bos ------------------------------------------------------------

Rattus TCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTGTGACCTGTCTTTGAG-TAGAGGAA 73731

Danio -----------------------------------GTAACTTATC--------------- 13883

Mus TCCCCCTCCCTCCCTCCCTCCCTCCCTCCCTCCCTCCTTCCTGTCTTTGAG-TAGAGGAA 63201

Gallus -----------------------TTTAAACAGTTTATAGCCTGTAT-----------AAA 42458

Anopheles --------------------------------------GTC------------------- 1968

Homo TTGTGATACTCGAATTCTTTATTCCTCCTTCCTTTATTACCTGTAATACTTCTTAAGAAA 87765

Pan TTGTGATACTCGAATTCTTTATTCCTCCTTCCTTTATTACCTGTAATACTTCTTAAGAAA 88469

Drosophila ------------------------------------------------------------

Canis -CCTGCTGCTCCACCTGCTTGTGCTCTCTCTCTCT-CTCTCTGTCAAAT------AAATA 57174

Bos ---TGTTG-----------------------------------------------GAACA 11725

Rattus AAATATTTCCCA-CAATTTACATG----------TTGGAGAATATGTACTTCATATAGCT 73780

Danio ------------------------------------GGAGA------------------- 13888

Mus AACTATTCCTCAGCTATTTGCATG----------TTGGCGAATATATACTTCATGTAGCT 63251

Gallus AACTGTT---------------------------TTGATGAGCAAG-------------- 42477

Anopheles ------------------------------------------------------------

Homo AACTCTTTCTCATCAACTCTATGACTACCCTAAATTACAGATCCACATATAGGATCTGTA 87825

Pan AACTCTTTCTCATCAACTCTATGACTACCCTAAATTACAGATCCACATATAGGATCTGTA 88529

Drosophila ------------------------------------------------------------

Canis AAATCTTATTTAAAAATTAAAAAA-------AAATTAAGATTTTAT------------CA 57215

Bos TAGT---------------GGAAA-------GAAT------------------------- 11738

Rattus TGTTGCCAGCTGTTTTTTTTTTTTTTTTTTTTGCTGGTACCTCTAACAGTTCCTCAGCTC 73840

Danio ---------CTGT----------------------------------------------- 13892

Mus TCTTGCCAGCTTCTTTTT--------------GCTGGTACTTCTAACAGTACCTCAGCCT 63297

Gallus -------AGCTAAT-------------------CTGGTGGCT-------TGCTACAGCAA 42504

Anopheles --------GCTGAT-------------------CGGG----------------------- 1978

Homo TACATGTATATAAATATGTACATATCATATACGATAATGCTTAATTCTTTCCCATTACTT 87885

Pan TACATGTATATAAATATGTACATATCATATACGATAATGCTTAATTCTTTCCCATTACTT 88589

Drosophila ------------------------------------------------------------

Canis AATTCAGATTTAATTATCCTCTCCCCACA---GTTAATG--TGATTCATTTCATTGAATT 57270

Bos ----------------------------G---GCTATTG--TG----------------- 11748

Rattus ATGTGGTTATCTTAGTCTTACCTAGGGGTCTCTAATACTCAAAGGATAGGAGAGCACTTC 73900

Danio -----------------------AAGGGGCT----------------------------- 13900

Mus ATGTGGTTATCTTTGTCTTACCTA-GGGTCTCTAAGACTCAAAGGATAGGAGAGCACTTC 63356

Gallus AAAGGGT----------------AAGGGGCT----------------------------- 42519

Anopheles ------------------------ACGGATC----------------------------- 1985

Homo ACTAATTTTCAAAATA-----ATGTGATTCCCTAA------------------------- 87915

Pan ACTAATTTTCAAAATA-----ATGTGATTCCCTAA------------------------- 88619

Drosophila ------------------------------------------------------------

Canis ------TTTCCATATT-----ATATCAGCCTTTTA------------------------- 57294

Bos ------------------------------------------------------------

Rattus AGAGCCAAAACTATTCATAGCAGAATGTTCCCTAGTGCCT-CAATAACCATGTATTTGAT 73959

Danio ------------------------------------------------------------

Mus AGGGCAACAACTATTCCTAGCAGAACTTTGCCCATAGCCCATTAATACTGTATATTTGAA 63416

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -------------CTGCTCTCTGAATGTTATCAATGTGGTGGTAATAATGGTGGTGTCGA 87962

Pan -------------CTGCTCTCTGAATGTTATCAATGTGGTGGTAATAATGGTGGTGTCGA 88666

Drosophila ------------------------------------------------------------

Canis -------------TTTCTAGATAAACCTTACTTA-------------------------- 57315

Bos ------------------------------------------------------------

Rattus CAGTAAGACTGTCTGGCATGGTGCAATTTTATTACTTTTTGAATCTTAATAGTTTTTATC 74019

Danio ---------------GCATG---------------------------------------- 13905

Mus C---------------CATGGTGCAACTTAATTGCTTTTTGAATCTTCATAGTTTTAATC 63461

Gallus ----------------CTTTGGCCTACTC------------------------------- 42532

Anopheles ----------------CATCGACC------------------------------------ 1993

Homo T-----------GTTGTGTGGGGTAAAATTTGAATACAGTGAAATACCCAGGGCTTAATT 88011

Pan T-----------GTTGTGTGGGGTAAAATTTGAATACAGTGAAATACCCAGGGCTTAATT 88715

Drosophila ------------------------------------------------------------

Canis ------------GCCGTGTGGTCTATTAGTTATA---AATGTGTTGCTC---TTTTATTT 57357

Bos ----------------------------------------------------CCTTGTTT 11756

Rattus TTTCTATTTTAGGTTTTTAAAAGATTGTAAAATTGTTCATATTCTCCTTTGTGTATATTT 74079

Danio ---------------------------------TATTCATAT------------ATATT- 13919

Mus TTTCTATTTTAGGTTTGTAAAAGATTGTAAAATTGTCTATATTCCTAGTTGTGTATAGTT 63521

Gallus --------------------------------TCATTCATAT--------------AGCC 42546

Anopheles --------------------------------------AT-------------------- 1995

Homo GGGTTAGTTTT-------------TAAAAATTACATTTATGTAAC----------CATAT 88048

Pan GGGTTAGTTTT-------------TAAAAATTACATTTATGTAAC----------CATAT 88752

Drosophila ------------------------------------------------------------

Canis TACTAACATTT-------------TAAGGTCTGTATTCATGAGG-------------AAT 57391

Bos TACT-----------------------------TAATCAT-------------------- 11767

Rattus TTAAATTTAGCTCTAGTTTCTTTGCATTTGTCATAATTTATAAAATTTATTTCTA-ATTG 74138

Danio -----------------------GCATTT---------------ATTTATTT-------- 13933

Mus TTGAATTTATCTCTAGTTTCTTTGTATTTGTTATAATTTTTAAAATTTATTTCTA-ATTG 63580

Gallus CTATCCCTTCCCCTCAGCTTTCAGCATGTGCC-----------AGTTCAACTGTTTAATG 42595

Anopheles -----------CTTCAGTTTCATGCA-GTACG-----------CGTTCATCC-------- 2024

Homo TTCAGTCAAGGTGTAGACTATGTCCATCAGCACAGAGTTCCCATGTTTTCCCTTCCAGTG 88108

Pan TTCAGTCAAGGTGTAGACTATGTCCATTAGCACAGAGTTCCCATGTTTTCCCTTCCAGTG 88812

Drosophila ------------------------------------------------------------

Canis ATTGACCTATAATTACCTTTTTTTTATACACATCAGGCTTTTGC---TACCCTTGTAGTG 57448

Bos -----------------------------ACAGTAAGC------------------AGAG 11780

Rattus CACCTTACTTTGGTCATATTTCTTCAATGTTTCTCTCCGTTAAAGTTTTCTAAATCTTTT 74198

Danio -----------------ATTTATTTA-------------------------------TTT 13945

Mus AACCTTATTTCTGTCACATTTTTTCAAGGTTCCTCTCTGTTAAGGTTTTCTAAAC--TTC 63638

Gallus AAGCCTGCTGTG-----ATGTTGGCAAGA---------AATTAGTTACCTGAAACAGTAT 42641

Anopheles ----------TA-----ACGCCGAC----------------------------------- 2034

Homo AATCTCCATCCCCCATTAGAACAGACAATAACTGTCCTAATTACTGTCACTGTAGCTTAC 88168

Pan AATCTCCATCCCCCATTAGAACAGACAATAACTGTCCTAATTACTGTCACTGTAGCTTAC 88872

Drosophila ------------------------------------------------------------

Canis AGT-------------TGAAAAAGAAA---ACTGTTCC--TTATTTTCAGAAATACTTGC 57490

Bos ACT-------------TGGAAATGAA---------------------------------- 11793

Rattus ATTTTTCAACTAGTT----TTTTTCTAGCCTGTTATTTTAGAATTTTAGTTTTTACTATA 74254

Danio ATTTACC----------------------------TTATATAATTGCAGACGTTACAGTA 13977

Mus ATTTCTGATCTAGTTATTGTTTTCATAGCCT-TTATTTTAGAATTTTAGTTTTTACTATG 63697

Gallus GTTAATGAAATGAGGG------------------AATACAGGAAAAAAGACGAAGCCACC 42683

Anopheles ------------------------------------------------GACGAAAACGCT 2046

Homo TTTTGTCTGCTCTAGAA----------------TTTCTTATGAATGGAATCTTATGTACT 88212

Pan TTTTGTCTGCTCTAGAA----------------TTTCTTATGAATAGAATCTTATGTACT 88916

Drosophila ------------------------------------------------------------

Canis GTAAGATTGGTATTTT-----------------TTTCTCTTAAATA----TTTGTTCACA 57529

Bos -TGGAACTGTTA------------------------CTCTTAAGT-----CCTATTTACA 11823

Rattus TGTA------------TTTCTAACTTTCATGTCTTTATATTT---TTCATCTCTTTTTGA 74299

Danio GGT-----------------TAATTCACA---------------------CTGTCATTGA 13999

Mus TAT--------------TTCTAATTTTCTTGTCTTTATAGTT---TTCATCTTTTGTTGA 63740

Gallus TAC--------------CCCTTATCACGGTG-----------------ACATACTATTAA 42712

Anopheles TGC--------------GCTCTACTACG-------------------------------- 2060

Homo TGTACTGCATGAAGACTCTTTAGATTCATCCATGTTATT-------GCATTGATTTATAG 88265

Pan TGTACTGCATGAAGACTCTTTAGATTCATCCATGTTATT-------GCATTGATTTATAG 88969

Drosophila ------------------------------------------------------------

Canis TTCACCAGA-GGAGACTATCTGGGCCTGGACATTTCTTTGTTGAAAGTTTTGTTCTTTGG 57588

Bos TT---------------GTCTGTCCCCAAAGATT---------AAAGTTT---------- 11849

Rattus TATTTACAAAGTTCTCATGCACATACTATTTAATAAGATTGTGTGTGTGTTTTCTTTTGA 74359

Danio T--CTGCAG-----TCAT-------------AATCAAATCATGT---------------- 14023

Mus TATTGACAAAGTTTTCATGATTATACTATTTAATAAAATTGTGTG----TTTTATTTTGA 63796

Gallus AA-TTGCAGCCCTTCTATG--------AAACAGCGGACCCATGT---------------- 42747

Anopheles ------------------------------------ACTCGCG----------------- 2067

Homo TGCCTTTTAAAAAATTAT------AGAGTAGTGTTGCATTATATGAATACGCAAAGTGT- 88318

Pan TGCCTTTTAAAAAATTAT------AGAGTAGTGTTGCATTATATGAATATGCAAAGTGTG 89023

Drosophila ------------------------------------------------------------

Canis AGTTTTTAAAAATTTTATTTG---GAAATAACTGTAGATTATTGGAAT------------ 57633

Bos -ATTTCAAAAAGTGTTA---------AATA------------------------------ 11869

Rattus TCCCTATTTTTGTTTATCTTTTTTGAAAAAAATAAATTTATTACATATTTATATTGTAAA 74419

Danio -------------------TCATTGAAAGG-------TTAGTA----------------- 14040

Mus TTCCTATTTTTGTTTCTTATTTTTTAAAATAACA---TTACTATATGTTTATACTGTAAA 63853

Gallus ------------TGTGTTTTCTTGTCAAGTCAGAATGTCTGTG----------------- 42778

Anopheles ------------------------------------------------------------

Homo --TTTTTTTTTACCTGTTGGTGGACAGTTGGATTG--TTTCCAGTTTGGGACTATTGTGA 88374

Pan TTTTTTTTTTTACCTGTTGGTGGACAGTTGGATTG--TTTCCAGTTTGGAACTATTGTGA 89081

Drosophila ------------------------------------------------------------

Canis --TTTCTTTTAAAGTATAGGTTGGTCCTGTAATAGCCTCTCTACTTTCCCACAGTGGTAA 57691

Bos ----------------------------------------CTACTTTC-----------A 11878

Rattus ATA---------CTATAAATTAAAATATGAAACAAT---ACAATAGCTAATAG------- 74460

Danio --------------------------ATGAA----------------------------- 14045

Mus ATAAAATTCTTTCAGTTAATTAAAATACGAAACAACTCAACAATAGAAAATAGGTAATTA 63913

Gallus ----------------------ACAGCTGAAGCAATTCAGC------------------- 42797

Anopheles ------------------------------------------------------------

Homo ATAAAG-----CTGTGTAGTCTTATTGTGGAAATGTTTTATTTCTCCTGG---------G 88420

Pan ATAAAG-----CTGTATAGTCTTATTGTGGAAATGTTTTATTTCTCCTGG---------G 89127

Drosophila ------------------------------------------------------------

Canis ------------CATTTTGCATAACTATAGCACAGTTTCAAATT---------------- 57723

Bos ------------CGT--------ACTATGGAA-------AAGTA---------------- 11895

Rattus ---ACTTTTAAAGATAACAATTTTTTGTTTTA------------ATTTCTTTTTTGTATG 74505

Danio ------------------------------------------------------------

Mus AATACTTTTAAAAATAACAATTCTTTGGTTTTTGATTTGATTTTATTTTTTTTTTGTATG 63973

Gallus -------TGAGTATCAAAAATTGTTTA--------------------------------- 42817

Anopheles ------------------------------------------------------------

Homo CAAACATGTAGGAGTGGAGTTTCCAAAGCATATAGCAGGTGCATATTTAACTAAAA---G 88477

Pan CAAACATGTAGGAGTGGAGTTTCCAAAGCATATAGTAGGTGCATATTTAACTAAAA---G 89184

Drosophila ------------------------------------------------------------

Canis CAGGAAGTTGATATTGG----TTCATCCTGTAGATCATATTCAGATTTCATCAGTG---G 57776

Bos CAGGTAG-------------------------------ATTTAAATT--ACTAG------ 11916

Rattus GGTGGCTTGCTTACTTGTACTTATGC---AGT-ATGTATATGCAGTGTCCATTA-GGCTA 74560

Danio -----------CACTTATACTTAAGT---ATTTATGTGTATAAAGTGTCTGTT------- 14084

Mus AGTGGCCTGCATACTTGAGTCTATGC---AAT-GTGTGTATGCAGTGTTCACTGAGGCTA 64029

Gallus -----------CATTTTTATATGCTT---ATATGTATATATG-AGTGCATGTTG------ 42856

Anopheles -----------CATTCGTATGTACTC--------------CG-AGCG------------- 2088

Homo TGTCTTTTCCTCATTTTTA---ATATTGGATTTTTGTATTTCTATTG-ACTATAGATATT 88533

Pan TGTCTTTTCCTCATTTTTA---ATATTGGATTTTTGTATTTCTATTG-ACTATAGATATT 89240

Drosophila ------------------------------------------------------------

Canis T--TAGGCCCTTATTTCTATGTACGTTCAGTTCGTGTACTTGGATCACATTGTATAGATT 57834

Bos ----------------------ACATTCAG------------------------------ 11924

Rattus G----AAGACAGAGTCAGATCTCCTGGCACTAGAGTTGAGCCATCATGGAG--------- 74607

Danio ------------------------------------------------------------

Mus G----AGGATGGAGTTGGATTCCCTGACACTGGAATTGAGCCATCATATAG--------- 64076

Gallus --------------------CTCATCCAACTCATTTTAAGT--TCAT------------- 42881

Anopheles ------------------------------------------------------------

Homo TTCTTAAAATATAGCAGTATGTCTTATCCTTAGTTTTGCTTTTTTTTGGTTTCAGTTATC 88593

Pan TTCTTAAAATATAGCAGTATGCCTTATCCTTAGTTTTGCTTTTTTTTGGTTTCAGTTATC 89300

Drosophila ------------------------------------------------------------

Canis C-----AGATA-ACCACTAT--CCTCATCTTAGTGTACAACTTTTTCATCACCAGAAG-- 57884

Bos ------AAGCA-AGTAGTTT--CCCCTGTCTAGT------CTTCT------------G-- 11955

Rattus ---GGGTTGTGAATCCAACCTGGATCCT-------------CTTCAATAGCAGCTGGTGC 74651

Danio ------TTGTGAG----------------------------------------------- 14091

Mus ---GGGTTGTGAATCCAGCCTGGATCCT-------------CTGCAATAGTAGCTGGTGC 64120

Gallus ------TTGTAACTCTTATCACCAGC-T-------------CATCACCATAAGTTTCAGT 42921

Anopheles --------GCGACTC------------------------------------AGCTTC--- 2101

Homo TTTGGTCAGCAGTGGTCCAAAAATATTTATTAAGTAGAAAATTCCATGAATAATTCAGGG 88653

Pan TTTGGTCAGCAGTGGTCCAAAAATATTTATTAAGTAGAAAATTCCATGAATAATTCAGGG 89360

Drosophila ------------------------------------------------------------

Canis ---GGTCTGTGTTGCTC------TCCCT-------------TTCTAGGCATACTTTGCAC 57922

Bos ---TGTCTGTGATG---------------------------------------TTTG--- 11970

Rattus TCTT--------------------------AACCACCAAACAGTCTCCAGCCCTAC---- 74681

Danio -------------------------------------AAA-------------TGC---- 14097

Mus TTTT--------------------------AGCCACCGAATAAGTTCCAGCCCTAC---- 64150

Gallus TCAT--------------------------AGAATCAGAAAGGTTGGAAAA--AAC---- 42949

Anopheles CTGC--------------------------AGCAGCAGCAG------------------- 2116

Homo TTTTTGATGTATGTGTGTGTTGGCGGGTGCAGGGCAGGGAGAGTTGGTTGGTTGGTTCGT 88713

Pan TTTTTGATGTATGTGTGTGTTGGCGGGTGCAGGGCAGGGAGAGTTGGTTGGTTGGTTCGT 89420

Drosophila ------------------------------------------------------------

Canis CCCA----GCATGATTACCTTG--------AGATCCATCAAAATTGTCACATGAATCAAC 57970

Bos ------------------------------------------------------------

Rattus ------TTCTAGAATTTTAAA---TGAGAAGTTTTATCATTTTT-CCTACATCT------ 74725

Danio ------TTCTCATATGATATG---TGAACAG--------------CCTGTA--------- 14125

Mus ------TTCTAAAATTTTAAA---TGAAAAGTTGTGTCAGTTTTGCCTATGTCTAATTCT 64201

Gallus ------CTCTCAAATCATTGAATCTGTCAACTCATCCCCACTGTGCCCACTTAC------ 42997

Anopheles ---------------------------CAACT---------------------------- 2121

Homo TGGT--TTTTTTTTTTTT-AAAGAGACAAAGTCTC-TGTCATCCAGGCTGGAGTGCAGTA 88769

Pan TGGT--TTTTTTTTTTTTTAAAGAGACAAAGTCTC-TATCATCCAGGCTGGAGTGCAGTA 89477

Drosophila ------------------------------------------------------------

Canis TAGTCATTCCCTTTTATTGCCATGTGTAGAATTGCGTGGCATACATGTACCAGATT--TG 58028

Bos -------TTTCTTTTACTGCAATA--TAAAATA--------------------------- 11994

Rattus -TGAGGCCTTCAG------CTGTATTGAAAAT-CTTTGCTTTTGCATGAAGTACAAATA- 74776

Danio ----------CAG------CTTTACTGTAGAC-ATTT--TCTTGAGCGAG---------- 14156

Mus CTTAGATCTTGAGGCCTTATTATGTTGAAAAT-CTTGGCTTCTACATGCAGTACAGATA- 64259

Gallus -CACATCCCTCAG---------TGCCACATCTACACAGTTCTTGAACACCTGCCAGGT-- 43045

Anopheles ------------G---------CGCCAGA-----ACAGT-----AGCGCACTGCAGG--- 2147

Homo GCATGACTACA-GA-------TTGTTATAAAC-TGAAACTCCTGGGCTCATGCAATCTTC 88820

Pan GCATGACTACA-GA-------TTGTTATAAAC-TGAAACTCCTGGGCTCATGCAATCTTC 89528

Drosophila ------------------------------------------------------------

Canis GTTTAACCATTCAA-------CTGTTAAAGG------ACACTTGGGTTATTGTCAGATT- 58074

Bos --------------------------AAAGG------A---------------------- 12000

Rattus --------------CAGTTTTTTTTAATAATGTTGTCCAGCAGGGTC------------- 74809

Danio -------------------------AATAACATCGACTGA-------------------- 14171

Mus --------------CAGTTTTTTT-TATAATGT-ATCCATCAGGGTC------------- 64290

Gallus ------------------------CAATGAC----TCCACCA------------------ 43059

Anopheles ------------------------CAGTGA--------ACC------------------- 2156

Homo TTACCTCAGTCCTCTGAGTATCTGGGCTCATGCAATCTTCTTAC---------------- 88864

Pan TTACCTCAGCCCTCTGAGTATCTGGGCTCATGCAATCTTCTTACCTCAGCCCTCTGAGTA 89588

Drosophila ------------------------------------------------------------

Canis --------------TGGCTATTAGGAATAAAGCTACT----------------------- 58097

Bos ------------------------------------------------------------

Rattus ------------------------ACAGTTTATATTTGTAAGTATCAT--ATATTGTACA 74843

Danio --------------------------AACTT---TCTGT------CGT--ACACCATGCA 14194

Mus ------------------------ATATCATATATTTGTAAGTATTAT--ATATTATACG 64324

Gallus ----------------------------CTTCCCTTGGCAGCCTGTTTCAATGCCTCACA 43091

Anopheles ----------------------------CTTACCT-----------------------CA 2165

Homo ------------------------GTCAGCCCTCTGAGTAGCTGGTACTACAGGTGTGCA 88900

Pan TCTGGGCTCATGCAATCTTCTTACGTCAGCCCTCTGAGTAGCTGGTACTACAGGTGTGCA 89648

Drosophila ------------------------------------------------------------

Canis ---------------------------AAACATTTAAGCACAGATTTTT----GTGTGAA 58126

Bos -----------------------------------------------TT----ATGTA-- 12007

Rattus TAT-----------------TTTTAAAAATAAA---------------------AGCTTT 74865

Danio CAC-----------------C----AAAAGAGT---------------------ACCACT 14212

Mus TGT-----------------TTTTAAAAATAAA---------------------ATCTTT 64346

Gallus GTC-----------------CTCTCTGTGAAGA---------------------AGGTTT 43113

Anopheles ATC------------------------TGAAGA--------------------------- 2174

Homo GCTAATTTTTAGTTGGTTATTTTTTTGTAGAAACAGGGTCTCACTATGTTGCCCAGGCTG 88960

Pan GCTAATTTTTAGTTGGTTATTTTTT-GTAGAAACAGGGTCTCACTATGTTGCCCAGGCTG 89707

Drosophila ------------------------------------------------------------

Canis CATAAGTTTTCAT------TTCTCTGGTATAAA----------------TGCCCAGGAGT 58164

Bos ------TTTT-------------------TAAC----------------TG---AGGAGA 12023

Rattus GTTTGGCTTTAGATGATTTTTGTTGTTGTTCTCTTCCATGCTTCTT-----CCCCATGAA 74920

Danio G----------------------------------------------------------- 14213

Mus CCTTGGCTTTTTTTG--TTTTGTTGTTGTTCTTATCCATGCTTCTT-----TCCCATGAA 64399

Gallus TCTTAATATCTGATA-----------TAAACTTCCCCTGGCCATTA-----CCTTAAGGC 43157

Anopheles ------------------------------------------------------------

Homo GTTTCAAACCCCTGGACTCTAGCAATTCTTCCACTTCAGCCTTCCAAAGTGCTG--GGAT 89018

Pan GTTTCAAACCCCTGGACTCTAGCAATTCTTCCACTTCAGCCTTCCAAAGTGCTG--GGAT 89765

Drosophila ------------------------------------------------------------

Canis GC-----AATCCTGGGTCATATGATAAGTACATGTTTAGATTTCTAAGAAACTGCCAAAT 58219

Bos G----------------------------ACATATTGATAT------------------- 12036

Rattus AAGAATGATATACCACTTCATCA--------------------------GTACATCTTCT 74954

Danio ---------ATACCCTTTTAGCA--------------------------GTG-------- 14230

Mus AAGAATGATAGACCACTTCATCA--------------------------CTATATCTTCT 64433

Gallus AATTAC----TATCCTTTCGCTA--------------------------GT-----TACC 43182

Anopheles ----------------TTCGCC-------------------------------------- 2180

Homo TACAGGCGTGAGCCACTGCACCCAGCCAACAACTCTTAAGTTTTAAATTACATGCTATTC 89078

Pan TACAGGCGTGAGCCACTGCACCCAGCCAACAACTCTTAAGTTTTAAATTACATGCTATTC 89825

Drosophila ------------------------------------------------------------

Canis TATTTTCCAGAGTCCCTGTACC------------------------ATTTTTCATTTCCC 58255

Bos -----------ATCCTTTTACT------------------------A------------- 12048

Rattus TCAGAAAGACTTTGAAACCATAACAATCGAAAT------TGCCTAGTACTAT-------- 75000

Danio ---GAAACGC----AAGCC-TGATAACGG----------TGACCCATACTGT-------- 14264

Mus TCAGAAAGACTTTGAAACTATAACAATCAAAAT------TACATAGTACTACTATTAAAA 64487

Gallus TGGGACAAGAGGCCAACCCCCAGC--TCACCAC------AGCCTCCTTCCAG-------- 43226

Anopheles -GGGA-------------------------------------------CCAT-------- 2188

Homo TGAGTAACATGGTGAAATCTCCCACCTTTCCACCCAGGGCATGAATTATCCCTTTTTCCA 89138

Pan TGAGTAACATGGTGAAATCTCCCACCTTTCCACCCAGGGCATGAATTATCCCTTTTTCCA 89885

Drosophila ------------------------------------------------------------

Canis TGGGGTATATG----AATGATCCAGTTTCTC----------CATATTATTGCT------A 58295

Bos -----------------------------------------CAAGTTACAGCT------A 12061

Rattus ---GGCCACTCAAAGGGAAAGGTTCCAAATACATTGTATGTTATGTTAGAATAATTTTTG 75057

Danio ---A-CCACTCAGTGGAAATGGGCCATAATACA--------------------------- 14293

Mus ATCGGCCATTCAAAGGGAACAGTTCCAAATACATTGTATTTTATGTTAGAATAATTTTTG 64547

Gallus ----GTCA-TTATAGAGAGCGATGAGGTCTTCCCTGGGCCTCCTCTT------------- 43268

Anopheles ----ATCA-TCG------ACGATGCG-------CTGG----------------------- 2207

Homo GTATATCG-TTGTTGTCTAGACTACCCACCACTTTTAGTCTACTGGTTATCAGATCGACT 89197

Pan CTATATCG-TTGTTGTCTAGACTACCCACCACTTTTAGTCTACTGGTTATCAGATCGACT 89944

Drosophila ------------------------------------------------------------

Canis GCAT-TTG-TTGGTGTCAAAATTGTTAACTTTATCCTTTCTCCT-------AGATAGGTT 58346

Bos --AT-GTG-CTG-------------------------------------------AGCTT 12074

Rattus ATGTAAAAGCTCAAGAATCAAATTCATTCAAAATAATATATATTCCAATTGCTATA---- 75113

Danio -------AGCTGGGGG--------------------------------CTGCT------- 14307

Mus ATGTAAAAGCTCAAGTAATTA-TTCATTCAAAATA-TATATATTTCAATTGCTATA---- 64601

Gallus ---------CTCCAGACTTGA--------ACAATCCCAGCTCCTTCAGCTGCTT------ 43305

Anopheles -------------------------------------------TCGAGCTG--------- 2215

Homo GTTGCAGTATCACATGCTTGTGTTC-----AAGTAACCCTTATTTTACTTAATAATGGCC 89252

Pan GTTGCAGTATCACATGCTTGTGTTC-----AAGTAACCCTTATTTTACTTAATAATGGCC 89999

Drosophila ------------------------------------------------------------

Canis GTGATGATACCTCAT---TGTGCT--------ATAATTTGAACTACCCTTGATG------ 58389

Bos GT------ACCTCG------------------ATTGTTTTAACTGACCATGAC------- 12103

Rattus ------------------AACATGCAAAATTCA--------------------------- 75128

Danio ------------------------CAAAGTGC---------------------------- 14315

Mus ------------------AACGTGGAAAATCCA--------------------------- 64616

Gallus --------------------CCCATAAGACTTG--------------------------- 43318

Anopheles -------------------------GAGA------------------------------- 2219

Homo CTAAAGCACAAGAGCAGTGATGTTGGAAATTCGAATATATATGCCAAAGAGAAGCTGGAA 89312

Pan CTAAAGCACAAGAGCAGTGATGTTGGAAATTCGAATATATATGCCAAAGAGAAGCTGGAA 90059

Drosophila ------------------------------------------------------------

Canis -------------GCTATAATGTGGAATATTTTTTCATGTACTT---------------- 58420

Bos ------------------------------------------------------------

Rattus ---------------------------CAGCCTATTTTAGGTTTTGACAAAATAAATA-- 75159

Danio ------------------------------------------------------------

Mus ---------------------------CAGTCTATTTTAGGTTTTGACAAGAGAAATA-- 64647

Gallus ---------------------------TGCTCCA----GACCCCTCACAG---------- 43337

Anopheles ------------------------------------------------------------

Homo AGTGCTTCCTTTAAGGAAAGAATTTAAAAATCATATGTTGAGGTTGCTAAAATCTATGGT 89372

Pan AGTGCTTCCTTTAAGGAAAGAATTTAAAAATCATATGTTGAGGTTGCTAAAATCTATGAT 90119

Drosophila ------------------------------------------------------------

Canis ---------------------ATTTGCCATCTATATATTATTTTTGGTGAAATGTCTG-- 58457

Bos ------------------------------------ATTAGTTT------AATG------ 12115

Rattus -------AATTTTGCAGCCTTGAC---------------AAATAGGACTTCTATACAAAA 75197

Danio ----------TTTACAGCATT------------------AAA------------ACAAAA 14335

Mus -------AATTTTGCATCCTTGAC---------------AAACAAAACTTCTACGCAACA 64685

Gallus ---------CTTCATTGCCTTTATCT-------------GGACGCTCCAGGGCCTCAATG 43375

Anopheles -----------TCATTGCC--------------------------------------ATG 2230

Homo AAAAATGAGTATTGTATCTATGAAATTGTGAAGAAGGAAAAATAAATCATGCATAGTATA 89432

Pan AAAAATGAGTATTGTATCTATGAAATTGTGAAGAAGGAAAAATAAATCATGCATAGTATA 90179

Drosophila ------------------------------------------------------------

Canis ------GGGTTTTAT---------------------------TGAATTTTGTGT--TCTT 58482

Bos --------ATTTGTT---------------------------TGAAATTGGC-------- 12132

Rattus TAGTAATTTTCATATTCATT--------------------------TGTAGAA------- 75224

Danio T-----------TATGCATT--------------------------AAAACAA------- 14351

Mus TAGTGATTATCATTTTCATT--------------------------TGTAGAA------- 64712

Gallus T-------------CTCTTT--------------------------TGCAGTG------- 43389

Anopheles T-------------CT-------------------------------------------- 2233

Homo TACAGGGTTCAGTACTATTTGCAATTTCAGACATCACTGGAGGTCTTGGAACGTATTCCC 89492

Pan TACAGGGTTCAGTACTATTTGCAATTTCAGACATCACTGGAGGTCTTGGAACGTATTCCC 90239

Drosophila ------------------------------------------------------------

Canis CATAATTTTTAGTCCTTTTTG-------AGGTAT------GTGCTTTGCAA--------- 58520

Bos ----------------------------AGGAA----------------AA--------- 12139

Rattus ---------------------GAATGTCTTTTTTTTTAAACTTCTATTTTGAAGACTTAT 75263

Danio ---------------------GAATGTC-------------------------------- 14358

Mus ---------------------GAATGTTCTTT------AGTTCCTCTTCT--------AT 64737

Gallus ---------------------AGAGGCCC------------------------------- 43397

Anopheles ------------------------AACCC------------------------------- 2238

Homo CATGGGTAAGTGGGGAATACTGTATATTCTATATAAAAGGCCCATTTCTGATAAGTAGTT 89552

Pan CATGGGTAAGTGGGGAATACTGTATATTCTATATAAAAGGCCCATTTCTGATAAGTAGTT 90299

Drosophila ------------------------------------------------------------

Canis ---------------------GTACGTTCT----------CCTACTCCTG-----TAGTT 58544

Bos ---------------------ATAC----------------------------------- 12143

Rattus AAACAGGAATT-----AAACAGTCAACATAAAA-------AAAACAAAGCAAAAGAAGAA 75311

Danio --------------------------------A-------ATAACACAGCA--------- 14370

Mus AAAGAGGAAAT-----AAGCCAACATAAGAAAACAGAAC-AAAACAAAGCAAAAAAAGAA 64791

Gallus AAAACTGAACA-----CAGCACTTAAGGTGCGGTCTCACCAGAACCGAGTACAGAGGGA- 43451

Anopheles GAAG---------------------------GACCTCA--------------AGAAG--- 2254

Homo TATGATTATTTTCTCCAAGTTTTCATTTTCTTAAGTGTCTTCTGGTGAGCAGAAATTATT 89612

Pan TATGATTATTTTCTCCAAGTTTTCATTTTCTTAAGTGTCTTCTGGTGAGCAGAAATTATT 90359

Drosophila ------------------------------------------------------------

Canis AATC---------------TTTTCATCTTAACAGA--ATCTTTGCATAGCAGAAGGTTTT 58587

Bos -AGC---------------TTTCAATCAT--------------------CAGAAGG---- 12163

Rattus ---------ATGGTACCTCTGGTCTTTCTTTGTTTTTTTTTTTTTTTTTTTTTTTTTTTT 75362

Danio ------------------------------------------------------------

Mus ---------GTGTTACCTCTGGTCCCCCCCC------------------CCCTTTTTTTT 64824

Gallus ----------TGATCACCTCGCTGCTGCTGC---------------------TGGCTGCA 43480

Anopheles ------------------------------------------------------------

Homo CATTTTTTGAGGTCTAATTTATTTTTTCTTTTATGG--------------------TTTT 89652

Pan CATTTTTTGAGGTCTAATTTATTTTTTCTTTTATGG--------------------TTTT 90399

Drosophila ------------------------------------------------------------

Canis CATTTT----GATTAACCTTGATTTTTCTTTTATGGAT-----------CATGTTTTTGG 58632

Bos -----------------------------------------------------------G 12164

Rattus TTGTCTGTCACAGAAAAGATGTCTATACTAAGAAACTTAAAGTAAGTTACAAGGATAGGG 75422

Danio -----TGTTGCAC------------TACTGACA--------------------------- 14386

Mus TGCCACTTTACAGAATAGATGTCTATACTAAGAAACTTTAAGTAACAGGGAGAAAGGAAA 64884

Gallus CTGTTTCTGATACAAGCCATGATGTCACTGGCCTTCTT-GGCCAACTGGGCACACTGCTG 43539

Anopheles ------------------------------------------------------------

Homo TTATGTCC--TTTTATATCTTTGCCTAGCCCAAAGCCACAAATATCTT---ATGTTTTCT 89707

Pan TTATGTCC--TTTTATATCTTTGCCTAGCCCAAAGCCACAAATATCTTCTTATGTTTTCT 90457

Drosophila ------------------------------------------------------------

Canis TAAAGTCAAATCTAAGATTCTTGGCCAGCCTTAGGTCCTAAAGATTTT----TTTTTTCC 58688

Bos GAAAG-----------------------------------AGGATGTC----TTTC---- 12181

Rattus GAAGAAGACCTGTTGTGTGCTATAAAAGGGAAACATGATTT-CTCCATTCCAGGGAGAAA 75481

Danio ----------------GTGC-----------AACATT----------------------- 14396

Mus GAAGACCTGCTGCTGTGTGCTACAAAAGAGAAAAATGATTTGTTCCATGCCTGGGAGAAA 64944

Gallus GCTTGTGTTCAGCCA---GCTGTTGACTAGCAGCACCCCCAGATCCTTTCCTGCTGCATG 43596

Anopheles -------------CA---GCTG-------------------------------------- 2260

Homo TCTAATTGTGTAATATAGGTTTAACTTTTATGTGTAAATCTGTGATCCACCACCAATAAA 89767

Pan TCTAATTGTGTAATATAGGTTTAACTTTTATGTGTAAATCTGTGATCCACCACCAATAAA 90517

Drosophila ------------------------------------------------------------

Canis TAAAATTTTTTA---CAGTTTTACATTTTATATTGAAGTGTGT---CCATTTTGAGTTAA 58742

Bos -AGAATTATTT----TAGTTCT---TTTAGTATTTGAG----------------ACTTAA 12217

Rattus ACATGTTAATAGACTAAAAGATCAGAGATCAAT--TAGTTCTTACTTT---CTACAGTAA 75536

Danio -CATGATAATA------------------CAA----AGTTTT------------------ 14415

Mus ACATGTTAATAGATTAAAAGATCAGGGATCAAT--TAGTTCTTACTTT---CTATAGTAA 64999

Gallus GCTCAGTGGTGGAACTG------------CATC--TGGTCCTGTTCTTTGGCTAGAATCA 43642

Anopheles -----GTGGTGGAG---------------------------------------------- 2269

Homo ATTTTGTGATGCTGTTAGACAGTGGATGTCA---TTCATTTTCTAAATAGTTTTATTTAT 89824

Pan ATTTTGTGATGCTGTTAGACAGTGGATGTCA---TTCATTTTCTAAATAGTTTTATTTAT 90574

Drosophila ------------------------------------------------------------

Canis TTTTTAT-ATAACATTTGAGATTTAA-GTCAAGATTCACTTTTGGCCTATGGATGTCCAT 58800

Bos CTGTTAT-GTACCAT---AATGCTAA-ATAAAA-------------CAGTG-------AC 12252

Rattus A-ATAGAGGTACTAACCAACTAGGTAACATTTTGTTTTTGTTTGGTTTGCACATAC---- 75591

Danio --ATAGGGA------------GGGTA--------------------TTGCACAG------ 14435

Mus AAATTGAGCTATTAACCAACTAGGTAACATTT-GTTTTTGTTTGGTTTACACACACACAC 65058

Gallus GCATGAAAA----AGCCTTTGAGGAAAGCCCA----------CCGCTTATACTAAC---- 43684

Anopheles ------------------------------------------------------------

Homo TTGTTCCAGTACCATTTGTTAAAGAGACTTTTCTTTCCCCATTGAATTGCCTTTGCAC-C 89883

Pan TTGTTCCAGTACCATTTGTTAAAGAGACTTTTCTTTCCCCATTGAATTGCCTTTGCAC-C 90633

Drosophila ------------------------------------------------------------

Canis ATGTTCCCATATAATTTATTGAAAAAGTTATCCTTCCTTTACTGATTTGTTTTTGCAT-C 58859

Bos ATTTTCCACCATAATTTAGTGGAAAA---------------------------------- 12278

Rattus TTTCCTCCATCTTTTGGTAAATATTTCCAATAAGCTTCTTCTTTCAATCTACTGACCATA 75651

Danio -----------TTTTGG-ACATG-------------------------CCACTG------ 14452

Mus CTTCCTCCATTTTCTGGTAAATT---CCAATAAGCTTC---TTTCAATCTCCTC--CAAA 65110

Gallus -----TGGAGTTCAATGTGATTTCATCCACATGATTTTTGATTACATTCTGCTC------ 43733

Anopheles ------------------------------------------------------------

Homo TTTGTTGAAAATCAATCTGTG-------TGTGAGCCGTGTTTCTGGATTCTCCATTCTGT 89936

Pan TTTGTTGAAAATCAATCTGTG-------TGTGAGCCGTGTTTCTGGATTCTCCATTCTGT 90686

Drosophila ------------------------------------------------------------

Canis TTTGTCAAAAATCAGTGTATAATGTTTATATAAATC-TTTTTCTGAATTCCCTATGCTAT 58918

Bos ------AGAAAACATTG------------------------------------------- 12289

Rattus TTCTCCACCCTGCAGTAT------TTCTCCCACCAGTCAATCACCTTGTAATTTCTTGCT 75705

Danio -----CAACCTGGA-----------------------------TCTGGGGACCTCCAGCA 14478

Mus TTCTCCTCCCCGCATTAT------TTCTCCCACCA----ATCACCTTGTAATTTCGGGCT 65160

Gallus ---------TTGCACTGT------TGGATTTATCA-------AAGTTAAAATCTGTGTTG 43771

Anopheles ----------------------------TTTACCG-------GCG--------------- 2279

Homo TCTATTAATTTGTTTT-------GTCCTTTTGCCAA-----AATGACACTGTTATGGTTA 89984

Pan TCTATTAATTTGTTTT-------ATCCTTTTGCCAA-----AATGACACTGTTATGGTTA 90734

Drosophila ------------------------------------------------------------

Canis TCCCTTGATCTGTGTTTCTATCCATCCCTCTGCCAA-----TACTGCACTGTCTGTATTA 58973

Bos ------------------------------------------------CTTTCCGTATTG 12301

Rattus TCAACTGACTCTCCTGTTACTTAAAATCTAAGTGGGACACGTGAA--GTTGATGGGTGTT 75763

Danio ACAACTG----------------------------------------------------- 14485

Mus TCAAATC----TCCTGTTACTTTAAATCTAAGTGGGGCACTTGAATAGTTGGTGGATATT 65216

Gallus ACAATGTG-----CTGCTTCTTCCTCAGTAATGGAAGGGGTAGAAGATTGTATACGTGCA 43826

Anopheles ------------------------------------------------------------

Homo CTGCAG-------------------CTTCAAATCAGATGC---TGTGAGTCCCACAACTT 90022

Pan CTGCAG-------------------CTTCAAATCAGATGC---TGTGAGTCCCACAACTT 90772

Drosophila ------------------------------------------------------------

Canis CTATAGGTA------AATGGTAAACGTTAACATCAGATAAGAGTGCGAATGAAAGATTTC 59027

Bos -----------------TGGTAA--GGTAACATGGGGT---------------------- 12320

Rattus TTTATAATGGCTTGTTGAACCACTTAGCTCCTGATTTTGTTTGCTCTTCACCTTTCATAG 75823

Danio ---------GCCTGCTGA------------------------------------TTGTAG 14500

Mus TTTATAATGGCTTGTTGAACTACTTAGCTCCTGGTTTGGTTTGCTCTTCATCTTTCATAG 65276

Gallus GCTTCAGCGGGGCACTGTAGGGTTTAG-------------------------TATCACAG 43861

Anopheles -----AGCAGGGCATCGACG--------------------------------------AG 2296

Homo TT-TCATTAGGTTGCTTTGACTTTTATTTG-----------------------CATATAA 90058

Pan TT-TCATTAGGTTGCTTTGACTTTTATTTG-----------------------CATATAA 90808

Drosophila ------------------------------------------------------------

Canis TTGTCTTTTCCATATTTTAGCTACTCTTTAA----------------------CATACAA 59065

Bos -----TTTTCTG------GGCCAGCCTT-------------------------------- 12337

Rattus GGGTGTAATTCATAATGCTACTGCCCTTTCTCTTCATCTTCCTTTTGTAGTGTTACTTCA 75883

Danio GG---------------------------------------------------------- 14502

Mus GGTAGTAATTCATAATGCTACTGCCCTTCTTTCTCCTCATC-TTTTGTAGTGCTACTTCA 65335

Gallus GGCTC--ATGCATGCTTTTAGTGGTAATG--------------TGAGTACTAGCATTTTG 43905

Anopheles GGC------------------------------------------------GGCGTTTCG 2308

Homo ATATTAGAATCAGTTAATTTTTACAAACAAAAGGGCAAAGCCTGCAGAGATTTTGATTTG 90118

Pan ATATTAGAATCAGTTAATTTTTACAAACAAAAGGGCAAAGCCTGCAGAGATTTTGATTTG 90868

Drosophila ------------------------------------------------------------

Canis ATTTTATATTCACTTTGACTATGCTTAAAAAAC-------CTTGATGAAATTTTGATAGG 59118

Bos ------------------------------------------------------------

Rattus ATTCTTTTTCAGTTCATGTTAAGTTCATTGGAAATAACTCTTGTTCGTCAGTTCTTTGTG 75943

Danio ------------------------------------------------------------

Mus GTTCTTTTTTAGTTCAAGTTAAGTTTATTGGAAATAACTCTTGTTCTTCAGTTCTTTGTG 65395

Gallus AGTAGCTTCTATTACCCTAAAGGT-------AAGTAGCTTTTCTTTGCCGTTAAATTCAG 43958

Anopheles A-------------------AGG---------AGT------------------------- 2315

Homo GGTTGCCTTGACTGGGGCAGGTCAATTTGGAGAGAATTCACATTTTAACAATATATTCT- 90177

Pan GGTTGCTTTGACTGGGGTAAGTCAATTTGGAGAGAATTCACATTTTAACAATATATTCT- 90927

Drosophila ------------------------------------------------------------

Canis AATTACATTAA--------GATCAAATTGGGGAGAACAGACATTTTTACTATGTTCACTG 59170

Bos -------------------------------GAGAA-------------------CACTG 12347

Rattus TCCCACCCC------CTTTT-AGCTATTTGCTCAAATATGGTTTTCATGTTCACCTT-AT 75995

Danio -------CC------CTGTT-AGCT----------------------------------- 14513

Mus CCATATCCC------CTTTTTAACTATTCATTCAAATA-GGTTTTCATGTTCACTTTTAT 65448

Gallus CATAATTCTAA---ATTTTTCAGACACGTTCTAATATA---------------------- 43993

Anopheles ---------------TCTTTCAG-------CTGAT------------------------- 2328

Homo TCCAATCCTTGAACACCGTACGTCTCTCCATTTATTTAGATGTTTGTTAGTTTATCT--- 90234

Pan TCCAATCCTTGAACACCGTACGTCTCTCCATTTATTTAGATGTTTGTTAGTTTATCT--- 90984

Drosophila ------------------------------------------------------------

Canis TCCAACCTATGAATACAGTATAATTCGTCATTTATTTAGGT------------------- 59211

Bos TTAAAAATAT--ATACACTA---------------------------------------- 12365

Rattus CAGTCAATGGAATTT--TTTTTTTATTTTTTGCATGCTCTGTATCCATTGCTTTATGAA- 76052

Danio ----------------------------------------------------TGATGAA- 14520

Mus CAGTAAATGGAGCCTAATTTTTCTTTTCCTGGCATGCTCTGGAACCATTGCTATATGAA- 65507

Gallus ---------------------------------------------CAGGGGTTTATAAA- 44007

Anopheles -----------------------------------------------------CATCGA- 2334

Homo ---------CAGCACTGTTTTATAGTTTTTAATGTTGAAATCATGTACTCTTTGGTTAGG 90285

Pan ---------CAGCACTGTTTTATAGTTTTTAATGTTGAAATCATGTACTCTTTGGTTAGG 91035

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------CCTTTTATTAA- 59222

Bos -------------------------------------------------CCTTGATTCA- 12375

Rattus -------------------------AGTTTTTGGCTTTTCTTTG---------------- 76071

Danio --------------------------------------TCTTTA---------------- 14526

Mus -------------------------AGTTTTCCGCTTTTTTTTTTGTTTTTGTTTTGTTT 65542

Gallus -------------------------GGTA---------TGTTTT---------------- 44017

Anopheles -------------------------GG--------------------------------- 2336

Homo AATAAACTTAAAATATGTTTCTAATGCTATTAGTGGTATTTTTTA--------------- 90330

Pan AATAAATTTAAAATATGTTTCTAATGCTATTAGTGGTATTTTTTA--------------- 91080

Drosophila ------------------------------------------------------------

Canis ----------------------AATGGCATT----GTATTTTT----------------- 59239

Bos ----------------------AGGGAC-------------------------------- 12381

Rattus -------------ATTTCAAGGTCTATTAGCTGTCCTTTTTGCTTGTTCTTTTCTCTATT 76118

Danio -------------A---------------------------------------------- 14527

Mus GTTTTTTGTTTTTGTTTCAAGGTCTATTAGCTGTCCTTTTTGCT-GTTCTTTTTTGCATT 65601

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo -------------AATACTGCTTTTCACTTGTTTATTACTATCTTGAAATAAAATCGATT 90377

Pan -------------AATACTGCTTTTCACTTGTTTATTACTATCTTGAAATAAAATCGATT 91127

Drosophila ------------------------------------------------------------

Canis -------------AATTTTGGTTCCCACATGTT----AGTATACAGGAATATGATTGATT 59282

Bos ------------------------CCTCATGCT----ACTA------------------- 12394

Rattus TCTTTTTCAGAGAATTGCTAATTTTTTTGTTTTTTTTTGTTTTTTTTTTCAAATTTGGCT 76178

Danio ------------AATTGCA----------------------------------------- 14534

Mus TCTTTTTCAACGAACTGTTGTTTTTTTTTTCTTTCAAAAAATTTTTTT------------ 65649

Gallus ------------ACATGTTGGGTTTTTTTTTT---------------------------- 44037

Anopheles -------------------AGATCTTC--------------------------------- 2344

Homo TTT---------ATATATTGATCTTATATCCTATAACCTTTCT----------------- 90411

Pan TTT---------ATATATTGATCTTGTATCCTATAACCTTTCT----------------- 91161

Drosophila ------------------------------------------------------------

Canis TTTTTTTTTTTTACATGTTGATCTTCTATTCAATTATTTT-------------------- 59322

Bos ------------------------------CAGTCACCTT-------------------- 12404

Rattus TTTAAATTATTAGTGTTAATAGAACCACCA-------ATGT---GATTAATTCTTCATAT 76228

Danio -------------------------CATAA-------ATGA---GAAGAAT--------- 14550

Mus ----AATTATCAGTGTGAATAAAATCACCATTATTTAATGT---GATTAATTCTTCATAT 65702

Gallus -----------------AATATAACCATAAC-------TGTTTAAAATAATTTTTTACA- 44072

Anopheles ----------------------AACCCCGAC-------TAT------------------- 2356

Homo ----------------AAATTGACTTATTCT-AGTAGTTATTTAGTAGATTTCATAGGGT 90454

Pan ----------------AAATTGACTTATTCT-AGTAGTTATTTAGTAGATTTCATAGGGT 91204

Drosophila ------------------------------------------------------------

Canis -----------------AGAAGGTTTTTTAG-GTTTTTTTTTTTTGAGACCTCTTGGGGT 59364

Bos -----------------AAGAGG--------------------------CCTCT------ 12415

Rattus TCTCTACTCAATTCAAAGATTTTAACTTTCTATCACTTCA--TATTTTTTGTCTTAGTTC 76286

Danio ------------------------------------------------------------

Mus TCTCTGTTCAATTCAAAGGTTTTCATTTTCTTTCTTTTTTACTATTTTTTGTCTTAGTTT 65762

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTCTA------GTAAACAGCTATGTCATCTACAAATCAAGACAGGTTTCTTTCTTTCCA 90508

Pan TTTCTA------GTAAACAGCTATGTCATCTACAAATCAAGACAGGTTTCTTTCTTTCCA 91258

Drosophila ------------------------------------------------------------

Canis TTTCTTT-----GTAGATAGTCATGTCATCTCTAAATAGGGATAGTTTTGCTTATTTTTA 59419

Bos --------------------------CATTCCTG--------------TGCTT------- 12428

Rattus TT----CAATTTGTTGCTTGTTTTTCTCTTTCTAGTTTGTATT----------------- 76325

Danio ------------------------------------------------------------

Mus TTGTCCTAGCTTCTTTATTTTTTTTTTTTTTCCATTTTTTATTAGGTATTTAGCTCATTT 65822

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATGTT-TATGTTATTTATTACTGTTCCTCT------------------------------ 90537

Pan ATGTT-TATGTGATTTATTACTGTTCCTCT------------------------------ 91287

Drosophila ------------------------------------------------------------

Canis AGTTTGTATGCCTTTTATCACTTTTTTTCCTGC--------------------------- 59452

Bos ------------------------------------------------------------

Rattus -------------------------------------CCTGTTCTTTCTCTGTTAATCAC 76348

Danio ------------------------------------------------------------

Mus ACATTTCCAATGCTTTACCAAAAGTCCCCCTTACCCACCCACCCCCACTCCCCTACCCAC 65882

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ------------------------------------------------------------

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CT----------TTTGGCTTTGATGTTTCTT--------------CAAA----------T 76374

Danio ---------------GACTATGATG---------------------GGA----------T 14564

Mus CCACTCCCCCCCTTTGGCCCTGGCGTTCCCCTGTACCGGGGCACACAAAGTCTGCGTGTC 65942

Gallus ---------------GGC----ATGTTC----------------ACATA----------- 44086

Anopheles ---------------GGC----ATGTTCGTG-------------ACGAA----------- 2373

Homo -------ATTGCACTGGCTAGAACCTTTGGTAGAAGGTATTCTTACTTTATTCCTCATTT 90590

Pan -------ATTGCACTGGCTAGAACCTTTGGTAGAAGGTATTCTTACTTTATTCCTCATTT 91340

Drosophila ------------------------------------------------------------

Canis -------CTTATTTATGCTAAAACTTTTAG-------------------------CACTG 59480

Bos -------CTTGTGTATAATGAAA------------------------------------G 12445

Rattus TAAT-------TTCCAG--------------------TTGCACTGGTATACAAAA--ATT 76405

Danio CAAT-------T----------------------------------------AAA--ATT 14575

Mus CAATGGGCCTCTCTTTC--------------------CAGTGATGGCCGACTAGGCCATC 65982

Gallus TGATGAA---------------------------------------TCTACAAAACTGTT 44107

Anopheles CGAGGA-----------------------------------------CTCCAACACGGTG 2392

Homo TATTGAGAGAGACTATAATATTTACCATTAACTGTGATGTTACTTGTAAACAAAAAGTTT 90650

Pan TATTGAGAGAGACTATAATATTTACCATTAACTGTGATGTTACTTGTAAACAAAAAGTTT 91400

Drosophila ------------------------------------------------------------

Canis TGCTAAATAAGAGTA-----------------------GTTA-----AAACAAAAGCCTT 59512

Bos TGA-GAATACGAG----------------------------A-----AATCAAATACTCT 12471

Rattus ATTTTAAAC--ACTTGTGG--------AATCACCTA-----------------ATATACC 76438

Danio --------------TCTAG--------AA------A-----------------ATA---- 14586

Mus TTTTGATAC--ATATGCAGCTAGAGTCAAGAGCTCAGGGGTACTGGTTAGTTCATAATGT 66040

Gallus TT----------GGTTTAA----------------------------------------- 44116

Anopheles T-----------GGTTTAA----------------------------------------- 2400

Homo GTATTTCTCTGGGATTAAAAACCAAGAGTCCATTTGGT---------------------- 90688

Pan GTATTTCTCTGGGATTAAAAACCAAGAGTCCATTTGGT---------------------- 91438

Drosophila ------------------------------------------------------------

Canis GACTTGTTCCTGAATTTAGGAGAAAGCATTTATCT------------------------- 59547

Bos GG---------------------------------------------------------- 12473

Rattus TATTTCTTCAACAGATCT-----TTCTTTTCTTCCTCTGGTCTCCCTCTCTCCCTCTTCT 76493

Danio ------------------------------------------------------------

Mus TGTTCCACCTATAGGGTTGAAGATCCCTTTAGCTCCTTGGGTACTTTCTCTAGCTCCTCC 66100

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo --TTTTTACTGTTGAGTTTTAAGGGTTCCTTATGTATTTTCTAGGTATGTTCTTCCTTCA 90746

Pan --TTTTTACTGTTGAGTTTTAAGGGTTCCTTATGTATTTTCTAGGTATGTTCTTCCTTCA 91496

Drosophila ------------------------------------------------------------

Canis ----TTATCTCTTAAGCTTCA-----TATTAGTGTAGTTG-------------------- 59578

Bos -------------GGGCTT---------TTTGTATAAT---------------------- 12489

Rattus --------CCCTCTTCTCCCTCTCCCTCCTCTC------CCTCCCCTCTTCCTCTCTCTC 76539

Danio ------------------------------------------------------------

Mus ATTGGGAGCCCTGTGATCCATCCATTAGCTGACTGTGAGCATCCACTTCTGTGTTTGCTA 66160

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTGAATTGTTTTTTTCACATAC----GTTAAAAATCACTTGAGAATATTTATATAGGTCT 90802

Pan TTGAATTGTTTTTTTCACATACATATGTTAAAAATCACTTGAGAATATTTATACAGGTCT 91556

Drosophila ------------------------------------------------------------

Canis -------GTGCTCTACAAATTCA------AGAGGTTCC-----AACCTCTGTACCTTGTT 59620

Bos ----------------AAATTCG------TGAAGA--------AA--------------- 12504

Rattus CTTCTTCTCCTTCTCTCTC------CCTCTTCTTCCTCTCCCTCTCCCTCTCCTTCCTCT 76593

Danio ------------------------------------------------------------

Mus GGCCCCGGCATAGTCTCACAAGAGACAGCTACATCTGGGTCCTTTCAGTAAAATCTTGCT 66220

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GCTTCTGAGATTTATCTGTTTATCAGGTTTTGTTTCATTTATTTTGAGGCTCTATCATTT 90862

Pan GCTTCTGAGATTTATCTGTTTATCAGGTTTTGTTTCATTTATTTTGAGGCTTTATCATTT 91616

Drosophila ------------------------------------------------------------

Canis GTTGTTG----TTGTTTTGTCTTCTTGTTTTGTTTTATTGTCTTTTGTTTCTTAAGATTT 59676

Bos ------------------------------------------------------------

Rattus CCCCTCTCCCTCTTTTTC----------------------------TCTCCCTCTTCTCC 76625

Danio ------------------------------------------------------------

Mus AGTGTATGCAATGGTGTCAGCATTTGGAAGCTGATTATGGGGTGGATCCCTGGATATGGC 66280

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GGTTCATACCCATTTAGAATTACTATGTCT-----------------TGGTGATTGGTCC 90905

Pan GGTTCATACCCATTTAGAATTACTATGTCT-----------------TGGTGATTGGTCC 91659

Drosophila ------------------------------------------------------------

Canis CATTTAT--TTATTCAGGAGAGACACAGA------------------------------- 59703

Bos ------------------------------------------------------------

Rattus CTCTTCTCCCTCTCCCTCTCCTCCTCCTCTCTCTCCTTCTCCTTCTCTCTCCCTCTTCTC 76685

Danio ------------------------------------------------------------

Mus AGTCTCTACATGGTCCATCCTTTCATCTCAGCTCCATACTTTGTTTCTGTAACTCCTTCC 66340

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTTATCATTATATAAGTTTTTTCTGTTTTGCGATTTTCTTTGCTCTGAATCTGATATGAG 90965

Pan TTTATCATTATATAAGTTTTTTCTCTTTTGCAATTTTCTTTGCTCTGAATCTGATATGAG 91719

Drosophila ------------------------------------------------------------

Canis ----------------------------------------------GAGTGAGGCAGAGA 59717

Bos ------------------------------------------------------------

Rattus CCTCTCCCTCTCTCCTCCTTCTTA----------CCCCTTCCCCCTCTCCCTCTTCTTTT 76735

Danio ------------------------------------------------------------

Mus ATGGGTGTTTTGTTCCCACTTCTAAGGAGGGGCATAGTGTCCACACTTCAGTCTTCATTT 66400

Gallus -----------------------------------------------TCCGTCCTCTTTC 44129

Anopheles -----------------------------------------------CTCGATCTCGTTC 2413

Homo TGTAACCATTTGT---TTTTTTTTAAATTAATGTTTGCATGATCTGTCTTTTACTATCAT 91022

Pan TGTAACCATTTCTGTTTTTTTTTTTAATTAATGTTTGCATGATCTGTCTTTTACTATCAT 91779

Drosophila ------------------------------------------------------------

Canis CATAGGCA---------------------------------------------------- 59725

Bos ------------------------------------------------------------

Rattus CTCCTTTTGCCTTTATGTCTTGGCAA----AACTTAGTTTTGAGTTTTCTAGGACTGTGT 76791

Danio ------------------------AA----AACCCA------------------------ 14594

Mus TTCTTGAGTTTCATGTGTTTAGGAAATTGTATCTTATATCGTGGGTATCCTAGGTTTTGG 66460

Gallus ----------------------GAAACTGAGGGTCAGTTTACACTGAT---------TGG 44158

Anopheles ----------------------GAAAACGAGGCCCAGTTCACGCTCAT---------CGG 2442

Homo TTTACTTTCATCCTGTGTTGCTGAATTTGAAACGAATCTCTTGTAAAC----------AG 91072

Pan TTTACTTTCATCCTGTGTTGCTGAATTTGAAACGAATCTCTTGTAAAC----------AG 91829

Drosophila ------------------------------------------------------------

Canis ----------------------GAGGGTGAAGCAGGCTCCTTGCAGAG----------AG 59753

Bos ------------------------------------------------------------

Rattus TTTTGTTTTTGTTTTTGTGTG---------TTTGTGTGTGCATATCAATGTTCTTTTCCT 76842

Danio --TCATTTTT-------------------------------------------------- 14602

Mus GCTAGTATCCACTTATCAGTGAGTACATATTGTGTGAGTTCCTTTGTGATTGTGTTACCT 66520

Gallus CATAGTACTGGGT----------------------------------------------- 44171

Anopheles TATCGTGCTCGGG----------------------------------------------- 2455

Homo CATATAGTTGTCATTTTAATAA-----------------------AAACTGTTAGTCTCT 91109

Pan CATATAGTTGTCATTTTAATAA-----------------------AAACTGTTAGTCTCT 91866

Drosophila ------------------------------------------------------------

Canis CCTCATGTGG------------------------------------AACT--CGATCCCA 59775

Bos ------------------------------------------------------------

Rattus CATATACAATGTTTGTC-CTAGCTTT-----------------TTAAAGAAATGTAGTTT 76884

Danio --------------------AG---------------------TTACAGAAA-------- 14613

Mus CACTCAGGATGATGCTCTCCAGGTCCATCCATTTGGCTAGGAATTTCATAAATTCATTCT 66580

Gallus ------------------CTCGCCAT-----------------TTACAATAA-------- 44188

Anopheles ------------------CTGGCAAT-----------------TTACAACAA-------- 2472

Homo GCCTTTTAATTTTTTTATTTAGACCAT----------TTATATTTAAGGTAATT------ 91153

Pan GCCTTTTAATTTTTTTATTTAGACCAT----------TTATATTTAAGGTAATT------ 91910

Drosophila ------------------------------------------------------------

Canis GGACTCCAGGATTATGCCCTGGGCCGA----------AGGCAGGCGCTA-AACC------ 59818

Bos ------------------------------------------------------------

Rattus CA-------------AGTACACTATTCTTTAAATG--CCACATTTC---------TTCTT 76920

Danio --------------------GCAAATCTTTAAAT---CCATAT----------------- 14633

Mus TTTTAATAGCTGAGTAGTACTCCATTGTGTAGATGTACCACATTTTCTGTATCCATTCCT 66640

Gallus -------------------CTGTATACTGGATGT-----ACATTTT-------------- 44210

Anopheles -------------------TATCATCCTTGCGGT-----CAACTTC-------------- 2494

Homo ---------------ATTGATATGTTAGGGAGAGGTCTGCCATTTTATTATTTGTTTTCT 91198

Pan ---------------ATTGATATGTTAGGGAGAGGTCTGCCATTTTATTATTTGTTTTCT 91955

Drosophila ------------------------------------------------------------

Canis ---------------ACTGAGCCACCCAGGGAAGCCCCCCTATACT--------TTGTTT 59855

Bos ------------------------------------------------------------

Rattus CACCTGAG------------TCTTCCCATTTTCTGCCCTTTAT----------------- 76951

Danio -------------------------CCA-------------------------------- 14636

Mus CTGTTGAGGGGCATCTGGGTTCTTTCCAGTTTCTGGCTATTATAAATAAGGCTGCTATGA 66700

Gallus ------------------------CCCAT------------------------------- 44215

Anopheles ------------------------CCCAT------------------------------- 2499

Homo GTTTCTGTCTTCTGTTTATGGTTATTTATTTATTGCCTTCCATG---------------- 91242

Pan GTTTCTGTCTTCTGTTTATGGTTATTTATTTATTGCCTTCCATG---------------- 91999

Drosophila ------------------------------------------------------------

Canis GTTGAGCTTTGCTGTGAACAGGCTTTTGGCT----------------------------- 59886

Bos ------------------------------------------------------------

Rattus -TGCAGTGGTTCTTCAAGTTCTTTCTCTAGAT------CTTCAGAAATATATATATA--- 77001

Danio --------------------------------------------AAACACATGTTTA--- 14649

Mus ACATAGTGGAGCATGTGTCCTTCTTACCAGTTGGGGCTTCTTCTGGATATATGCCCAGGA 66760

Gallus --------------------------------------------GGTTGTCTACAGG--- 44228

Anopheles --------------------------------------------GGTGGTCTATCGC--- 2512

Homo -------------------------ATTACTTGAACATTTTTTAAGATTTTTAAGAC--- 91274

Pan -------------------------ATTACTTGAACGTTTTTTAAGATTTTTAAGAC--- 92031

Drosophila ------------------------------------------------------------

Canis -------------------------------------TTTTGTCAGATGTTT-------- 59901

Bos ------------------------------------------------------------

Rattus ----------------------------TATATATATATATATATATA------------ 77021

Danio ----------------------------TACATTTA------------------------ 14657

Mus GAGGTATTGCTGGATCCTCCGGTAGTACTATGTCCAATTTTCTGAGGAACCGCCAGACTG 66820

Gallus -----------------------------AAGCTGATG---------------------- 44237

Anopheles -----------------------------AAGCTGATG---------------------- 2521

Homo ----------------------CCTTGATTTATTTAGTGTTTGGGTTT------------ 91300

Pan ----------------------CCTTGATTTATTTGGTGTTTGGGTTT------------ 92057

Drosophila ------------------------------------------------------------

Canis ------------------------TTTCCACATCTGTTGCTAGAAGCA------------ 59925

Bos ------------------------------------------------------------

Rattus --------------TATATATATATATATATGTACACACATTTCAAATGTTATCCCATTT 77067

Danio ------------------------------------------------------------

Mus ATTTCCAGAGTGGTTGTACAAGCCTGCAATCCCACCAACAATGGAGGAGTGTTCCTCTTT 66880

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ----------------------------------------------------------TG 91302

Pan ----------------------------------------------------------TG 92059

Drosophila ------------------------------------------------------------

Canis ----------------------------------------------------------TG 59927

Bos ------------------------------------------------------------

Rattus CCTGGTTTCCTGTCCA--------TAAGGCCTCATCTCACCCCCTCCCCCTTCTTC---- 77115

Danio -------------------------------------------------------C---- 14658

Mus CTCCACATCCTCGCCAGCATCTGCTGTCACCTGAATTTTTGATCTTAGCCATTCTCACTG 66940

Gallus -----------------------------------------------------------G 44238

Anopheles -----------------------------------------------------------G 2522

Homo TTTTGTTTGTTTGTTTGTTTTTGTTTCGAGACACAGTCTCGCTCTGTTGCCCAGGCTGGA 91362

Pan TTTTGTTTGTTTGTTTGTTTTTGTTTCGAGACGCAGTCTCGCTCTGTTGCCCAGGCTGGA 92119

Drosophila ------------------------------------------------------------

Canis GTT---TTCTTAATTTCTATTTGATACAGCACAC-------------------------- 59958

Bos ------------------------------------------------------------

Rattus -TATGAGGGTGTACCCGCATTCCCACCCGACCCCAACATTCTCCTAC--ACTGGGG-CAT 77171

Danio -TAT--------------------------------CATTTTTTTAA--A---------- 14673

Mus GTGTGAGGTGGAATCTCAGGGTTGTTTTGATTT--GCATTTCCCTGATGATTAAGGATGT 66998

Gallus GCAAAAAAGGAA------------------------CTTTCCGTGAT------------- 44261

Anopheles GTATGAAAGGCT------------------------CATTTCTCGAT------------- 2545

Homo GTGCAGTGGCACAATCTCAGCTCACTGCAACATCGGCTTCCCAGGTT------------- 91409

Pan GTGCAGTGGCACAATCTCAGCTCACTGCAACATCAGCCTCCCAGGTT------------- 92166

Drosophila ------------------------------------------------------------

Canis -TGCATTAATGGATTTTC----CATTATTGAACCAACTTTCCATATC------------- 60000

Bos ------------------------------------------------------------

Rattus CGAACCTTCACAGGACCAAGGGCCTCTCCTCCCATTG--ATGCCTGACAAGGCCATCCTC 77229

Danio ------------------------------------------------------------

Mus TGAACATTTTT----TCAGGTGCTTCTCTGCCATTTGGTATTCCTCAGGTGAGAATTCTT 67054

Gallus ---------------CTGGCAGACTCTCATCCTGTAA-----------------GTTCAT 44289

Anopheles ---------------CTGA----------------------------------------- 2549

Homo CAAGCAATCCTCCCGCCTCAGCCTCCTGGGTAGCTGGGACTACAGGCACATGCCACCACA 91469

Pan CAAGCAATCCTCCTGCCTCAGCCTCCTGGGTAGCTGGGACTACAGGCACATGCCACCACA 92226

Drosophila ------------------------------------------------------------

Canis T---CAGTCATTTCCATTTAGTTCATTG---------------------------TCACA 60030

Bos ------------------------------------------------------------

Rattus TGCTACATAAGCAGCTGGAGCCATCAA----------TCACTCCATGTGTCC-------- 77271

Danio -----------------------TCAA----------TAAC------------------- 14681

Mus TGTTCAGTTCTGAGCCCCATTTTTTAAGGGGGTTATTTGATTTTCTGAGGTCCACCTTCT 67114

Gallus TAT----------GTTCCTTGTGTTTA----------TTACTGCAT-------------- 44315

Anopheles ------------------------------------------------------------

Homo CCTGGCTAATTTTTGTATTTTTATTAGAGATGAGGTTTCACCATATTGGCCAGGCTGGTC 91529

Pan CCTGGCTAATTTTTGTATTTTTATTAGAGATGAGGTTTCACCATATTGGCCAGGCTGGTC 92286

Drosophila ------------------------------------------------------------

Canis TTTGACGTGGTAATGGTGGTTGATTATTTCTGTGTCTTGAGTTCATGAGATATACTGGCC 60090

Bos ------------------------------------------------------------

Rattus -----TCTTT-----TGTTGGTGGT-----TCAGTCCCTGGGAGCCCTGGGGT------- 77309

Danio ------CTTT-----TG--------------------------GCTCTGA---------- 14694

Mus TGAGTTCTTTATATATGTTGGATAT-----TAGTCCCCTATCTGATTTAGGATAGGT--- 67166

Gallus -----TTTCTG----TGTACTGCCT-----TAATC------AAGATTTAAATTAA----- 44350

Anopheles -----------------------------------------AGGATTTAAAT-------- 2560

Homo TCGAACTCTTGACCTTGTGATCTGTCCACCTCAGCCTCCCAAAGTGCTGGAATTACAGGC 91589

Pan TCGAACTCTTGACCTTGTGATCTGTCCACCTCAGCCTCCCAAAGTGCTGGAATTACAGGC 92346

Drosophila ------------------------------------------------------------

Canis TATAGTTTTTGTCTTTTTTTTATGTTGTCTTGGTCTGGTTTAAACATTAGGATTAAT--- 60147

Bos ------------------------------------------------------------

Rattus --------------------TTCTGGTTGGTTGAGAGGGTTTCTGGTTCGTTGATACTCT 77349

Danio ------------------------------------------------------------

Mus ----------AAAGATCCTTTCCCAGTCTGTTGGTGGTCTTTTTGTCTTATAGACAGTGT 67216

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ATGAGCCACCATGCCTGGCCTTCTATGTGTTTTTTATAGTTGTTTTCACGGTCATTGTGG 91649

Pan ATGAGCCACCATGCCTGGCCTTCTATGTGTTTTTTATAGTTGTTTTCACGGTCATTGTGG 92406

Drosophila ------------------------------------------------------------

Canis -------------TCTGGCCTCGTAAAAAGTT-----GGGAAGTGTTCTATTTGTAGGAG 60189

Bos ------------------------------------------------------------

Rattus -TCTTCCTATGTGG-----CTGCAAACCCCTTCAGTCCT-TTCCCTAGCTCCTGAATTGG 77402

Danio ------CTATACG--------------------------------------------TGG 14704

Mus CTTTTGCCTTGCAGAAACTTTGGAGTTTCATTAGGTCCCATTTGTCAATTCTCGATCTTA 67276

Gallus --------ATGCAATAG-----------------------------AACTGTCAAAATTG 44373

Anopheles ------------------------------------------------------------

Homo GTATCACATTATAGATAATGTGACTTACCACCATTCACTGCCATCAATACCATTACATGG 91709

Pan GTATCACATTATAGATAATGTGACTTACCACCATTCACTGCCATCAATACCATTACATGG 92466

Drosophila ------------------------------------------------------------

Canis AGATTGTGTTAAGG----TGGTACTAATTGTTTCTTA-----------AATGTTTCGTGG 60234

Bos ------------------------------------------------------------

Rattus GAACCCTGTTCTCAGTCCAGTGATTGGCTGCAAGCTTCCACCTAT---TATATTCTTAA- 77458

Danio GA----------------------------------------------TGTATT------ 14712

Mus CAGTACAAGC--CATTGCTGTTCTGTTCAGGAATTTTTCCCCTGTGCCCATATCTTCAAG 67334

Gallus AAA--------------------------------------------GTAAATT------ 44383

Anopheles ------------------------------------------------------------

Homo AATGAGATATGGAAACCTTAATTTCAGTTGGGTCTCTTTCCCCAC-----TTTTAAATAG 91764

Pan AATGAGATATGGAAACCTTAATTTCAGTTGGGTCTCTTTCCCCAC-----TTTTAAATAG 92521

Drosophila ------------------------------------------------------------

Canis AATTCTCCAACGAAATC---ATTTGGGCCTGGAAATTTCCCTTTT-----TTTGGGGGAG 60286

Bos ------------------------------------------------------------

Rattus --TTTTCTTAATTTTCTCTCTCTC---TCTCCCTCTCTCTCTCTCTCTCTCTCTCTCTCT 77513

Danio --TTTTC----------------------------------------------------- 14717

Mus GCTTTTCCCCACTTTCTCCTCTATAAGTTTCAGTGTCTCTGGTTTTATGTGAAGTTCCTT 67394

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TATTGTTTTGAGGATTAATGCTATTACAGTTTTTGTATCAGTTATCCAATATGACTTATA 91824

Pan TATTGTTTTGAGGATTAATGCTATTACAGTTTTTGTATCAGTTATCCAATATGACTTATA 92581

Drosophila ------------------------------------------------------------

Canis AATT----TGAAATTCAGTTTCTTCAGTGTTTATAAAACGATTAA--------------- 60327

Bos ------------------------------------------------------------

Rattus CTCCCTCT---------------------------------------------------- 77521

Danio ------------------------------------------------------------

Mus GATCCACTTAGATTTGACCTTAGTACAAGGAGATAAGTATGGATCGATTCGCATTCTTCT 67454

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GAACTTATCAA------------------------------------------------- 91835

Pan GAACTTATCAA------------------------------------------------- 92592

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -------------------------------------------CTCTCTCTCTCTCTCTC 77538

Danio ------------------------------------------------------------

Mus ACATGATAACAACCAGTTGTGCCAGCACCAATTGTTGAAAATGCTGTCTTTCTTCCACTG 67514

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ---------------------------------GGGAGTGATGCTCTGTTGTATGTACCC 91862

Pan ---------------------------------GGGAGTGATGCTCTGTTGTATGTACCC 92619

Drosophila ------------------------------------------------------------

Canis ---------------------------------------GATATTCTTTCATAC-TGGGT 60347

Bos ------------------------------------------------------------

Rattus TCTCTTTCTTTCTTTCTTTTCTTTGAGGGGACAATGTATA-------------------- 77578

Danio -------------------------------------ATA-------------------- 14720

Mus GATGGTTTTGGCTCCCTTGTCGAAGATCAAGTGAC-CATAGGTGTGTGGGTTCATTTCTG 67573

Gallus -------------------------AACCAGTGACTTGTG-------------------- 44398

Anopheles ---------------------------CCGGT---------------------------- 2565

Homo ATGTTTCTGCTATTTCCATTATTTTTTCCAAGATTCCATCTTTTA--------------- 91907

Pan ATGTTTCTGCTATTTCCATTATTTTTTCCAAGATTCCATCTTTTA--------------- 92664

Drosophila ------------------------------------------------------------

Canis AGGTTATGGTAGTTTGTGTTA----TTCAAAGAGTTGATCTATT---------------- 60387

Bos ------------------------------------------------------------

Rattus -----TCAATTTTATTGATGAAATTCAGTATCACACATTCATAT---TTCTATGCCTTCT 77630

Danio -----TAA---TTATT------ATTAAGT------------TAT---TTTAGTG------ 14745

Mus GGTCTTCAATTCTATTCCATTGGTCCACTTGTCTGTCTCTATACCAGTACCATGCAGTTT 67633

Gallus -----TGAAGACTCTGT-----ATCTGTTAGAACAAACTGATAC-----CAATGAAACCT 44443

Anopheles ------------------------------------------------------------

Homo -----TTACTTCCATTAGCCAGTCTTCAAAGGCAGTTCTGCTAG---TGAGAAATTCTTT 91959

Pan -----TTACTTCCATTAGCCAGTCTTCAAAGGCAGTTCTGCTAG---TGAGAAATTCTTT 92716

Drosophila ------------------------------------------------------------

Canis -----TTATTTAAGTAGTCAAATTTTTGTGTGAAGAGTTCATAA---TATTCCCTTCTTA 60439

Bos ------------------------------------------------------------

Rattus TCACTAGAATTTCTC---------GTTTCATATTAGAACTATTTATGGAAAGAGAGATAA 77681

Danio TCACTAAAATATTTA---------GCCTC------------------------------- 14765

Mus TTATCACAATTGCTCTGTAGTAAAGCTTTAGGTCAGGCATGGTGATTCCACCAGAGGTTC 67693

Gallus ATATCTGGACTTGGT------AGAGGTTGTGAACAAATAAGGCTG--------------- 44482

Anopheles -----------------------AGGTT-------------------------------- 2570

Homo TTGTTTTTCTCTTTCTGAAGATGACTTTATTTTCCCTTTATTCCCAAAGAATAGTTTTAT 92019

Pan TTGTTTTTCTCTTTCTGAAGATGACTTTATTTTCCCTTTATTCCCAACGAATAGTTTTAT 92776

Drosophila ------------------------------------------------------------

Canis TTCTTTTGATGTCTGCAGGTCTGAACTGATCATACCCTTTTTTATTCCTCATAGTGGTAA 60499

Bos ------------------------------------------------------------

Rattus ----ATCAGCAATAAAGCTCTAAGCTGTCTTCAG-------------------------- 77711

Danio ------------------------------------------------------------

Mus TTTTATCCTTGAGAAGAGTTTTTGCTATCCTCGGTTTTTTGTTATTCCAGATGAATTTGC 67753

Gallus ----GATATTAATAGAGCTTTG-------------------------------------- 44500

Anopheles ------------------------------------------------------------

Homo TTGTGCTATTTGG--GGTTCGCTCAGCTTCTTGAAGCT--------------------GT 92057

Pan TTGTGCTATTTGG--GGTTCGCTCAGCTTCTTGAAGCT--------------------GT 92814

Drosophila ------------------------------------------------------------

Canis TTATGTTTTTTTTTTAACTTGTTAGTCTTTGTTGAG------------------------ 60535

Bos ------------------------------------------------------------

Rattus -AATTCTTGATTATCAAACACCATTGAATTGAAT---------------------GTCAC 77749

Danio ------------------------------------------------------------

Mus AAATTGCTCCTTCTAATTCGTTGAAGAATTGAGTTGGAATTTTAATGGGGATTGCATTGA 67813

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAGTTTGTGTCTTTTGCCAAACATGGAAAATTTTCAA---------------CCATTATT 92102

Pan AAGTTTGTGTCTTTTGCCAAACATGGAAAATTGTCAA---------------CCATTATT 92859

Drosophila ------------------------------------------------------------

Canis AGATTTGAAATTATTGATTATATTGAAAAGCTGGC-----------------TTTTTATT 60578

Bos ------------------------------------------------------------

Rattus ATCCAGAGCTTTCTTT----------------------ATGC------------------ 77769

Danio ----------TTCTTA----------------------ATGT------------------ 14775

Mus ATCTGTAGATTGCTTTTGGCTAGATAGCCATTTTTACAATGTTGGTCCTGCCAATCCATG 67873

Gallus ----------TTCTATT----------------------TAT------------------ 44510

Anopheles ----------TTCTTTT----------------------CGC------------------ 2580

Homo TCTTCAGGTGTTCTTTCAGCGTCACTCTTTTCTCCATTCTA------------------- 92143

Pan TCTTCAGGTGTTCTTTCAGTGTCACTCTTTTCTCCATTCTA------------------- 92900

Drosophila ------------------------------------------------------------

Canis TCTCTGTTCTTATTTTCAATTTCATTGATTTCTGCTCTTTATT----------------- 60621

Bos ------------------------------------------------------------

Rattus ------------------------------CTCATTCAATTATTTTCATCTAAGAAAA-- 77797

Danio ------------------------------CTCAC------------------------- 14780

Mus AGCATGGGAGATCTTTCCATCTTCTGAGATCTTCTTTAATTTCTTTCTTC--AGGGAC-- 67929

Gallus ------------------------------TTTTTTTAGCAAGCTACG------------ 44528

Anopheles ------------------------------TTCGTTTAA-AGGCTTC------------- 2596

Homo ----------GGCCTCTAATGATACAAATGTTGAGTCATTTGTTACTGTTCCACATGGAC 92193

Pan ----------GGCCTCTAATGATACAAATGTTGAGTCATTTGTTACTGTTCCACATGGAC 92950

Drosophila ------------------------------------------------------------

Canis ----------AGTTTCTTCCTTTGTTTTGGTTTATTTTGCTCTTCTCATTCTAGCTTA-- 60669

Bos ------------------------------------------------------------

Rattus TAGCAATATATATTGTGAAGAAATTTAACTTTCTTCATGAATTAACATTTCAGTAAATGT 77857

Danio --------------------------AGCTTTATTCAT---------------------- 14792

Mus TTGAAGTTTTTATCATACAGATCTTTCACTTCCTTCGTTAGA-GTCACGCCGAGATATTT 67988

Gallus ----------------AAAGTTGCCTAATGTCATGTATTAGC------------------ 44554

Anopheles ------------------------------TCAT-------------------------- 2600

Homo CTGAGGCATGGTTCATTTTTCAGTCTATTTTCTCTCTTTTGTTCAGATTTCTCTCCTTTG 92253

Pan CTGAGGCATGGTTCATTTTTCAGTCTATTTTCTCTCTTTTGTTCAGATTTCTGTCCTTTG 93010

Drosophila ------------------------------------------------------------

Canis CTGAGGAGAGAAACAGTGATTGGTTTGAGACCTTTCCTCTTTTCTAATGTAAGCATTTAG 60729

Bos ------------------------------------------------------------

Rattus TTATGAATATATG--TATGATTA-------TACTTCTGAGAAACCTGTGCTGTTCTATTT 77908

Danio -----------TG--TAT------------------------------------------ 14797

Mus TATATTATTTGTGGCTATTGAGAAGGGTGTTGTTTCCCTAATTTCTTTCTCAGCCTGTTT 68048

Gallus --------AACTAACTATGA--------------------AATAGTTTATTAACATGATC 44586

Anopheles ---------ACTAATTA--------------------------GGCTCCCT--------C 2617

Homo TCATCTTCACTCTACTGTTGAGCC--------CATCTAATGATTATTTTTCTCCTATTGT 92305

Pan TCATCTTCACTCTACTGTTGAGCC--------CATCTAATGATTATTTTTCTCCTATTGT 93062

Drosophila ------------------------------------------------------------

Canis TGCTTTAAATTTTATT-------------------CTCATTATTGCTTTA-----GCTAT 60765

Bos ------------------------------------------------------------

Rattus TTTTATTATGTG------------CCTTCTAGTTGTGTTAATTTTAC------------- 77943

Danio -TTTGTTGT--------------------------------------------------- 14805

Mus ATTCTTTGTGTAGAGAAAGGCCATTGACTTGTTTGAGTTAATTTTATATCCAGCTACTTC 68108

Gallus TGTTGTTAATTG----------------TTGCTTAA--TAGCTTC--------------- 44613

Anopheles TCTCGATAGGTA----------------CTGTTCAA--TAGCTT---------------- 2643

Homo ATTTTTTAGGTCTATAATTTCCATTTGCTTTTTTTTCCTTGTATCTT------------- 92352

Pan ATTTTTTAGGTCTATAATTTCCATTTGCTTTTTTTTCCTTGTAACTTCT----------- 93111

Drosophila ------------------------------------------------------------

Canis ATCCCATATGTTTTGATATGTTGTGTTTTTCTTTTTTTTCATATCT-------------- 60811

Bos ------------------------------------------------------------

Rattus ----------------------------TTTCCTTGGATATTTT-------------ATG 77962

Danio ---------------------------------------ATTTC-------------ATG 14813

Mus ACCGAAGCTGTTTATCAGGTTTAGGAGTTCTCTGGTGGAATTTTTAGGGTCACTTATATA 68168

Gallus -------------------------------CCAAAGAGATTTCTA-----------AAA 44631

Anopheles ------------------------------------------------------------

Homo ---------GTTTCCTTGCTGAGATTTTCTATTGTTTCGTTTTTGAAACAGTAGAACTTG 92403

Pan ---------GTTTCTTTGCTGAGATTTTCTATTGTTTCGTTTTTGAAACAGTAGAACTTG 93162

Drosophila ------------------------------------------------------------

Canis ---------GTATTTTTTAAAATTTATTTTGACACTTTCTCTTTGTTAAACCAAATTATG 60862

Bos ------------------------------------------------------------

Rattus TATTTACATTTCA---------AATGTTATCTCCTTTTCCCCCTTTCCCATACCCCTTCT 78013

Danio TA---------------------------------------------------------- 14815

Mus TACTATCATATCATCTGCAAAAAGTGATATTTTGACTTCCTCTTTTCCAATTTGTATCCC 68228

Gallus CAATAG------------------------------------------------------ 44637

Anopheles ------------------------------------------------------------

Homo TAATTGCTTGTCAAATCATTTCTCTGATGGCAGCATTAAGATCCTTGCCAGATAATTTCA 92463

Pan TAATTGCTTGTCAAATCATTTCTCTGATGGCAGCATTAAGATCCTTGTCAGATAATTTCA 93222

Drosophila ------------------------------------------------------------

Canis TTGTTTAATTTCCAGGGGTTTT---------------------------GGATATTTTCT 60895

Bos ------------------------------------------------------------

Rattus CCCCTCCATGTGCTTCTATGAGGATGCACCCACTTCCACTCCAACTCCCTGCTTACATGG 78073

Danio ------------------------------------------------------------

Mus CTTGATCTCCTTTTGTTGTCGAATTGCTCTGGCTAATACTTCAAGTACTATGTTGAAAAG 68288

Gallus -----------------ATAGGATTGCATT------------------------------ 44650

Anopheles ------------------------------------------------------------

Homo GCATCTTACTCATCCCAGTGTTGGCGTTTTCTTTCCTTCATGTAATTTTCCTGGTTCTTG 92523

Pan GCATCTTACTCATCCCAGTGTTGGCGTTTTCTTTCCTTCATGTAACTTTCCTGGTTCTTG 93282

Drosophila ------------------------------------------------------------

Canis TCTTTCTTCTCTCTTATTTATTGATTTCTAGTTTGATTCTTTTA--------------TA 60941

Bos ------------------------------------------------------------

Rattus TCATTCCTCCTCGATTCATTTGAGTTATTTCTGGTTTTCTTTCTTCATTTTAGCAAATTT 78133

Danio ------------------------------------------------------AAATCT 14821

Mus GTA---------GGGAGACAGTGGGCAGCCTTG--TCTAGTCCCTGATTTTAGTGGGATT 68337

Gallus ----------------------------------------------------GTATAGTT 44658

Anopheles ------------------------------------------------------------

Homo GTA--------------TGACAGATAATTTTTGGATTGTGTCTCGGACATTTTAGTTATT 92569

Pan GTA--------------TGACAGATAATTTTTGGATTGTGTCTCGGACATTTTAGTTATT 93328

Drosophila ------------------------------------------------------------

Canis GTC--------------AGAGAACTTATTCTTGCGTAACTCTCAATACTCTTGAATTTGT 60987

Bos ------------------------------------------------------------

Rattus ACTTTTAAACCTCCTTGTCACCCTCAAGACTGAACGTTT--TTGTTCTTAGAC-ATATTT 78190

Danio AGTTTCAAA------------------------ACGTT---------------------- 14835

Mus GCTTCCAGCTTCTCT------CCATTTACTTTGATGTTGGCTACTGGTTTGCT-GTAGAT 68390

Gallus TTCTACAAAAT----------------------ACGTTA---------CAGTG-GCACTT 44686

Anopheles ------AAAAT-----------------------CGCTG---------C---------TC 2656

Homo ATATCAGGAGACTCTGTACTTTTTAAAAATTTTAACTTCAGTAGTAACCTGTTAAGGTAT 92629

Pan ATATCAGGAGACTCTGTACTTTTTAAAAATTTTAACTTCAGTAGTAACCTGTTAAGGTAT 93388

Drosophila ------------------------------------------------------------

Canis ATAT--------TCTGTG---TTGGTGGGTGGAATGTTTGGTGATTGTTAATTTAGATTT 61036

Bos ------------------------------------------------------------

Rattus CGTTTTTG--------AAATATTATATTCTCTATGATGAGGCTTTGTACACTT--TTATC 78240

Danio -GCTTTAA--------AAA----------------------------ACAATT--GTAAC 14856

Mus TGCTTTTATCATGTTTAGGTATTGGCCTTGAATTCCTGATCTTTCCAGAACTT--TTATC 68448

Gallus GACCTGCA--------AAGGTTTGATGCTTGTATTGTGCTTCCTCCTGGTATT--TTAAT 44736

Anopheles GAC--------------------------------------------------------T 2660

Homo AGCATGTA---------GGTACTAGCATATATTT-GTGAGCTGTGGTTCCAGTGACCATT 92679

Pan AGCATGTA---------GGTACTAGCATATATTT-GTGAGCTGTGGTTCCAGTGACCATT 93438

Drosophila ------------------------------------------------------------

Canis TGTTCATT---------GATGATTTTGTAGATTTTGTGACCAGTAGTTCTGTCAGTCACT 61087

Bos ------------------------------------------------------------

Rattus ATTGAGGGAAGTTGGGGCAGGAACCAGAGTGGTATCTCTTGCTGATTTATGCTCCTCTAA 78300

Danio ATCAAGAG---------------------------------------------------- 14864

Mus ATGAATGGGTGTTGGATCTTGTCAAATGCTTTTTCTGCATCTAACGAGATGATCATGTGG 68508

Gallus ATAACTTAA--------------------------------------------------A 44746

Anopheles ATA--------------------------------------------------------- 2663

Homo TTTCAGAGGCTTTATGGTGCTGTTTTGGTTTGTTGCTTTTATCTCAGTCCACTGGGGCTC 92739

Pan TTTCAGAGGCTTTATGGTGCTGTTTTGGTTTGTTGCTTTTATCTCAGTCCACTGGGGCTC 93498

Drosophila ------------------------------------------------------------

Canis CAGAGAGAGGGGTGTTGAATGCTCCATACTGGTGGGTGTGTCCATTCCTCCTTTCAGGTC 61147

Bos ------------------------------------------------------------

Rattus CTCCC-TCTTCATGTTTTTTT---TAAAAAGTGAAAT-----GATTCTGTCGTATTTA-- 78349

Danio -------CTTAATGTTTTAGT---TGAAAA---AAAT-----CA---------------- 14890

Mus TTTTTGTCTTTGAGTTTGTTTATATAATGGATTACATTGATGGATTTTCGTATATTAAAC 68568

Gallus CACTTACTTCAGAGCTTTCACAAACCGAAGATGAAGT----------------------- 44783

Anopheles ------------------------CGGAAAACGA-------------------------- 2673

Homo GCACTGGTTCCTAGTAGTGCTGCTTGAGGGGCCTTCT-----------CCAGGCTGAGCT 92788

Pan GCACTGGTTCCTAGTAGTGCTGCTTGAGGGGCCTTCT-----------CCAGGCTGAGCT 93547

Drosophila ------------------------------------------------------------

Canis TATCAGTTTTGACTTTATGTATTTTGAAGATCTTT------------------------- 61182

Bos ------------------------------------------------------------

Rattus -----CAGAAGTCTTAGAT--AATCTCAAACATTAATGTTGGTCTCTAATTTTCCTATCT 78402

Danio ------------CTTAG------------------------------------------- 14895

Mus CATCCCTGCATCCCTGGAATAAAACCTACTTGGTCAGGATGGATGATTGCTTTAATGTGT 68628

Gallus ------------TCCAGGT------------AATCAAGCCACACAATACTTTCTCTAAC- 44818

Anopheles ------------------------------------------------------------

Homo GCGCAGAGTGTGTTTGGGT---------GAGGGAAGAGGACCCCCACTAGATTTTCGTGG 92839

Pan GCGCAGAGTGTGTTTGGGT---------GAGGGAAGAGGACCCCCACTAGATTTTCGTGG 93598

Drosophila ------------------------------------------------------------

Canis ----------TGATTGGTG---------CATAAACCTTGAGCCTCAGTATGTCTTTTTGA 61223

Bos ------------------------------------------------------------

Rattus AATTTTGCTCTGTTAACAGAGATTGTGA-AGTAATAACAAAATTGTTGTTATCGATAGTC 78461

Danio ------------------------------------------------------------

Mus TCTTGGATTCGGTTAGCGAGAATTTTATTAAGAATTTTTGCATCGATGTTCATAAGAGAA 68688

Gallus ------AATAGAGCATGGAGGATTGATAGGGGCTTCCCTACTTAGGTACAACCAAGGG-- 44870

Anopheles -------------CATGGAGGA-------------------------------------- 2682

Homo GCTGGAGAGTGCTTCCTGAGCCTTGTGCCTGTTGTGGCAGGCTCCCCCTTGCTGGTGTTC 92899

Pan GCTGGAGAGTGCTTCCTGAGCCTTGTGCCTGTTGTGGCAGGCTCCCCCTTGCTGGTGTTC 93658

Drosophila ------------------------------------------------------------

Canis ----TAGATTGATCATTTATCATTATG-----TGGTGTGGTTCTCCATCTACTGATTTTC 61274

Bos ------------------------------------------------------------

Rattus CTTTGCCT-------TGTATGTCTTTTATGTCTGTCTTTACTCTATCCATCA-------- 78506

Danio ------------------------------------------------------------

Mus ATTGGTCTGAAGTTCTCTATCTTTGTTGGATCTTTCTGTGGTTTAGGTATCAGAGTAATA 68748

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTGGCAGTGCTCCTGACCACATTGTGTCCCTGGGCTGTGGAACACTTGCAGGAAAGGTGA 92959

Pan CTGACAGTGCTCCTGACCACATTGTGTCCCTGGGCTGTGGAACACTTGCAGGAAAGGTGA 93718

Drosophila ------------------------------------------------------------

Canis TT--------TCCTCCAGAATCTATCTGTCTGATCTATTAATCTT--------------- 61311

Bos ------------------------------------------------------------

Rattus ----TTTCAC------------------------------CTGTGATTGTAAAAGTGGTC 78532

Danio -----TTCAC------------------------------CCA-------AAAA------ 14907

Mus GTGGCTTCATAAAATGAGTTGGGTAGAATACCTTCTACTTCTATC-TTGTGAAAAAGTTT 68807

Gallus ----TTTCAAA----------------------------TCCAAGCATTTGCAA--GGTA 44896

Anopheles --------------------------------------------------------GGTA 2686

Homo ACACTGCCAGGA---------------------------CCAATTATAGCAGAATTCCTC 92992

Pan ACACTGCCAGGA---------------------------CCAATTATAGCAGAATTCCTC 93751

Drosophila ------------------------------------------------------------

Canis ---CTTTTAACA---------------------------TTTTTTAAATTAAACTTCTTA 61341

Bos ------------------------------------------------------------

Rattus ATTTAA----GGAAATAATTTTCTTTTATA----TGATCATCCTACATATGTCATTCTCT 78584

Danio ---TAA----AAAAATAA------------------------------------------ 14918

Mus GTGCAGAACTGGAGTTAGATCTTCTTTGAAGGTCTGATAGAACTCTGCACTAAACCCGTC 68867

Gallus TTTTAA-----GAGATGC------------------------------------------ 44909

Anopheles TTT--------------------------------------------------------- 2689

Homo CTGCCAGTACACAGCAGCACTGTGGCTCTGGACCAGCAAGGAGAGTCTCAAGCATGGGTT 93052

Pan CTGCCAGTACACAGCAGCACTGTGGCTCTGGACCAGCAAGGAGAGTCTCAAGCATGGGTT 93811

Drosophila ------------------------------------------------------------

Canis TTGTGAG--------------ATAATTCTAGATTGGTATGCAGT-TGTAAAAAATCGCAC 61386

Bos ------------------------------------------------------------

Rattus TATTTTCCTATCTTTTTC-------------TTATCAGCAAGTATTATATTGTTACTTTA 78631

Danio -----------------------------------------------------------A 14919

Mus TGGTCCTGGGCTTTTTTTGGCTGGGAGACTATTAATAACTGCTTCTATTTCTTTAGGGGA 68927

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGTTTCTTTTTG----------------------------ATTTTAAGATTTTTCTTCTG 93084

Pan TGTTTCTTTTTG----------------------------ATTTTAAGATTTTTCTTCTG 93843

Drosophila ------------------------------------------------------------

Canis AGAGACCCTGTGTAC-------------------------ACTTTATCATATTTCACTTA 61421

Bos ------------------------------------------------------------

Rattus AATGAATCTATTGAAAAGGCAAAGTCAA----------------------AGTATTTGTT 78669

Danio AACAAA------------------------------------------------------ 14925

Mus TATGGGACTGTTTAGAAGGTCAACTTGATCCTGATTCAACTTTGGTACCTGGTATCTGTC 68987

Gallus TGTGGAAATGTTGAAAGAATACAGCTAG-------------------------------- 44937

Anopheles ------------------------------------------------------------

Homo CCTTCAGGTTCTGGTATTATTGTTCTGTTTTA---------TTCACCTTTATGTTTCTTC 93135

Pan CCTTCAGGTTCTGGTATTATTGTTCTGTTTTA---------TTCACCTTTATGTTTCTTC 93894

Drosophila ------------------------------------------------------------

Canis GTAGCAAATTTTTATAAAACAGTTACAATAT----------------CACAAGTAGGATA 61465

Bos ------------------------------------------------------------

Rattus TGATAGAATGAAGAGTTAATGTGATATTTTTAATAATATTAGGTAAGTTTTTGTCTTCAA 78729

Danio ----AGAA---------------------------------------------------A 14930

Mus CAGAAATTTGTCCATTTCGTCCAGGTTTTCCAGTTTTGTTGAGTATAGCCTTTTGTAGAA 69047

Gallus TAAAAGAGTG-------------------------------------------------A 44948

Anopheles ------------------------------------------------------------

Homo TAGTTTAGTTTTAGTTTCTTTGTATT--TGATGGGATTTTTTTCCTTGCATTTCTAATTA 93193

Pan TAGTTTAGTTTTAGTTGCTTTGTATT--TGATGTGATTTTTTTCCTTGCATTTCTAATTA 93952

Drosophila ------------------------------------------------------------

Canis CAGTCAAAATTCAGAAAAGTTCAATCACCACAAGAATTCCTCCTGTTGCTCTTCTATATT 61525

Bos ------------------------------------------------------------

Rattus G----------TATTATGAACTCATGAA-----------------------TTTATTTTT 78756

Danio A----------TATTATGAAC---------------------------------ATTTCT 14947

Mus GGATCTGATGGTGTTTTGGATTTCTTCAGGATCTGTTGTTATGTCTCCCTTTTCATTTCT 69107

Gallus G--------GCTTTCATGTAA---------------------------------ACTTTC 44967

Anopheles ---------------ATGCAA---------------------------------ACGTTC 2701

Homo CTCCTTAGTTGTGTCATGTCTTCCTT----------------------------TTTTTC 93225

Pan CTCCTTAGTTGTGTCATGTCTTCCTT----------------------------TTTTTC 93984

Drosophila ------------------------------------------------------------

Canis CCGTCAAACC----CATATATCTATA----------------------------GCTTTT 61553

Bos ------------------------------------------------------------

Rattus AATATAGTAAAT---GTTTTTTACCATTAGAACT---GTGA--ATAGTAGACGTACTACT 78808

Danio GGAA------------------ACCA-----------GTAA--CCAGTAACC-------- 14968

Mus GATTTTGTTAATTAGGATTTTGTCCCTGTGCCCTTTAGTGAGTCTAGCTAAGGGTTTATC 69167

Gallus AGTAATTAAAAC-------------------------ATAA--AGAGGGAACTTAGTACT 45000

Anopheles AA---------------------------------------------------------- 2703

Homo AGTTACCCTCATTCAGAAATTTCCCATTTC--------TAATGATTTGTTATTTTTTAAA 93277

Pan AGTTACCCTCATTCAGAAATTTCCCATTTC--------TAATGATTTGTTATTTTTTAAA 94036

Drosophila ------------------------------------------------------------

Canis CACTATGCCCACTCTGG--TCCTTAACCCC--------TGACAACAACTAATCTGTTG-- 61601

Bos ------------------------------------------------------------

Rattus TGGCCTCGGTGTATTTTTAAAATGATACACGACT---TCAGTAAAAT--TTGAA--ATTT 78861

Danio ---------TGTGTTCTT----------------------GTAAGTT--ATG-------- 14987

Mus TA-TCTTGTTGATTTTCTCAAAGAACCAACTCCTCGTTTGGTTAATTCTTTGAATAGTTC 69226

Gallus TC-------TATTTATCTACAAAAA----------------TACATT---TGCA------ 45028

Anopheles ------------------------------------------------------------

Homo TT--CTTTTTAGCTCAGTTTGAAATTTGTTTACAGTTTTCATGTTTTATTTGCATATTGT 93335

Pan TT--CTTTTTAGCTCAGTTTGAAATTTGTTTACAGTTTTCATGTTTTATTTGCATATTGT 94094

Drosophila ------------------------------------------------------------

Canis -T--CTGTTTCTTTAATTTTG------------------------TCATTTCAAGAATGT 61634

Bos ------------------------------------------------------------

Rattus GCCTTATTT---------------------TGAACATTACTATCTCCTACTCTACAAT-- 78898

Danio --CCTATTT---------------------T----------------------------- 14995

Mus TTCTTGTTTCCACTTGGTTGATTTCACCCCTGAGTTTGATTATTTCCTGCCGTCTACTCC 69286

Gallus --CTTGCTT-------------------------------TTTCTTTTACCTTCAGTTT- 45054

Anopheles ------------------------------------------------------------

Homo TTCATGTACTTTGATTTTCTGTAGGGACACCATTCTCATGTATATGCACATACTTTTTC- 93394

Pan TTCATGTACTTTGATTTTCTGTAGGGACACCATTCTCATGTATATGCAAATACTTTTTC- 94153

Drosophila ------------------------------------------------------------

Canis GAAATAAG---TGAATCACACCTAATATGTCACATTTTGGGATTTGCCAATATTTTGT-- 61689

Bos ------------------------------------------------------------

Rattus --------------AAAACATTGTTACAAGAAATTATTAGA---------AAATTGC--- 78932

Danio --------------------------------------AGA---------AAATTAC--- 15005

Mus TCTTGGGTGAATTTGCTTCCTTTTTTTCTAGAGCTTTTAGATGTGTTGTCAAGCTGCTAG 69346

Gallus --------------------------------GTATTCAGTC-------TGAGTCCC--- 45072

Anopheles ------------------------------------------------------------

Homo ------------------TCTAATAATTACACTGTTTCACTCTGTTCTGTTATTTATT-- 93434

Pan ------------------TCTAATAATTACACTGTTTCACTCTGTTCTGTTGGTTATT-- 94193

Drosophila ------------------------------------------------------------

Canis ---------------------AGCCATTTGCCTGTTGAAAAACTTCATGTTTGTTCCT-- 61726

Bos ------------------------------------------------------------

Rattus -------------------------------ATTTAGGAATAAGATTTACTATT------ 78955

Danio -------------------------------A---------------------------- 15006

Mus TATGTGCTCTCTCCCGTTTTTTCTTGAAGGCACTCATAGCTATGAGTTTCCCTCT----- 69401

Gallus -----------------------------ACACCTCTG---------TCCTAGCC----- 45089

Anopheles ------------------------------------------------------------

Homo ------------------------------TATTTGTGTGTGTGTGTGTGTGTGTGTGAG 93464

Pan ------------------------------TATTTGTGTGTGTGTGTGTGTGTGTGTGTG 94223

Drosophila ------------------------------------------------------------

Canis ------------------------------CATTTGGAGCTGT----------------- 61739

Bos ------------------------------------------------------------

Rattus -------------------------GAATGTTATGACTGG-------------------- 78970

Danio --------------------------AATCTTGTGATT---------------------- 15018

Mus ----------------------TAGAAATGCTTTCATTGTGTCCCAAAGGTTTGGGTACG 69439

Gallus ----------------------AAAGAATTGTTTCTTT---------------------- 45105

Anopheles ------------------------------------------------------------

Homo TG-----------------------AAATGAGTTTCTCATACTTGGACGAGGGAGAGATG 93501

Pan TGTGTGTGTGTGTGTGTGTGTGTGGAAATGAGTTTCTCATACTTGGACGAGGGAGAGATG 94283

Drosophila ------------------------------------------------------------

Canis ----------------------TATGAATAAAGTTGCTAT-------------------- 61757

Bos ------------------------------------------------------------

Rattus -TAGACCTTGTCAAGGAACAAAC-CTAGAAAG-----AATCTTTTAGGTATATC------ 79017

Danio -TA-------------AATAAAC-CTAAAAAA-----AA--------------------- 15037

Mus TTGTGGCTTCATTGTCATTAAACTCTAAAAAGTCTTTAATTTCTTTCTTTATTCCTTCCT 69499

Gallus -----TCTGCATAGGCTTTGGTCTCCAGAGAGCCTT-AGTCTTTTC-------------- 45145

Anopheles ------------------------------------------------------------

Homo GGCCAGGATAACTTTTTTCGCTTTTTAGGGACGAGGAGAAGTCTGTGTTTTT-------- 93553

Pan GACCAGGATAACTTTTTTCGCTTTTTAGGGACGAGGAGAAGTCTGTGTTTTT-------- 94335

Drosophila ------------------------------------------------------------

Canis -----GAATAATCACATGCAATTTATTTGGTAAACACAAAATTTTCGTTTCT-------- 61804

Bos ------------------------------------------------------------

Rattus --ATCAAAATATT-------------------------------AACGTAGAGGTTACTT 79044

Danio -----AAAAAA---------------------------------AAAGTTGA-------- 15051

Mus TGACCAAGGTATCATTGAGAAGAGTGTTGTTCAGTTTCCATGTGAATGTTGGCTTTCTGT 69559

Gallus ---CTAAGGCGTTGT-----------------------------AAGGAGGAAGACTGAC 45173

Anopheles ------------------------------------------------------------

Homo ---GTAAAATGGT---------------------------------CAAAAATATGCCCT 93577

Pan ---GTAAAATGGT---------------------------------CAAAAATATGCCCT 94359

Drosophila ------------------------------------------------------------

Canis ---CTAAA--TGC---------------------------------CAAGAATGCACTTA 61826

Bos ------------------------------------------------------------

Rattus TGTAACTTTTTTGCTTGGCTACAGCTGTCA-------------CATAAT----------- 79080

Danio --------------------------------------------ATAAT----------- 15056

Mus TATTTATTTTGTTATTGAAGATCAGCCTTAGT----------GCATGGTGATCTGATAGG 69609

Gallus CAT---TTCTTTCAGTGGAACTAACTGTCA--------------AAAGT----------- 45205

Anopheles ------------------------------------------------------------

Homo TGTGCTTTCTGAAACTGCCTTCTTTACTCCTCTATCCCACACATATATTTG--------- 93628

Pan TGTGCTTTCTGAAACTGCCTTCTTTACTCCTCTACCCCACACATATATTTG--------- 94410

Drosophila ------------------------------------------------------------

Canis ATTGTTTTTTACTATTGAATTTGAGAGTTCTG------------ATACTT---------- 61864

Bos ------------------------------------------------------------

Rattus ------------ATTGCAGTATAGTTTTCTATCTTCAAGGTCATTGTACCATCTAAT--- 79125

Danio ------------AT-ACAG----------------------------------------- 15062

Mus ATACATGGGACAATTTCAATATTTTTGAATCTGTTGAGGCCTGATTTGTGACCTATTATG 69669

Gallus -----------AATTTCAG----ATTGCACTTGTCAAACTCTGACCTAAGCTGTACT--- 45247

Anopheles ------------------------------------------------------------

Homo ---------AACTTTTTTTTGGTTTTTATTACTGACCTGGTCCATTCGGAAGTTATTCC- 93678

Pan ---------AACTTTTTTT-GGTTTTTATTACTGACCTGGTCCATTTGGAAGTTATTCC- 94459

Drosophila ------------------------------------------------------------

Canis -----------TTCTCTTACTCCTTTTATCTCTGTCACGTTTGCTTC---ATGTATTTT- 61909

Bos ------------------------------------------------------------

Rattus ---TGTATTTTGAA-----TACCGTCTTTTACTCA---------------TTTTATTATT 79162

Danio ------ATTTTGTA-----TGC-----------------------------TTTGT---- 15078

Mus TGGTCAATTTTGGAGAAGGTACCATGAGGTGCTGAGAAGAAGGTATATCCTTTTGTTTTA 69729

Gallus -----TATTTTGTA-AAGACCTTGGGATTTGTTAA--------------CTTCTGTATTT 45287

Anopheles ------------------------------------------------------------

Homo ---CAGAAGTTTTTCCTCGGTACAAGGTTTGTTTCTGGTGGGGGTTTGGTATTCGGGTGT 93735

Pan ---CAGAAGTTTTTCCTCGGTACAAGGTTTGTTTCTGGTGGGGGTTTGGTATTCGGTAGT 94516

Drosophila ------------------------------------------------------------

Canis ---GAGGCTCTGTCATTTGGTACATATCTTGCAT----------TCTTTCTTTCATTTAT 61956

Bos ------------------------------------------------------------

Rattus CAAT---------TATCGATCCACCTCACACCTGTCTTTTGCACAAGATCT------TGC 79207

Danio -------------------------------CTGTTTTTT-------------------- 15087

Mus GGATAAAATGTTCTGTAGATATCTGTCAGATCCATTTGTTTCATCACTTCTGTTAGTTTC 69789

Gallus CTTTT----------TTTTTTTTTTTTGTACACACTTTCTTAATTTAATGA-----CTGT 45332

Anopheles ------------------------------------------------------------

Homo TTTAAGGGCCCAGAGCTTACTACATCATGATCCCTTTGTAATCATCTGCAAATTAGATCC 93795

Pan TTTAAGGGCCCAGAGCTTACTACATCATGATCCCTTTGTAATCATCTGCAAATTAGATCC 94576

Drosophila ------------------------------------------------------------

Canis TTT-----TTTTGTACATACCCATTTATAGTCATTATGTC-TTACTGGTGGATTGGTCTT 62010

Bos ------------------------------------------------------------

Rattus CTTGTAGCATAGTCTAGCCTAGAACTTGCCTACCTTT----------------------- 79244

Danio --TGT------------------------------------------------------- 15090

Mus AGTGTGTCCCTGTTTAGTTTCTGTTTCCATGATCTGTCCATTGGTGAAAGTGGTGTGTTG 69849

Gallus CCTAT----CTATGTTGCTTGCTTCTACATTACTTCC----------------------- 45365

Anopheles ------------------------------------------------------------

Homo TGTAGAACTTTTTAAAACTTTAAGCCCTGTTTTCAGATTGGCCTG--------TGCTTTC 93847

Pan TGTAGAACTTTTTAAAACTTTAAGCCCTGTTTTCAGATTGGCCTG--------TGCTTTC 94628

Drosophila ------------------------------------------------------------

Canis TTTATCATTACATAAAGT------CCCTTTTTTTAATTTGTAATT--------TTCTTTG 62056

Bos ------------------------------------------------------------

Rattus ---TGCCTCAACCTTAT------AAGTGC--TAAATTATAGGAAATCTTTTTAGATTTCC 79293

Danio -------------------------GTG-------------------------------- 15093

Mus AAGTCTCCCACTATTATTGTGTGAGGTGCAATGTGTGCTTTGAGCTTTACTAAAGTTTCT 69909

Gallus ---TAATCCGCTTTCAA--ATCAAGATGTA---GGGGATAAAAACCTGCTGCCCATTTTT 45417

Anopheles ----AATCGGCT-------ACCGGGATGT------------------------------- 2721

Homo CAGTGGGTTGGCAGTGTTCTCAGGGCTGTCAGAAACCCAGTCAGTTACCTTGCATCTGCT 93907

Pan CAGTGGGTTGGCAGTGTTCTCAGGGCTGTCAGATACCCAGTCAGTTACCTTGCGTCTGCT 94688

Drosophila ------------------------------------------------------------

Canis CTCTAAATC--TAATATGAATATAACCATT-----CCTGGTTTATTTTTTAATGTTTGCA 62109

Bos ------------------------------------------------------------

Rattus TT------TCCCTTTGCCTTTTCTTATACATTAGAGATATTGCACTTTGTGATAAATTTT 79347

Danio -----------------------------------------------TGTGA-------- 15098

Mus TTAGTGAATGTGGCTGCTCTTGTATTTGGAGCATAGATATTCAGAATTGAGAGTTCCTCT 69969

Gallus TCTCTGATCCAGTTATTTCTTTGATTTTTAATGCACAAATTGAACTTAGTGA------TT 45471

Anopheles ------------------------------------------------------------

Homo TCCTTACTAACCAGTCTTGTAGTTGTCAGAGCTTTGTTTCTGTCCAATTATATGCAATGG 93967

Pan TCCTTACTAACCAGTCTTGTAGTTGTCAGAGCTTTGTTTCTGTCCAATTATATGCAATGG 94748

Drosophila ------------------------------------------------------------

Canis TGATATCTTTTTTCTGATGTTTTATTCTCAACCTATCTGTTGCTGAATTTGAA------- 62162

Bos ------------------------------------------------------------

Rattus C--AGTATTTTCTCT------ACA---------CCATTGTCCTTTATCTTTACTAATTTG 79390

Danio -------------CT------A-A---------CCATCATC-------------AAGTTA 15116

Mus TGGAGGATTTTACCTTTGATGAGAATGAAGTGTCCCTCCTTGTCTTTTTTGATGACTTTG 70029

Gallus TAAAGTGTTCT----------GGA----------TGTAAATATGGGTTCAAAAGAGGTAA 45511

Anopheles ------------------------------------------------------------

Homo TTCATGGTTTTGTTGTAGATAATGTCT----CTGGGTCTTTGGTTTTCTCATTCAGTTTG 94023

Pan TTCATGGTTTTGTTGTAGATAATGTCT----CTGGGTCTTTGGTTTTCTCATTCAGTTTG 94804

Drosophila ------------------------------------------------------------

Canis ---ATGAGTTTCTTAGAAATAACATGTAG--TTGAGTCCTT--TTTTTCCATCCACTCTG 62215

Bos ------------------------------------------------------------

Rattus GACTTTTTTTTTTTT-----TAACCAAGTGAAAGGTTAAAAAAAAGGTTTTAT------- 79438

Danio ATCT--------------------CAAATG-------------------TTAC------- 15130

Mus GGTTGGAAGTCAATC-----TTATCAGATATTAGGATGGCTACTCCTGCTTGTTTCTTCA 70084

Gallus AAGTGAAAGTTAATCGCTGACTCTCAACCCACAGATCAGACCATAGTGTTTGA------- 45564

Anopheles ------------------------------------------------------------

Homo CTGTTTTTGTAGGGGA--GGTTGGGAGGGAATAAAACAAAAAATAATAATAATAAT---- 94077

Pan CTCTTTTTGTAGGGGA--GGTTGGGAGGGAATAAAACAAAAAATAATAATAATAAT---- 94858

Drosophila ------------------------------------------------------------

Canis TCTGCCTTGTAATTGA--TATAGTTAG-----AAAATTCATATTTAAGGTAATTAT---- 62264

Bos ------------------------------------------------------------

Rattus --CAGTTTACTTAACAATTTGTTC-CCATTATTTTACTTTGATA-AGCATTTCT------ 79488

Danio --C------CCTAAGAAAT--------ATTGTGT-----------AACATTT-------- 15155

Mus TACCATTTGCTTGGAAAATTGTTTTCCAGCCTTTCATTCTGAGGTAGTGTCTATCTTTTT 70144

Gallus --CACAACCCCTGGGTAATAGTAGGCTTTCCTCAGGTCATTATT-ATCATTTGTT----- 45616

Anopheles ------------------------------------------------------------

Homo --AACTATGTCGTTGCCATCATCATCTTTCCAGAACCTGCTACCTGCCCTTCACCT---- 94131

Pan --AACTATGTCGTTGCCATCATCATCTTTCCAGAACCTGCTACCTGCCCTTCACCT---- 94912

Drosophila ------------------------------------------------------------

Canis --TGATACATTAGGGCTTATGTCTACCATTTCATGTTTTCTGTTTCTCCTTTAGC----- 62317

Bos ------------------------------------------------------------

Rattus --------TGAGTTTCGATT-----------------ATTTTGTTT---TAGCTCCTTTC 79520

Danio -------------------------------------GTTCTGTCT---TAAATACT--- 15172

Mus CTCTGAGATGAGTTTCCTGTAAGCAGCAAAATGTTGGGTCTTGTTTGTGTAGCCAGTTTG 70204

Gallus -------------------------------------GCCTTTTTTCTCTTTGTCTTTCC 45639

Anopheles ------------------------------------------------------------

Homo -----------------------------------GATTTTCGTATTTATCAGTATCATT 94156

Pan -----------------------------------GATTTTCGTATTTATCAGTATCATT 94937

Drosophila ------------------------------------------------------------

Canis -------------------------------------ATTTTGTTTCCAGGGGT------ 62334

Bos ------------------------------------------------------------

Rattus CCCTTCTCATTCCCTTCCCCATT----------TCTTGCTTTTTAAAAATTTCTAGA--- 79567

Danio --------------------------------------------AAAAAT---------- 15178

Mus TTAGTCTATGTCTTTTTATTGGCGAGTTGAGACCATTGATGTTAAGAGATATTAAGGAAA 70264

Gallus TTAGCATCTG-CTCTTGGTTGCT------------------TTTACAAACACTGAGT--- 45677

Anopheles ------------------------------------------------------------

Homo ACCTTAATCTGTTATCTCATTGGGG---------------ATTGCAAAATGGCTGTT--- 94198

Pan ACCTTAATCTGTTATCTCATTGGGG---------------ATTGCAAAATGGCTGTT--- 94979

Drosophila ------------------------------------------------------------

Canis ----TATCTTGTTACTT-----------------------------GAACGTTTTTT--- 62358

Bos ------------------------------------------------------------

Rattus ------------------------CTGTTGTCAATGGAAATTTTGGATGTTTGTCAAATA 79603

Danio --------------------------------AATGG----------------------- 15183

Mus AGTAATTGTTGCTTCCTGTTATTTTAGTTGTTAAAGGTGGCATTCTGTTCTTGTGGCTGT 70324

Gallus --------------------------GAGCTTGATGGT--CATTTGTTAGGAGTGAATGG 45709

Anopheles ------------------------------------------------------------

Homo ----------------------------------TGGGGAAAAAAAATTTCCATCTGCTT 94224

Pan ----------------------------------TGGGGAAAAAAAATTTCCATCTGCTT 95005

Drosophila ------------------------------------------------------------

Canis ----------------------------------TAGGA---------TTCCGTCTTGAT 62375

Bos ------------------------------------------------------------

Rattus AAACTGACAAGACTTTC------TTCTTTGCTTACTTCATCTATGAATCATCTTTTATTT 79657

Danio ------------------------------------------------------------

Mus CTTCTTTTAGGTTTGTTGAGGGATTACCTTCTTGTTTTTTCTAGGGCGTTGTTCCCGTTC 70384

Gallus GAATTAAGTAACTTGTCA---------CTACTGTTTTCATGACAGATTATTTCACATCCT 45760

Anopheles ------------------------------------------------------------

Homo GTCCTACATATATACCTGG-----CATTCTTTTTTCTCATCATTGGGTGCCATTTGATTA 94279

Pan GTCCTACATATATACCTGG-----CATTCTTTTTTCTCATCATTGGGTGCCATTTGATTA 95060

Drosophila ------------------------------------------------------------

Canis TTACTTCTAGTGTTGTTTG-----GGTTGTATGGTTTAGT-ACAGTGTTCTTCCTGTTTG 62429

Bos ------------------------------------------------------------

Rattus CTAAAATTGCTATCTATTTGCTTCAAAATTTGCAAG------------------------ 79693

Danio -TGAAATAGCT------------------------------------------------- 15193

Mus TTGTATTGGTTTTTTTCTGTTATTATCCTTTGAAGGGCTGGATTCGTGGAGAGATAACGC 70444

Gallus CTGATATTGCT------------------------------------------------- 45771

Anopheles ------------------------------------------------------------

Homo CCTTGAAAAACA----------------------------------------------GT 94293

Pan CCTTGAAAAACA----------------------------------------------GT 95074

Drosophila ------------------------------------------------------------

Canis CTGTGGTAA--------------------------------------------------C 62439

Bos ------------------------------------------------------------

Rattus -TGTTACTATTTCTGT--TGGAATTTATTAATCTCTTTATTTCTGATTCATGATGCCATC 79750

Danio --------------GT--TGAA-----TTAACACCTTG--TTCTGGTCCGC--------- 15221

Mus GTGAATTTGGTTTTGTCGTGGAATACTTTGGTTTCTCCCTCTATGATAATTGAGAGTTTG 70504

Gallus ---------------CCGTGAAATGTATTGAAACTTAC--TTATGACAGAC--------- 45805

Anopheles ------------------------------------------------------------

Homo TCTACAGAAAAGGCATGATAAAATAGATTTAAGGTTTTTAGAGTAAGGAGTTAATGTAAT 94353

Pan TCTACAGAAAAGGCATGATAAAATAGATTTAAGGTTTTTAGAGTAAGGAGTTAATGTAAT 95134

Drosophila ------------------------------------------------------------

Canis ATAACATTGTACACATGTGAAAGTGGATCAGCATCTCTTCCAATGAAGTATGGAAACCTT 62499

Bos ------------------------------------------------------------

Rattus GTTAAACTT------------------TCCATGTTAGAGTTT---AAGTTATTC------ 79783

Danio ----------------------------CTGTGTTC---TTC---AGGTTACCC------ 15241

Mus GCTGGGTATAGTAG-------------CCTGGGCTGCAGTTT---GTGTTCTCTTAGTGT 70548

Gallus ----------------------------CTGTATCTTAATCTTATAGGTTCTTT------ 45831

Anopheles ------------------------------------------------------------

Homo AATTTTAATAGTGACAATTTAATTTTGTTTTTTGGTTGGTTTTTGCTGCCTTTTTGA--- 94410

Pan AATTTTAATAGTGACAATTTAATTTTGTTTTTTGGTTGGTTTTTGCTGCCTTTTTGA--- 95191

Drosophila ------------------------------------------------------------

Canis GCTTTCAATTAGGT-------------TTCTTTCCCCACTTTTAAATATTGTTGTGA--- 62543

Bos ------------------------------------------------------------

Rattus -------ACGACTCAATCTTTTTTACAAAATTTCATATGCC------AAAAGCCTTGC-- 79828

Danio -------AC--CTC------------------TCATA----------------CCTGC-- 15256

Mus CTGTATAACATCTGTCCAGGCTCTTCTGGCTTTCATAGTCTCTGGTGAAAAATCTGGTG- 70607

Gallus -------AC----------------CAGAGTTTGAGAG--------------ACTTGC-- 45852

Anopheles -----------------------------GTTTGGGA---------------ACCTGC-- 2735

Homo --ATATTACGAACTAATGAATGTTTTTGTATTTAATACGTT----TCACAGTCATTACTC 94464

Pan --ATATTATGAACTAATGAATGTTTTTGTATTTAATACGTT----TCACAGTCATTACTC 95245

Drosophila ------------------------------------------------------------

Canis --ATATTA-----------ATACTGTTATAATTTTTATAT--------CAGTCATCAC-- 62580

Bos ------------------------------------------------------------

Rattus ---------TTCTCATTTGCAGGACTCTTCGTAATATTTGGACTTAAATTTCTTTTTATT 79879

Danio ---------TTC------------------------------------------------ 15259

Mus ------TAATTCTGATAGGCTTGCCTTTATATGTTACTTGACCTT-------TTTCCCTT 70654

Gallus ----------TGGAGTATGAAGGAA---GTGTGGAAGATGATATGA----------TGAT 45889

Anopheles ----------TCGAGCACGAA--------------------------------------- 2746

Homo TAAATGATATTCAAATTGCTTAGCTATCGTGTGCTTTTAAAATGACCCTATTAGATTTTG 94524

Pan TAAATGATATTCAAATTGCTTAGCTTTCGTGTGCTTTTAAAATGACCCTATTAGATTTTG 95305

Drosophila ------------------------------------------------------------

Canis ---AGGATTTACAAAATTCATGAGAATTTTGTTGTGTATACCTGTATTTCTGCTATTTCA 62637

Bos ------------------------------------------------------------

Rattus ATTTTTTTTATTAACTTGAGTATTTCTTATTTACATTTCGAGTGTTATTCCCTTTCCGGG 79939

Danio ------------AACGTG------------------------------------------ 15265

Mus ACTGCTTTTAGTATTCTA----TCTTTATTTAGTGCATTTGATGTTCTGATTATTATGTG 70710

Gallus AACTTTTCAAATATCTCA------------------------------------CACG-- 45911

Anopheles ------------------------------------------------------------

Homo AGATTTCTAACTAATCTCGAACATTCATTCTCAGGCCTGGAATAAGTTATTTTTCCAATA 94584

Pan AGATTTCTAACTAATCTCGAACATTCATTCTCAGGCCTGGAATAAGTTATTTTTCCAATA 95365

Drosophila ------------------------------------------------------------

Canis ATTCTTCCCTTTTGCTTTAAGAGTCTTTTATGAC---------------TTCTCTTAGTC 62682

Bos ------------------------------------------------------------

Rattus TTTCCAGGCAAACATCCCCCTAATCCCTCCCCCTCCCCTTCATTATGGGTGTTCCCCTCC 79999

Danio --------------------------CTGCTCCTCCCC---------------------- 15277

Mus TCGGGAGG-------------AATTTCTTTTCTGGTCCAGTCTATTTGGAGTTCTG---- 70753

Gallus ---------------------GATCTCTTTGGCAATCC---------------------- 45928

Anopheles ------------------------------------------------------------

Homo AATTGTTGGAGAATGGCATTTAGAAGTCAGATTTTAGATGCAAAGTATGGCCTTTGCTTT 94644

Pan AATTGTTGGAGAATGGCATTTAGAAGTCAGATTTTAGATGCAAAGTATGGCCTTTGCTTT 95425

Drosophila ------------------------------------------------------------

Canis ATTCTTCAAAGACAGGTCTACTAATGGCAGATTCTATTAGT------TTTCCTTTGTTTG 62736

Bos ------------------------------------------------------------

Rattus CCATCTTCCCCCCATTGCCGCCCTCCCCCCAACAATCACCTTCACTAGGGGTTCAGTCTT 80059

Danio ------------------------------------------------------------

Mus -TAGGCTTCTTGTATGTTCATATGCATCTCATTCTTTAGATTTGGGAAGTTTTCTTCAAT 70812

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGAACGT-TACTGCTTGTAGGCCTTATCAGAGGACAGAACTAGGAAAATAATCTTCCTAG 94703

Pan TGAACGT-TACTGCTTGTAGGCCTTATCAGAGGACAGAACTAGGAAAATAATCTTCCTAG 95484

Drosophila ------------------------------------------------------------

Canis GGGATGTCTATTTCCT-----CTTTATTG-----------CTGAAGAGTAGTTTTGTT-- 62778

Bos ------------------------------------------------------------

Rattus AGCAGGACCAAGGGCTTCCCCTTCCACTGGTGATCTTACTAGAATATTCATTGCTACCTA 80119

Danio -----------------------------------------GAATACTC-----CACC-- 15289

Mus AATTTTGTTGAAGATGTTTGCTGGACCTTTGAGTTG----AAAATCTTCATTCTCATCCA 70868

Gallus ---------AATGATGCATGATTTAAAGGAAAATGGTGATAAAATTCCTATAACAAATGA 45979

Anopheles ----------------------CTGAAACCGGACGGTGACAAGAT--------------- 2769

Homo TGTATCCTGAGAATCATCCCACATTATTGCAGAGGTGTTTTCCATTTTGTTTTGTATGAC 94763

Pan TGTATCCTGAGAATCATCCCACATTATTGCAGAGGTGTTTTCCATTTTGTTTTGTATGAC 95544

Drosophila ------------------------------------------------------------

Canis TATGCCATTGGGATTTGTTCAGCTTCTTGGATTTGTGGGTTGTTTTTTTGTTTGTTTA-- 62836

Bos ------------------------------------------------------------

Rattus TGAGGTCAGAGTCCAGGGTCAGTCCATGTATAGTCTTTAGG---TAGTGGCTTAGT---C 80173

Danio ----------------------------------------------GTGG---------- 15293

Mus CTCCTATTATCCGTACGTTTGGTCTTCTTATTGTGTCCTGGATTTCCTGGATATTT---T 70925

Gallus --AAATAGAAAGGTATGCTTTGTATTCAAATAACTTCTTAAAAGTAATGAGTAATT---T 46034

Anopheles -----------------------ATTCG-------------------------------- 2774

Homo TGAATACTGCTCCTTTGTGTGGATGCAGCATAGCTTATCAATATTTATGGGCATCGAGGT 94823

Pan TGAATACTGCTCCTTTGTGTGGATGCAGCATAGCTTATCAATATTTATGGGCATCGAGGT 95604

Drosophila ------------------------------------------------------------

Canis ----------TATTTTTTG----CCCAACATGG------AAAATTTGGGGGCACTA---T 62873

Bos ------------------------------------------------------------

Rattus C--CTGGAAGCTCTGGTTGCTTGGCATTGTTGTTCA-------------------TAAGG 80212

Danio -----AGAAACT-------------------------------------------TAAAG 15305

Mus GAGTTAGGATCTTTTTGCATTTTCCATTTTCTTTGATTGTTGTGCCAATGTTCTCTATGG 70985

Gallus T---TGGGTGCTCTG----------------------------------------TGCAG 46051

Anopheles ------------TTA----------------------------------------CGCAG 2782

Homo TATTTTTAACCTTTTGCTGTTAGTACTAAT-----------------------GTCACAG 94860

Pan TATTTTTAACCTTTTGCTGTTAGTACTAAT-----------------------GTCACAG 95641

Drosophila ------------------------------------------------------------

Canis TTCTTCAAATATTTTTTCA----------------------------------GCCCCAG 62899

Bos ------------------------------------------------------------

Rattus GGTCTC---------GAGCTC---CTTTAAGCTCTTCCAGTTCTTTCTCTGATTCCTTCA 80260

Danio AG-------------AGACTC---CTTAAAGCCAT------------------------- 15324

Mus AATCTTCTGCACCTGAGATTCTCTCTTCCATCTCTTGTA-TTCTGTTGCTGATGCTCAAA 71044

Gallus AATTAAC------TGGGGCTC-----TATAGCAATTTGG--------------TCTCACA 46086

Anopheles GA--------------------------------------------------------CA 2786

Homo TGAATCC-----------TCTTAATGTTCATGCATTATTCCGTACATATGTAAAGTATCA 94909

Pan TGAATCC-----------TCTTAATGTTCATGCATTATTCCGTACATATGTAAGGTATCA 95690

Drosophila ------------------------------------------------------------

Canis TGTCTCT-----------CCTTTCTTTCTGAGCTTCTAGTAGTACCAGTGTTCAGT--CA 62946

Bos ------------------------------------------------------------

Rattus ACGGGGGTCCTATTCTCAGTTCAGTGGTTTGCTGCTGGCATT--TGCCTCTGT----ATT 80314

Danio --------------------------------------CACT--TACGCC---------- 15334

Mus TCTATGGTTCCAGATTTCTTTCCTAGGGTTTCTATCTCTAGTGTTGCCTCGCTTTGAGTT 71104

Gallus ACGTAAGT-------------------GTTAAAGCATATAGT--TACTTGTGT------T 46119

Anopheles AC-----------------------------AAGCA------------------------ 2793

Homo TTAAGATAAATTGTTAGAAGTGGGATTGTTGCATCAAATGGT-AGATGCATGTGTAATTT 94968

Pan TTAAGATAAATTGTTAGAAGTGGGATTGTTGCATCAAATGGT-AGATGCATGTGTAATTT 95749

Drosophila ------------------------------------------------------------

Canis TT------------------TATCATCATTACA-CATGTATC-TGAGACTGGTTTGGTTT 62986

Bos ------------------------------------------------------------

Rattus TGCTGTATTCTGGCTGTGTCTCTC---------AGGAGAGATCTACATCCTGCTCCTGTC 80365

Danio ------------------------------------AAAG-------------------- 15338

Mus TTCTTTATTGTGTCTACTTCCCTTTTTAGGTCTAGTATGGTTTTGTTCATTTCCATCACC 71164

Gallus TGTTTTGTT-------------------------AAAGGGAACATTGATATGTACATACA 46154

Anopheles ------------------------------------------------------------

Homo TGCTAGATACTGCCAAATCCTCCTTCACAG--AAAAATAACATTTTGCATTCCCACCAGC 95026

Pan TGCTAGATACTGCCAAATCTTCCTTCACAG--AAAAATAACATTTTGCATTCCCACCAGC 95807

Drosophila ------------------------------------------------------------

Canis TG---GGTTTTGGTGTTTGTTTTTTC----------------TTTTGTTTTCC------- 63020

Bos ------------------------------------------------------------

Rattus GGCCTGCACTTCTTTGCTTCATCCATCTTG-------TCTAATTGGATGGCTGTATATGC 80418

Danio ---------------GCTTC---------------------------------------- 15343

Mus TGTTTGTATGTTTTTTCCTCTTTTTCTGTAAGGACT-TCTACCTGTTTGATTGTGTTTTC 71223

Gallus GACATA---------GCTTCTGG---------------------GGGTGTTTTGACCTGT 46184

Anopheles ------------------------------------------------------------

Homo AGTTTACAACAGTATCTCTTTTCTTAAAACTTTCCAAACAGAATGTGTTGTTAAATGTGG 95086

Pan AGTTTACAACAGTATCTCTTTTCTTAAAACTTTCCAAACAGAATGTGTTGTTAAATGCGG 95867

Drosophila ------------------------------------------------------------

Canis AGTTTTCTCTAGTTTGTTTCTTTTTTTATCCTC----------TGTCTTCTTTACTATTG 63070

Bos ------------------------------------------------------------

Rattus ATGGGCC---------ACATGTGGGGCAGG---CTCTG-------AATGGGTGTTCCTTC 80459

Danio ------------------------GGCATG---CTCTG-------AG------------- 15356

Mus CTGTTTT---------TCTTTAAGGACTTGTAACTCTT-------TAGCAGTGTTCTCCT 71267

Gallus TTGAGAA---------ACATTTGAGACTTG---CTCCT-------TACCA---------- 46215

Anopheles -----------------------AGACTT------------------------------- 2799

Homo ATGTTTA-CTTATTTGCCAATTGAGAAATGGTATTTTACTATAGTTACAATTTTTGAGCT 95145

Pan ATGTTTAACTTATTTGCCAATTGAGAAATGGTATTTTACTATAGTTACAATTTTTGAGCT 95927

Drosophila ------------------------------------------------------------

Canis A--------------GCCTATCCAG------TATTTTTCT----CTATGTTTTTCCAGTT 63106

Bos ------------------------------------------------------------

Rattus AGTCTCTGTTTTAATCTTTGCCTCTCTCTTCCCTGCCAAG--GGTATTCTTGTTCCCCTT 80517

Danio -------------------GC--------------------------------------- 15358

Mus GTATTTCTTTAAGTGATTTATTAAAGTCCTTCTTG--------ATGTCCTCTACCATCAT 71319

Gallus -----------------TTACTG------------------------------------- 46221

Anopheles ------------------------------------------------------------

Homo TACCTCAATTATGAATGATAATGGACATTTTTTCTTGTA-----GAGCTGTTTATAGTTT 95200

Pan TACCTCAGTTATGAATGATAATGGACATTTTTTCTTGTACTTAAGAGCTGTTTATAGTTT 95987

Drosophila ------------------------------------------------------------

Canis C--------TATAATTCACATTTGGCTCCTTTTTAAAAAT-----AACTACTGTTTCTTT 63153

Bos ------------------------------------------------------------

Rattus TTAAAGAAGGAGTGAAGCATTCACATTTTGATCATCAGTC---TTGAGTTTCATT----- 80569

Danio -TAAAGAA-------------CTCACTCTAGCCCTCAG---------------------- 15382

Mus CATGAGATATGCTTTTAAATCTAGGTCTAGGTTCTCAGGTGTGTTGGGGTTCCCTGGACT 71379

Gallus -AGTAGAAG-----------CTGAGCCCAGGTTATCTGGGC-----AGAGTCATA----- 46259

Anopheles ------------------------------------------------------------

Homo TATATAGTCTTTTGCTCATTTTGCTGCTCAGCTGGTCGTTTTCTTCACTTTTAGA----- 95255

Pan TATATAGTCTTTTGCTCATTTTGCTGCTCAGCTGGTCGTTTTCTTCATTTTTAGA----- 96042

Drosophila ------------------------------------------------------------

Canis CCTGAGATTTTTCTCTTGTTTCATTTCTGAAACAATAGAGCTTGTAATTGTAAAA----- 63208

Bos ------------------------------------------------------------

Rattus ------------TGTTCTAGGCATCTAGGGTAATTCAAGCATTTGG-----GCTAATAGC 80612

Danio --------------------------AGGAGAAT-------------------------- 15390

Mus GGGCGAAGTGGGTGTGCTGGGTTCTGGTGATGGTGAGTGGTCTTGGTTCCTGTTAGTAAG 71439

Gallus --------------------GAGTTAAATGTATTTTGGAGTCTTAC-----ATTAATAGG 46294

Anopheles ------------------------------------------------------------

Homo ------------AACTTTATATGTTAAGGAGATTAG--TCCTTTAAC----GCTGGTAAA 95297

Pan ------------AACTTTATATGTTAAGGAGATTAG--TCCTTTAAC----GCTGGTAAA 96084

Drosophila ------------------------------------------------------------

Canis ------------TCATTTTTATGATGAATGCATTAAAATCCTTCTGA----GATAATTCC 63252

Bos ------------------------------------------------------------

Rattus CACTTATCAATGAGTGCATACCATGTGTGTCTTTCTGTGATTGG--------GTTACCTC 80664

Danio ------------------------------------------------------------

Mus ATTCCTCCGTTTACCTTTCGCCATCTGGTAATCTCTGGAGTTAGTAGTTATAGTTGACTC 71499

Gallus AG---------------------------------TGGAGTGA----------------- 46304

Anopheles ------------------------------------------------------------

Homo TTCGCAAATATTTTTTCCCAGTTT-----------GTCATTTGTCTTTTAACCTTGCTTA 95346

Pan TTTGCAAATATTTTTTCCCAGTTT-----------GTCATTTGTCTTTTAACCTTGCTTA 96133

Drosophila ------------------------------------------------------------

Canis AACATACCCTGTTCATCTCAATGTTGA-------CAACACTTGTTTCTTGTTCTTTCATG 63305

Bos ------------------------------------------------------------

Rattus ACTCAGGA---TGATATTTTCCAGTTCCAAC-------CATTTGCCTACGAATTTCATA- 80713

Danio ---------------------CAGCTACATC-------CA-----CAACTAAT--CGTA- 15414

Mus TGTTTAGAGATTGTTCTTCCCTAGCTTCTTTAAAAGTACACATTGCTTTAAATGTCATGT 71559

Gallus ----------------------AGTGTGTAT-------CAAAGTACTAAGGATTTCTTG- 46334

Anopheles ------------------------------------------------------------

Homo TAGGATTTTTTTGCCAAATGAAAGGTTTTATGTTTATGTAGTTAGCTATTAATCTTTTT- 95405

Pan TAGGATTTTTTTGCCAAATGAAAGCTTTTATGTTTGTGTAGTTAGCTATTAATCTTTTT- 96192

Drosophila ------------------------------------------------------------

Canis TTGTAATTTGGC-TTGCATCCTAGACATTGTGTCTGTTAGGAGATCCTGGGTCCTGTTTA 63364

Bos ------------------------------------------------------------

Rattus --------------AAGCCATTGTTTTTGATAGCTGAGTAATATTCCATTGTGTAGATGT 80759

Danio --------------AA-------------------------------------------T 15417

Mus TTCTTCTTAACCTTGAGTCAATATTCCTGTCCTTGTTGCAATGGTTC-TTCAGTCCGTGT 71618

Gallus ------------------------------------GGGGTTGTTTCCTTACAGGAATTT 46358

Anopheles -----------------------------------------------------------T 2800

Homo ------------------CGTTATTATGCTTTGATATGCATTTCTT---TAGTTATGTTT 95444

Pan ------------------CGTTATTATGCTTTGATATGCATTTCTT---TAGTTATGTTT 96231

Drosophila ------------------------------------------------------------

Canis ------------------CATTATTTTACTTTAGTAGGCAATCATCC--TATTCAAGTGT 63404

Bos ------------------------------------------------------------

Rattus ACCACATT---TTCTGTATCCATTCCTCTGTTGA----------AGGGCATCTGGGTTCT 80806

Danio ATCAAGTT---T------------------------------------------------ 15426

Mus ATTATATTCTTTTGTTTGTTTGTTTGTTTGTTGCTTTTCAAGACAGGGTTTCTCTGTGTA 71678

Gallus GTCAATCTG--------------------------------------------------- 46367

Anopheles GTCGAACTG--------------------------------------------------- 2809

Homo ATTTTATTC----------------------------------------ATTTTCTTTGT 95464

Pan ATTTTATTC----------------------------------------ATTTTCTTTGT 96251

Drosophila ------------------------------------------------------------

Canis AACACACGG----------------------------------------GTCCTAGCATA 63424

Bos ------------------------------------------------------------

Rattus TTCCAGCTTCTGGCTATTATAAATAAGGCTG-CTATGAACATAGTGGA--GCACGTGTCT 80863

Danio ------------------AAATGTAAGGC--------AACATGA---------------- 15444

Mus TCCCTGGCTGTGCTGG--GTAGACCAGGCTGGCCTCGAACTCAGAAATCTGCCTGCATCT 71736

Gallus --------TATGCTGACTATATACTCAAT--------AAATCAGTAGAA----------- 46400

Anopheles --------TACAGTGACTTTATGCTGAAC--------AAGAGCGTCGAG----------- 2842

Homo TTTTTAATTTTCTAGAGTCTGTCCTCAGTAG----AAATTTTAGTCATACTGCTTCTTCT 95520

Pan TTTTTAATTTTCTAGAGTCTGTCCTCAGTAG----AAATTTTAGTCATACTGCTGCTTCT 96307

Drosophila ------------------------------------------------------------

Canis CTTTT-----TGTGGGTTGTGGTTCCAGAGA----CAATTTTAGTTTT----CAGAGCCT 63471

Bos ------------------------------------------------------------

Rattus TTTTTATATGTTGGGGCATCTTTTGGGTATATGCCCAAGAGAGGTATA---GCTGGATCC 80920

Danio ------------------------------------------------------------

Mus GCCTCCCAAGTGCTGGGATTAAAGGCGTGCACCACCACGCCTGGCTCGTGTATTATATTC 71796

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTGG-------------------------------------------------TCACCTT 95531

Pan TTGG-------------------------------------------------TCACCTT 96318

Drosophila ------------------------------------------------------------

Canis TTG---------------------------------------------------CGGCAC 63480

Bos ------------------------------------------------------------

Rattus TCAGTCAGTTCA------------------------------------------------ 80932

Danio --AATGGGTTCA------------------------------------------------ 15454

Mus TTAATTTGCTCAGGTCCAATTTTCTTTTCTTTCTTTCTTTTTTTTTTTTTTTTTTTTTTG 71856

Gallus --AAGCAGTTCA------------------------------------------------ 46410

Anopheles --AAGCAGTTCA------------------------------------------------ 2852

Homo ATAATAAAATTA------------------------------------------------ 95543

Pan ATAATAAAATTA------------------------------------------------ 96330

Drosophila ------------------------------------------------------------

Canis TTAATCCTGCTT------------------------------------------------ 63492

Bos ------------------------------------------------------------

Rattus --------------------------ATGTCCAATTTTCTGAGGAACCTCCAGACTGATT 80966

Danio --------------------------A--------------------------------- 15455

Mus TAAAAGCACATTCTGCTCATTTCTACATGGTCATTCCTCCTCGGTTCTTTTGAGTTTTTT 71916

Gallus ------------------------------------------AGGCCTTTCGGAGAGGAT 46428

Anopheles ------------------------------------------ACGCGTTCCGCAGGGGTT 2870

Homo ----------------------------GCCTTTATTTCCAAAGTTACCTTGCATATTTC 95575

Pan ----------------------------GCCTTTATTTCCAAAGTTACCTTGCATATTTC 96362

Drosophila ------------------------------------------------------------

Canis ----------------------------TGCTTTATGTATCTTATTCCATGAGGGCTCCC 63524

Bos ------------------------------------------------------------

Rattus TCCAGAATGGTTTTACCAGTCTGCAATCCCACCAAC---AAT------------------ 81005

Danio ---------------------------------------AAT------------------ 15458

Mus TCTGATTTTCTTTCTCCATTTTAGTCACCTTCAAGACTGAATCTTTTTGTTCTTAGAAGA 71976

Gallus TCCACAT--------------------------------GGT------------------ 46438

Anopheles TCCAGAT--------------------------------GGT------------------ 2880

Homo TTCAGTATTTTTTAGTATTCTTATTTTTATTTAA-----GAT------------------ 95612

Pan TTCAGTATTTTTTAGTATTCTTATTTGTATTTAA-----GAT------------------ 96399

Drosophila ------------------------------------------------------------

Canis ACTGGTCCATGATGGTGTTGCTTGAGGGAGATGA-----AAT------------------ 63561

Bos ------------------------------------------------------------

Rattus ------------------GGAGGAGTGTTCCTCTTTCTCCACATCCTCGCCAGCATCTGC 81047

Danio ------------------GGGGAAGT-----------------------------TCTGG 15471

Mus GTCTCTTGCTTATTATGAGGAGAAACATTTCTTTTGTGAAATATTCATACTTTC-TCTA- 72034

Gallus -------------------GACCAATGAATCTCCTTTGAAATA------------TTTAT 46467

Anopheles -------------------GACGGACGAAAGCCCGCTCCATCT------------GCTGT 2909

Homo -------------------GTGCT-CATTTCTTTCTGAATTTGT----------ATTTCT 95642

Pan -------------------GTGCT-CATTTCTTTCTGAATTTGT----------ATTTCT 96429

Drosophila ------------------------------------------------------------

Canis -------------------GAACAGCTTCTCCATGCAGACATGTG-----TGGTATCTTA 63597

Bos ------------------------------------------------------------

Rattus TGTCACCTGAGTTTTTGATCTTAGCCATTCTCACT--------------------GGTGT 81087

Danio TG--ACC-------------------------------------------------GTGT 15480

Mus TGTCATTTGAGGCTTTGTACATTTTTATGTTCTCTTCAGACACATCAG--AAGAGGGCAT 72092

Gallus TTAGACCAGAG--------------------------------------------GAAAT 46483

Anopheles TCCGCCCGGAG--------------------------------------------GAAGT 2925

Homo CATCACTGGTGGTCTGTCTTGTC--TGCTGCTGCATTCTCCTTTTGTGTTGGAATGTGGT 95700

Pan CATCACTGGTGGTCTGTCTTGTC--TGCTGC---ATTCTCCTTTTGTGTTGGAATGTGGT 96484

Drosophila ------------------------------------------------------------

Canis AGCCTCCCATGGGCTGGAGAGTTCTTGCTGTGCTCAGTGCCTTTTGTG-------GCAGT 63650

Bos ------------------------------------------------------------

Rattus GAGGTGAAATCTCAGGGTAGTTT---------TGATTTGCA----TTTCCCTTATGAC-- 81132

Danio G-------------------------------------------------CCTGTGCC-- 15489

Mus CACATTCCTTTACATGGTGGCTCATGGTTGTGTGATTTGTGGGATTTGAACTCAGGACCT 72152

Gallus TGAATTA-------------------------------------------CTTATTTG-- 46498

Anopheles GGAGCTG-------------------------------------------ATTGTGTG-- 2940

Homo GTTACTAGTTTCCCATTGTTTATGACTGAATTTTTCTGGTCTA-------CTTTTG---T 95750

Pan GTTACTAGTTTCCCGTTGTTTATGACTGAATTTTTCTGGTCTA-------CTTTTG---T 96534

Drosophila ------------------------------------------------------------

Canis TAAATTAGGCCCGTGTTGCCGGCCATTCAGGGTCCCTCGGCTAGGAGGGACTCTGGGTCC 63710

Bos ------------------------------------------------------------

Rattus -TAAAGATGTTGAACATTTCTTTAGGTGTTT------------------------CTCAG 81167

Danio -TAAAAA-GTAGA---------TAA---------------------------------AA 15505

Mus TTGGAAGTGTAGTCAGTGCTCTTAATCG---------------------------CTGAG 72185

Gallus -TGGAAGTAGGGTAAGAGTCCTGAAT--------------------------------GT 46525

Anopheles -TGGCAGCAAG------------------------------------------------- 2950

Homo CTACCGGAAAGTTTTGCTTCTCATTCGCCAG-------------------ACTCTTCCCA 95791

Pan CTACCGGAAAGTTTTGCTTCTCATTCGCCAG-------------------ACTCTTCCCA 96575

Drosophila ------------------------------------------------------------

Canis CTACAAGAAAGACAAGCACTTACCAGGCCAGGACCAATTGTGGCAGAAAAACCCTCCCAG 63770

Bos ------------------------------------------------------------

Rattus CCAT-TCGACATTC-------------CTCAGCTGTGAATTCTTT-------GTTTAGCT 81206

Danio CCAC-AC----------------------------TGGACTCAT------------GGCT 15524

Mus CCATCTCTCCAGCC-------------CGGCTTTGTACATTTTTATACCC--ATCCAGTT 72230

Gallus ACAT---------C-------------AGAAAAAGTGGAGCTTTT---------TTGATC 46554

Anopheles ------------------------------------------------------------

Homo TAATAACTTTATTT-------AGACTTCCGAATTCTGTTTTTCTTGTTTATGTTTCTATA 95844

Pan TAATAACTTTATTT-------AGACTTCCGAATTCTGTTTTTCTTGTTTATGTTTCTATA 96628

Drosophila ------------------------------------------------------------

Canis CTGTGACTCTGGGTTGAGAAAGGAAGTCTCAAGTATGACTTCTTTTCTTCTTGTTCAATT 63830

Bos ------------------------------------------------------------

Rattus CTGAACCCCATTTTTCATTAGGGGTATTTGT----------------------CTCCCTG 81244

Danio CT---------------------------------------------------CTCTCT- 15532

Mus CATAATCC-ATCCATCATTAAGGAAACTTGGAGCAGGATCCATTGCAGCACTGCTTGCTG 72289

Gallus CTAA--------TATAATTAGTGTT----------------------------CGTTCTT 46578

Anopheles ------------------------------------------------------------

Homo ACAGATGTTACTTTTTTCTGGACCTGTTATTACTAGA-------------CCTCATGGTG 95891

Pan ATAGATGTTACTTTTTTCTGGACCTGTTATTACTAGA-------------CCTCATGGTG 96675

Drosophila ------------------------------------------------------------

Canis TAAGTTTATCTTCTGTTTTTGTGGTACTATCATTGTG-------------CTTCGTT-TA 63876

Bos ------------------------------------------------------------

Rattus CGGTCTAACTACTTGAGTTCTTTGTGTATTTTGGATATAAGGC-----CTCTATCTGTTG 81299

Danio -----------------TTCTCTGT-----------------------CTCTCTCT---- 15548

Mus ATTTATGTTCCTCTAACTCCCTCCTCATTTTTTTAAAAAGAGAAATAATTCTGTCTCCTT 72349

Gallus AAAAATGTC--------ATCTTCTTA----------------------CAGAATTTA--- 46605

Anopheles --------------------------------------------------GAGTTT---- 2956

Homo GAGCAGGGAGGAATT-GTGTGGCTTTAGGGGTCTTGGT-TGAAGGGATCCCTCTTCT--G 95947

Pan GAGCAGGGAGGAATTTGTGTGGCTTTAGGGGTCTTGGT-TGAAGGGATCCCTCTTCT--G 96732

Drosophila ------------------------------------------------------------

Canis TCCTGTGGTTCCTCTAGTTCAGTTTTAGTTTCCTCCATCTGATATGATTTCTTTTCTTTG 63936

Bos ------------------------------------------------------------

Rattus TAGGATTGGTAAAGAT--------------------------CTTTTCCCAA-------- 81325

Danio ------------------------------------------CTCTCCC----------- 15555

Mus TTCAGAAGACTAAAATAAACAAAACATAATTGTTGACCTCTCATTTTCCTATCTAAATTT 72409

Gallus -----------------------------------------GATTTTCAAGCA------- 46617

Anopheles -----------------------------------------GATTTCGACGAG------- 2968

Homo TTGCTTTAGTAAGGGCAGA--------ATCACCACTTTCTGATTTTTCAG-----CTCCA 95994

Pan TTGCTTTAGTAAGGGCAGA--------ATCACCACTTTCTGATTTTTCAG-----CTCCA 96779

Drosophila ------------------------------------------------------------

Canis TATTTCCAGTTATCCC------------CTGCTCCTGTCATACCTTTCAAGATCTTTTCT 63984

Bos ------------------------------------------------------------

Rattus --TCTGTTGGTTGCCGTTTTGTCCTAACCACAGTGTCCTTTGCCTTACAGAAGCTTTGCA 81383

Danio ------------------------------------------------------------

Mus GCTCTGTTTACAGAGATTGTGGAGCAGTAACAAAATTGCTGTGATCAATAGTCCTTTGCC 72469

Gallus -----------------CTAGAAGAAACTACAGAAT-------ATGATGGTGGCTATACA 46653

Anopheles -----------------CTCGAGCAGTCGACCGAGT-------ACGAGGGCGGCT----- 2999

Homo TGTAGCTTAATGAAGACTCTTTTTCATTAGCTGCTTCCACCCCTTTACAGCCGCTTAAGG 96054

Pan TGTAGCTTAATGAAGACTCTTTTTCATTAGCTGCTTCCACCCCTTTACAGCTGCTTAAGG 96839

Drosophila ------------------------------------------------------------

Canis TCAGTTTTAGTTATGTTTCTGACTTAATTGTCCTTTCATAGCCTCTACTATGACTTAAAA 64044

Bos ------------------------------------------------------------

Rattus G--------TTTTATGAGATCCCATTTGTCGATTCTTGATCTT----AGAGCATAAGCCA 81431

Danio ---------TCTTATG-------------------------------------TAAG--- 15566

Mus TTGTATATCTTTTTTGTCTTTCCTTAATTGATGATTTCACCTG----TGATTATAAA--A 72523

Gallus AGAGA---CTCTCTTATTAT----TAGGTAATTTTTT----------------TAAA--- 46687

Anopheles -----------TC----------------------------------------------- 3001

Homo GACACTTCTGCTTTTGAAGGTACCCCCCTTCCTTTCATGCATGGTGCCTTCCTGAGCCTG 96114

Pan GACACTTCTGCTTTTGAAGGTACCCCCCTTCCTTTCGTGCATGGTGCCTTCCTGAGCCTG 96899

Drosophila ------------------------------------------------------------

Canis TTTTTTTTACCTTAATTTGAAATCTGTTTACAGTTTTCATGTG----TTTTGTTGGCAGA 64100

Bos ------------------------------------------------------------

Rattus TTGGTGTTTTGTTCAGGAAATTTTTTCCAGT-------GCCCATGTGTTCCAGATGCTTC 81484

Danio ---------TGTTCAGG----------------------------------------TTC 15577

Mus ATGGTGATTTAAGGAAATAATTTTATCTAGTCAT-CTGACATATGTCATTCTCCTATTTT 72582

Gallus ---------TGTCTGAATGATTACAAGCAGT----------------------TTCCTTT 46716

Anopheles ------------------------------------------------------------

Homo CCATTGCTGGACCCAAGTACTTTTCTGTAGTCCTTCCTTTAACCACCCTGTTGCCAGTGC 96174

Pan CCATTGCTGGACCCAAGTACTTTTCTGTAGTCTTTCCTTTAACCATG-TGTTGCCAGTGC 96958

Drosophila ------------------------------------------------------------

Canis TCTTTGGCGCACTT---TTATTCTCTATAA----------AGACATGATTCTTTATCTGC 64147

Bos ------------------------------------------------------------

Rattus CCTAGTTTTTCTT------CTATTAGTTTG------------------------------ 81508

Danio CCT--TTTTT-----------------TTG------------------------------ 15588

Mus CCTATCTTTTTCATATCAACTATTATATTGTTACCTTAAGATATCAATCTATTGAAAAGA 72642

Gallus CCTGTTTCTT------------------TGT----------------------------- 46729

Anopheles ------------------------------------------------------------

Homo TCTAACCTACACTCAGTAGTGCTCTGTTGAGGGGCAGGTGGTGGAGGGGGTGGGGTCTGG 96234

Pan TCTAACCTACCCTCAGTAGTGCTCTGTTGAGGGGCAGGTGGTGGAGGGGGTGGGGTCTGG 97018

Drosophila ------------------------------------------------------------

Canis TCTTATCTGTCCTTAGTTGTTCACACTCTTGGGGTAGA---------------GCTCTGC 64192

Bos ------------------------------------------------------------

Rattus --------AGTGTATCTG-GTTTGATGT---------------GTAGGTCCTTTATCC-- 81542

Danio --------TATGCAC-------TGAGAT---------------ATAG---CGTTATTT-- 15613

Mus CAAAGTCAAATATATTTAAGATTGATACTGAAGAGATAATATGGTAATTTTTTTGTTTTC 72702

Gallus --------AATGAATTTA---ATAGTGT----------------AAGATTTTGTATTT-- 46760

Anopheles ------------------------------------------------------------

Homo CCTT---GGGTGATCCCT-AATCAGTATGA---------TTCCGCACAAGCCACTCTTCG 96281

Pan CCTT---GGGTGATCCCT-AATCAGTATGA---------TTCCGCACAAGCCACTCTTTG 97065

Drosophila ------------------------------------------------------------

Canis CCTTTCGGGGTGAACTCT-AACCGGTATTG---------TTATGCACACCCTCCTCTTCC 64242

Bos ------------------------------------------------------------

Rattus -------------------ACTTGGACTTAA-GCTTTGTACAGGGTGATAAGCATGGA-- 81580

Danio -------------------ATTT-----TAA-G----------------------GGA-- 15624

Mus AGATATTATGAACTCATGAATTTACTTTTAATGTAGTAAATGTGTTTTACCATTAGGACT 72762

Gallus ---------------------------TTGAGGTACT------------------GGA-- 46773

Anopheles ------------------------------------------------------------

Homo ATG------------------TAGCTCCTGCTGGACCCTGCTCATT-------------- 96309

Pan ATG------------------TAGCTCCTGCTGGACCCTGCTCATT-------------- 97093

Drosophila ------------------------------------------------------------

Canis ATA------------------TTGCTCCTGTAGGACTCTACTAGTTCAGGCTCAGGTATT 64284

Bos ------------------------------------------------------------

Rattus ------TCGATGTGCATTCTTTTACATGTTGACCTCCAGTTGAACCAGCA--CCA---TT 81629

Danio ------T----------------------------------------------------- 15625

Mus TTAGCCTTGCTTAGGACTTTGCTTGGTGTTGGTGTATCTTTAACATGACA--CATGACTT 72820

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ----------TCCCCACTTCTTTGGTATTTGG-AGTTTATTGTTCTGTCT-CCTAGTTTT 96357

Pan ----------TCCCCACTTCTTTGGTATTTGG-AGTTTATTGTTCTGTCT-CCTAGTTTT 97141

Drosophila ------------------------------------------------------------

Canis -----CATACTCTCAACTTATGTGTCAGTTGGGAGTTTGCCACTCTTTCTTCCTAGTTTT 64339

Bos ------------------------------------------------------------

Rattus TGCTGAAAATGCTA--TTCATTTTCCATTTGATGGTTTTGGCTCCTTTGTCAAAAATCAA 81687

Danio ----GAAA----------------------------------TCTCTTGTCA-------- 15639

Mus TGTTAAAATTTGAAATTTTGCCTTATCTTGAACATTATCCCCTACCCTGTAAGAAAACAT 72880

Gallus --TTTAAGT--------------------------------CTTATCTGTAA-------- 46791

Anopheles ------------------------------------------------------------

Homo ACTCTAGACCTAAGTCATAGGTTTTTTTTTT-ATTT-TCCCCT---TTTTGATCCGGGTA 96412

Pan ACTCTAGACCTAAGTCATAGGTTTTTTTTTTTATTTCTCCCCT---TTTTGATCCGGGTA 97198

Drosophila ------------------------------------------------------------

Canis AATCTAAACTTAAGTTATGGGTGTTTTTATTGGATTTTTCGCTGCATTTTAATCTGCATA 64399

Bos ------------------------------------------------------------

Rattus GTGCCCATAGGTGT-----GTGGGTTCATTTCTGGGTCTTCAATTCTATTCCATTGGTCT 81742

Danio ------------------------------------------------------------

Mus -TGTTAAAAGAAATTATTAGAAAACTGCATCCAGGAATAAGACTTACTATTTAATGTTAT 72939

Gallus -----------------------------------------------TTCCACTTGACTC 46804

Anopheles ------------------------------------------------------------

Homo GATTTTTAGAGATGTGAGTAGGATGTGATCGATACAGCCACCACTTTTATGTGGAAACCT 96472

Pan GATTTTTAGAGATGTGAGTAGGATGTGATCGATACAGCCACCACTTTTATCTGGAAACCT 97258

Drosophila ------------------------------------------------------------

Canis AGTTTTAAGAGAGGTAGATGGAATGTGATTCATACATATGAC----TTAGGTAGAAATAC 64455

Bos ------------------------------------------------------------

Rattus ATCTG-------------------TCTGTCTCTGTACCAATACCATGCAGTTTTTATCAC 81783

Danio ---TG-------------------TCTGCC------------------------------ 15647

Mus GACTGGTAAGGC------------CTTGTCAAGGAACAAACCTAGAAAGAATCTTTTAAG 72987

Gallus AAGTA--------------------CTGTCATT--------------------------- 46817

Anopheles ----A--------------------CTGCC------------------------------ 3007

Homo GGAAGCTTCTTCGTGTTTTCTTCAGCTTTCTAAATATATGCATTCTTGTTTAATTCAAAA 96532

Pan GGAAGCTTCTTCGTGTTTTCTTCAGCTTTCTAAATATATGCATTCTTGTTTAATTCAAAA 97318

Drosophila ------------------------------------------------------------

Canis AGAAGCCTCTTT--------TTCAGTTTTCTGAATAGTTGCATTCCTAATAAAT------ 64501

Bos ------------------------------------------------------------

Rattus CATTGCTCTGTAATACTGCTTGAGTTCAGGGATAGTGATT------------------CC 81825

Danio ------------------------------------------------------------

Mus TATATTATCAAAATAATCCCTTATTAACATAGAGGTTACTTTGCAACTTTTTTGCTCTCT 73047

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGTTAATGTAACACACATAACACTTATAGGAATAGAGATGCATTTTGTTCCCTGTTTTCA 96592

Pan TGTTAATGTAACACACATAACACTTATAGGAATAGAGACGCATTTTGTTCCTTGTTTTCA 97378

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CCCTGAAGTCCTTTTA-----------------TTGTTGAGGATAGTTTTAGCTATCCTG 81868

Danio ---------------------------------------AGGA----------------- 15651

Mus TCCAGCTGTCACATAA-----------------TATTGAAGTATAGTTTTCTATTTTCAA 73090

Gallus ---------------------------------------AGAGTGG-------------- 46824

Anopheles ----------------------------------------GAGT---------------- 3011

Homo TTGTATAAAATTTTTAAAGGTTTCGTTTAAAAGTCCAAAGAAACAGCTCCGT-------- 96644

Pan TTGTATAAAATTTTTAAAGGTTTCGTTTAAAAGTCCAGAGAAACAGCTCCGT-------- 97430

Drosophila ------------------------------------------------------------

Canis ----------------------------------------AAACA--------------- 64506

Bos ------------------------------------------------------------

Rattus GGTTTTTTGTTATTCCAGATGAATTTGCAAATTGTTCTGTCTAACTCTTTGAAGAATTGG 81928

Danio -----------ATTCCA------------------------------------------- 15657

Mus GGTCATTA--TATTACCTAATCATATTTTTAATATTGTCTCTTACTCATTTTATTGTTCA 73148

Gallus -----------ATACCATAAGCA------------------------------------- 46836

Anopheles ---------------CACAAACG------------------------------------- 3019

Homo ----------AATAATATAGCCAGACTGGTCATTGTGACCACTGCTGATCTGCCACTTCC 96694

Pan ----------AATAATATAGCCAGACTGGTCATTGTGACCACTGCTGATCTGCCACTTCC 97480

Drosophila ------------------------------------------------------------

Canis ----------AAGAATATAAACAGACTGGTCAGGGT------------------------ 64532

Bos ------------------------------------------------------------

Rattus ATTGGTATTTTGATGGGGAT--TGAATTGAATCTGTAGAACGCTTTTGG----------- 81975

Danio ----------------------------------------CACTTTTG------------ 15665

Mus GTTATTGATCCCCCTCACACCCTTCTTTTGAACAATAGCTTGCTTGTAGCATAGCCTAGC 73208

Gallus ---------------------------------------ATGCTTTGGC----------- 46846

Anopheles ---------------------------------------AT------------------- 3021

Homo TGCAGGGTCTGTCTCTGTTCTTCGGTGGTGCTCTTTGGTCTACCTCCTTA---------- 96744

Pan TGCAGGGTCTGTCTCTGTTCTTCGGTGGTGCTCTTTGGTCTACCTCCTTA---------- 97530

Drosophila ------------------------------------------------------------

Canis --------------------------------------CCTATCTCTCTG---------- 64544

Bos ------------------------------------------------------------

Rattus -TAGAATGGCCATTTTTACTATATTAATCCTGCCAATCCATGAGCTTCGGAGATCTTTCC 82034

Danio ------------------------------------------------------------

Mus CTAGAACTTGCCTACCTTTTGCCTCAACCTTCAAAATGCTGAATCATAGGAATACTTTTT 73268

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo --------------------GGTGTAGCTGGTTCAGTTAAGCTTCAGAGCCCTCCTGCAG 96784

Pan --------------------GGTGTAGCTGGTTCAGTTAAGCTTCAGAGCCCTCCTGCAG 97570

Drosophila ------------------------------------------------------------

Canis --------------------CCTGTGTCTGATTCGGTTAGGATTCAGAGCCCTCCTACAA 64584

Bos ------------------------------------------------------------

Rattus ATCTTCTGAGGTCTTCTTCAATTTCTT------------------TCTTCAGAGT--CTT 82074

Danio -------------------------TT------------------GCTTCATAGT--CAT 15680

Mus AGATTTCCTTTCCCTTTGCCTTTTCTTGTACATGAGAGACATTTGTCTCTGGAGTAATTT 73328

Gallus ---------------TTCCAGTGAACT------------------TCTGTAAATC---TT 46870

Anopheles -------------------------------------------------CAA-------- 3024

Homo TGTGAGGAGGCTTTATTACCACCCACT--------GCAGGGCAGCTTTTCTGCTATGTTG 96836

Pan TGTGAGGAGGCTTTATTACCACCCACT--------GCAGGGCAGCTTTTCTGCTATGTTG 97622

Drosophila ------------------------------------------------------------

Canis TGTGAGAAAACCTGATTACCACTCATTT-------GTAGGGCAGCTCTGCGGCCCTGACA 64637

Bos ------------------------------------------------------------

Rattus GAAATTCTTATTGTACA-----GATCTTTTACTTGCTTGGTTAAAGT------CACACCG 82123

Danio AAAA----------ACA-----G------------------------------------- 15688

Mus ACAGTATTTTCTCTACATTAATGTCATTTATCTTTACTTGTTAGGGTTTTTTACCAAGTG 73388

Gallus AAAAGTTTGTTTCTTTG-----GGACTTTGTCTTT------------------------- 46900

Anopheles ----------------------GGACTTT------------------------------- 3031

Homo GAGGGTTCTGTGCTACAGCAGACTTGTTTTCTCTTGTCAGCCTCCCC--------AAAAG 96888

Pan GAGGGTTCTGTGCTACAGCAGACTTGTTTTCTCTTGTCAGCCTCCCC--------AAAAG 97674

Drosophila ------------------------------------------------------------

Canis GAAG-CTCTGGCATACAGGAGACTTATTTTTTCTTGTCAGCCACCC---------AAAAG 64687

Bos ------------------------------------------------------------

Rattus AGGTACTTTATATTATTTGGA------------TCTATTATGAAGGGTGTC------GTT 82165

Danio -----------------------------------------GAGGGACG--------GTT 15699

Mus AAAGGTTTTAGTCAATTAACAATTTGTTTCCATTTTACTTTGATATGCATTTCTTCAGTT 73448

Gallus -------------------------------------CTCTTAGGCATATA------GAT 46917

Anopheles ------------------------------------------------------------

Homo GAGTATCATGAACTGGGGTCCGATTCCTCTCCTCCTTACCTGAGAGATGCTCCTGCAAGT 96948

Pan GAGTATCATGAACTGGGGTCTGATTCCTCTCCTCCTTACCTGAGAGATGCTCCTGCAAGT 97734

Drosophila ------------------------------------------------------------

Canis GAGTGATCTAGACTATGGAACGATTTTGTCCT------CCTGAAAGAGGCACCTGGATAT 64741

Bos ------------------------------------------------------------

Rattus TCCCTAATTTTTTCTCGGCTTGTTTCTCTTT----------------------------- 82196

Danio ------------------------------------------------------------

Mus TTGAATATTTTGTTTTAACTCCTTTCCCCTTCTGACTTCCTAACCCTTTGCTTGCTTTTT 73508

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TTCATGTCCAGTTTTCTGTTGTTGTGTGTTTCTTTTTTGTT------------------- 96989

Pan TTCATGTCCAGTTTTCTGTTGTTGTGTGTTTCTTTTTTGTT------------------- 97775

Drosophila ------------------------------------------------------------

Canis TCCATGTCTTACTTCCTGTGATTATGATATAGTTCTCTGTTGT----------------- 64784

Bos ------------------------------------------------------------

Rattus -------------TGTGTAGAGGAAGGCT------------------------------- 82212

Danio ---------------------GGAAG---------------------------------- 15704

Mus GTTTCTAGACTGTTGTCAAGTAGAAATGTTG-------------------------GATG 73543

Gallus --------------------AGGGCACTT------------------------------- 46926

Anopheles ------------------------------------------------------------

Homo -------TTCTCTTGCTGACTGGTGGATTTG---------------------------TA 97015

Pan -------TTCTCTTGCTGACTGGTGGATTTG---------------------------TA 97801

Drosophila ------------------------------------------------------------

Canis -------TTCTCTAGGTGAATGAGAAGTTTGCCAGAACTGAGGGGTGGGGGAGGATGTTA 64837

Bos ------------------------------------------------------------

Rattus ----------ACTGATTTATTTGAGTTAATTGTATACCCAGCCACTTTCTGAAGT---TT 82259

Danio ----------------------------------------------------------TT 15706

Mus TTTGTCAAATACAAATTACTACACTTCCCTCATTTACTTACCTCATTTTTGAATCATCTT 73603

Gallus -----------TAAATAAATTAGCATTG------------------------------TT 46945

Anopheles ------------------------------------------------------------

Homo AAGGGGCAGGGAAGGGAAGTGGCAAGAGATTGGAGAAAGCCAAGAATTCTAATAAAACTT 97075

Pan AAGGGGCGGGGAAGGGAAGTGGCAAGAGATTGGAGAAAGCCAAGAATTCTAATAAAACTT 97861

Drosophila ------------------------------------------------------------

Canis GACTGTCAGGGAAAAGAAGCAGAAAGACATTGAAGAGAGCCGAAAAATCTAATAAAGCTG 64897

Bos ------------------------------------------------------------

Rattus TT------------------TATCAGCTTTAGTAGTTCTCTGGTGGAAGTTTTGGGATCA 82301

Danio TT------------------CAACGGCTGCAGGACT-------------------GATCA 15729

Mus TTATTTCTAGAGTTGATGTGCATTTGCCTCAGAATTT-TCTTTTTTCTTTTTAAGAATTA 73662

Gallus TTG------------------GTTTTCTTTGGGGGAA----------------TGGATTG 46971

Anopheles -TG------------------GTC-------------------------------GATTG 3041

Homo TTA------------------AGTTATTTCAGATAAAT-GGTGTTGCAGCACCAAAAATG 97116

Pan TTA------------------AGTTATTTCAGATAAAT-GGTGTTGCAGCAACAAAAATG 97902

Drosophila ------------------------------------------------------------

Canis CTA------------------GCTCATGTCAGAAGAATTGGCATTGTACCAACAAAAATG 64939

Bos ------------------------------------------------------------

Rattus CTTAAATATACTAT---------CATATCATCTGCAAATAGTGATATTTTGACTTCTTCT 82352

Danio CC-AACTAAACT-T---------AATA--------AAACA-------------------- 15750

Mus TTTATTTATTTTATGTATATGGGTACACTGTAGCTGAACAGATGGTTGTGAGCCTTCGCA 73722

Gallus TTTGAATAG---------------GTACAATGTGTGAACA-------------------- 46996

Anopheles T--GCACGG---------------GC---------------------------------- 3050

Homo CCAGCATTTTGGTAATA----AAAATAGTATGTTGGGATATTAGAATATCAAAAGGTAGA 97172

Pan CCAGCATTTTGGTAATA----AAAATGGTATGTTGGGATATTAGAATATCAAAAGGTAGA 97958

Drosophila ------------------------------------------------------------

Canis CCTGCATTTTAATAATA----GAAATTGTATACTGGAATACTAGAATATCAAAAACTAGA 64995

Bos ------------------------------------------------------------

Rattus T------------TTCCAATTTCTATCCCCTTGACCTCCTTTTGTTGTCTGATTGCTCTG 82400

Danio ------------------------------------------------------------

Mus TGGTTGTTGGGAATTGAAGTTTTAGGACCTCTGCTCGCTCCGGTCACTCTGCTTACTCTG 73782

Gallus -----------------ACTTTTTATTTCTCTGATGAGAC--ATCAAGCAACATTCTTAA 47037

Anopheles ------------------------------------------------------------

Homo AA----------------ATTGTAATTACTGGTTTGGGATGTGTGATGTTCTCTGCTAAC 97216

Pan AA----------------ATTGTAATTACTCGTTTGGGATGTGTGATGTTCTCTGCTAAC 98002

Drosophila ------------------------------------------------------------

Canis A------------------TTATAATTACACATGTAGGAAGTGTGATATTCTCTGCTAAG 65037

Bos ------------------------------------------------------------

Rattus GCT--AGAACTTCAAGAAGTATATTGAATAAGTA-------------------------G 82433

Danio -----AGA---TCAA------------------A-------------------------G 15759

Mus GCCCAAAAGATTTATTTATTATAATACATAAGTACACTGTAGCTGTCTTCAGACTCGCCA 73842

Gallus ACTC---AAACTCAACATTCTT-------------------------------------- 47056

Anopheles ------------------------------------------------------------

Homo ATTCTGGAATTTTTTTTTTTTTTTTTTTTGAGATGAAATTTTTTTTTTTTTTTGAGATGG 97276

Pan ATTCTGGAATTTTTTTTTTTTTTTTT---GAGATGAAATTTTTTTTTTTTTTTGAGATGG 98059

Drosophila ------------------------------------------------------------

Canis ATTCCGGAA--------------------------------------------------- 65046

Bos ------------------------------------------------------------

Rattus GGAGAGAG----------------------TGGGAAGCCTTG--------------TCTA 82457

Danio GGAGGAGG----------------------TGG--------------------------- 15770

Mus GAAGAGGGATCATCTCATTACGGATGGTTGTGAGCCACCATGAGGTTGCTGGGACTTTGA 73902

Gallus -AAGAGGG-----------------------G---------------------------- 47064

Anopheles ------------------------------------------------------------

Homo CTCAAAATGTTTCCCAGGCTAGAGTGCAATGGTGTGATCTCAGCTCATTGCAGCCTCCGC 97336

Pan CTCAAAATGTTTCCCAGGCTAGAGTGCAATGGTGTGATCTCAGCTCATTGCAGCCTCCGC 98119

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GTCCCTGATTTTAGTGGGATTGCTTCAAGTTTCTCTCCATTTAGT--------------- 82502

Danio ------------------------------------------------------------

Mus ACTCAGGACCTTCAGAAGAGCAGTCTGTGCTCCTACCTGCTGAGCCATCTCAC------- 73955

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CTCCCATGTTCAAGCAATTCTTCTGCCTTGGCCTCCCAAGTAGCTGAGATTACAGGCATC 97396

Pan CTCCCATGTTCAAGCAATTCTTCTGCCTTGGCCTCCCAAGTAGCTGAGATTACAGGCATC 98179

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TGCCACCACGCCCGGCTAATTTTTGTATTTTAGTAGAGACAGGGTTTCACCACGTTGGTC 97456

Pan TGCCACCACGCCCGGCTAATTTTTGTATTTTAGTAGAGACAGGGTTTCACCACGTTGGTC 98239

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AGGCTGATCTTGAACCCCTGACCTCAGGTGATCCACTGGCCTCAGCCTCCCAAAGTGCTG 97516

Pan AGGCTGATCTTGAACCCCTGACCTCAGGTGATCCACTGGCCTCAGCCTCCCAAAGTGCTG 98299

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ----------------------------TTAATGTTAGCAACTGGT----TTGCTGTATA 82530

Danio ---------------------------------------AACT-------TTGTTGTAT- 15783

Mus -------------------CAACCTGCCTCAGTATTTTCAAGTGTTATTATTTCTGTTTG 73996

Gallus ---------------------------------------AAATGTTT---TTAGTGTGTT 47082

Anopheles --------------------------------------------------------TGTC 3054

Homo GGATTACAGGCATGAGCCACCACACCTGGCTCTGGAAAGAACTTTCTAAATAACTATTAA 97576

Pan GGATTACAGGCATGAGCCACCACACCTGGCTGTGGAAAGAACTTTCTAAATAACTATTAA 98359

Drosophila ------------------------------------------------------------

Canis -------------------------------------AGAGCTTTTCAAATAAATATTAA 65069

Bos ------------------------------------------------------------

Rattus TGGCTTTTACTATGTT----------------TAGGTATGGGCC------------TTGA 82562

Danio ------------------------------------TACGG---------------TTGA 15792

Mus AATTCATTAATCTCTT----------------TATTTTTGATTCATGATGCCATCGTTAA 74040

Gallus TATTCCTT---TCCTT----------------CCCCTTTGGCTTG------------GGA 47111

Anopheles GAT------------------------------------------------------GGA 3060

Homo AATGCATTTTATATTATATAAGCAACTAAAAATACTTTTAATTTTT--------TTTTTA 97628

Pan AATGCATTTTATATTATATAAGCAACTAAAAATACTTTTAATTTTT--------TTTTTA 98411

Drosophila ------------------------------------------------------------

Canis AATTATCCTTTGACTA-----------AGTAACATTGTCAATTTTT--------TTCTGA 65110

Bos ------------------------------------------------------------

Rattus ATTCCT------------------------------ATTCTTTCCAGGACTTTTGTCAT- 82591

Danio ACT------------------------------------------------------GT- 15797

Mus ACTTTTCATGTTAGAGTTTATATTATTCACGACTCAGTCTTTTTTAAAAATAGTTTCATA 74100

Gallus GCTCT----------------------------------------------------GT- 47118

Anopheles G--------------------------------------------------------GT- 3063

Homo ATTTTTTAATCTTAACATTATTTAGCTATAGGCCAGGCGCGGTGGCTCATGCCTGCAATC 97688

Pan ATTTTTTAATCTTAACATTATTTAGCTATAGGCCAGGTGCAGTGGCTCATGCCTGCAATC 98471

Drosophila ------------------------------------------------------------

Canis AATCTT------------------------------------------------------ 65116

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus TTC--------------------------------------------------------- 74103

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo CCAGCACTTTGGGAGGCCAAGGTGGGCGGATCACGAGGTCAGGAGATCGAGACCCATCCT 97748

Pan CCAGCACTTTGGGAGGCCAAGGTGGGCAGATCACGAGGTCAGGAGATCGAGACCCATCCT 98531

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GGCTAACATGGTGAAATCCTGCCTCTACTTAAACGTACAGAAAATTAGCCAGGCGTGGTG 97808

Pan GGCTAACATGGTGAAACCCTGCCTCTACT-AAACGTACAGAAAATTAGCCAGGCGTGGTG 98590

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GCAGGCACCTATAGTCCCAGCCACTTGGGAGGCTGAGGCAGGACAATGGCGCGAACCCAG 97868

Pan GCAGGCACCTATAGTCCCAGCCACTTGGGAGGCTGAGGCAGGAGAATGGCGCGAACCCAG 98650

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus -----------------------------------------------------------C 74104

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GAGGCGGAGCTTGCAATGAGCCGAGATCGCGCCACTGCACTCCAGCCTGAGCGACAGAGC 97928

Pan GAGGCGGAGCTTGCAATGAGCCGAGATCGCGTCACTGCACTCCAGCCTGAGCGACAGAGC 98710

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ---------------------GAAGGGGTGTTGAA-------TTTTTGGAGTTAAATTT- 82622

Danio ---------------------GAAAG---------------------------------- 15802

Mus AAAAAGCCTTATTTCTCATTTGAAGAACTCTTCATAATATTCCTATTGGACTTAAATTTA 74164

Gallus ---------------------GAAGACA-------------------AGGATCAGA---- 47134

Anopheles ---------------------AAAAAGA-------------------AAGTT-------- 3075

Homo AAGACTCTGTCTCAAAAAAAAAAAAATTTATTTAG---------CTATGAACTAGTGTA- 97978

Pan AAGACTCTGTCTCAAAAAAAAAAAAATTTATTTAG---------CTATGAACTAGTGTA- 98760

Drosophila ------------------------------------------------------------

Canis ----------------------GAAATTTTTTTAG---------CTGAGAATTAGTGTA- 65144

Bos ------------------------------------------------------------

Rattus ---TTTATCAACTACTTTTTTATATATTTTCTCCCATGGACCTGCTGTTAGTAAATATCA 82679

Danio ------------------------------------------TGC--------------- 15805

Mus TTTTTTATCATTTACTTTTTTATATATTTCCTCCCATGGACCTGCTCTTAGTAAATGTCA 74224

Gallus ------GACATGTCTTTGGTCTTCTGGATTCTACCATAAAGCTGTAATT---------CA 47179

Anopheles ----------------------------------------GCTTCAATT---------CA 3086

Homo ---TATAT--GTTTTATAGATGCCTGATTATTCAAATAAACT--TCAAGATTGCACTTTA 98031

Pan ---TATAT--GTTTTATAGATGCCTGATTATTCAAATAAACT--TCAAGATTGCACTTTA 98813

Drosophila ------------------------------------------------------------

Canis ---TATGTTAAATTTATGGATACATCATTATTCAAACAAGCAAGTCAAGATTGCTCTTAA 65201

Bos ------------------------------------------------------------

Rattus CAGGCTAGCAAAGCGTAGTAGAGT-GTTTAAAGTGGTGTTTAAA---------------- 82722

Danio ------------------------------------------------------------

Mus TGGGGTAGCAAAGCATAGTACAGTCACTTTAAGTGGTTTCTCAATGAAGGAAAACCTTTT 74284

Gallus CGATCGGGCAGAAC---------------------------------------------- 47193

Anopheles CCA-CGGGTA-------------------------------------------------- 3095

Homo TGAGCTTGTATTTCGTTTTT--TAGAACTCAAACTAACATAAG----------------- 98072

Pan TGAGCTTGTGTTTCGTTTTT--TAGAACTCAAACTAACATAAG----------------- 98854

Drosophila ------------------------------------------------------------

Canis TGTACT-GCATTTTGTTTTTGGTGTGAGTATAACAAGCAT-------------------- 65240

Bos ------------------------------------------------------------

Rattus -CTGCTCTTTCTTTAAGACTTGGTTCTGCTTTATGTGATTCAGTGCCTTCCAGTTTTTCA 82781

Danio -----------------ACTTAACTCTA-------------------------------- 15816

Mus ACTGCTGTTTCTTTAATATTTGGTTCTGCTTTATGTGATTCAATGCCTTCTACTTTTCAC 74344

Gallus -------TCTTGACAGCAGTTGCATTTGTTTATTGTGGTG-------------------- 47226

Anopheles ------------------------------------------------------------

Homo -------TGTCATTAAAACATAGCTTTTATTACATAGATTTTAGGAATGCCACAGGATAA 98125

Pan -------TGTCATTAAAACATAGCTTTTATTACATGGATTTTAGGAATGCCACAGGATAA 98907

Drosophila ------------------------------------------------------------

Canis -------CATTATAACAACATGACTTTTATCACATAGATTTTAGGAATGCCAGGGACTAA 65293

Bos ------------------------------------------------------------

Rattus TGTACTTTCTTTTAAAATTAAAGTCCCT-CACCACGCATATCTATCCTTTTTCAAAAAAT 82840

Danio --------------------------------------------------TTCAGAA--- 15823

Mus TTACAATTTTTTAAAAATTAAAATCCCTTCACCAGGTATTTCTATCATCTTTGGAAAGTT 74404

Gallus -------------------------------------------------TTTAAGAAA-- 47235

Anopheles ------------------------------------------------------------

Homo ATCATTCTCTTAAAATAAC---------------TGCAGGTGGCAGAAATGTCAGAA--- 98167

Pan ATCATTCTCTTAAAATAAC---------------TGCAGGTGGCAGAAATGTCAGAA--- 98949

Drosophila ------------------------------------------------------------

Canis ATCATTCTCTTAAAATAAT---------------TGCATATAGCAGAAATATCAGAA--- 65335

Bos ------------------------------------------------------------

Rattus TTGTCACTTCTGTCTTTAGAACTTTCAGTATCTACAATTTTTT-GTCCTATTTTGATCCC 82899

Danio ----------TGTCTTT---------------------------GTTTTATTTT------ 15840

Mus TCGTCACTTCTTTCTTCCGCTCTTCCAGTGTCTACAATTTTTTTGTCCTATTCTGATCCT 74464

Gallus --GCAGATGGTGCAGTTGAACAGTATAGTGGAACCA--------GTATTACTCCAGAGGG 47285

Anopheles ------------------------------------------------------------

Homo ---TAATTCTCCTCCTCCA--TACACAGCACATATTACTTGTTTAAAGTATTCTAGTTCA 98222

Pan ---TAATTCTCCTCCTCCA--TACACAGCACATATTACTTGTTTAAAGTATTCTAGTTCA 99004

Drosophila ------------------------------------------------------------

Canis ---TTATCCCCCATCCCCACTTCTACAGTACACAAAA----TCAAAAGTGTTCAAGTTTA 65388

Bos ------------------------------------------------------------

Rattus TAACT--GTGCTTATTTTGTGTATGATTTCTTTC--CTTTAA------------------ 82937

Danio -----------------------TGATTTTTTTT--TGTCAA------------------ 15857

Mus TAACT--GTGCTTATCTTGTGTATTATTTCTCTCTACTTTTA------------------ 74504

Gallus TGG----AAGAATAGTAAGACAAAGAATGCTTGC-ACGTCGT------------------ 47322

Anopheles -------------AGTAACGTAC------CTTGA-ACGTT-------------------- 3115

Homo TATA--AAAATTGAACTTTTGTATTACTGCTATTAGGTATGTAGTTGTTTGCATTTGGGG 98280

Pan TATA--AAAATTGAACTTTTGTATTACTGCTATTAGGTATGTAGTTGTTTGCATTTGGGG 99062

Drosophila ------------------------------------------------------------

Canis TTTTTTAAAAGTATGCTTTTGGATTAGTACTATTAGACGTGT------------------ 65430

Bos ------------------------------------------------------------

Rattus --------------------CTTTTGG--GATTTATTACTTGATTTTTCAGAATTATTCT 82975

Danio --------------------CCCTTAG--GCTTTTCTTTTTAGTTTTG------------ 15883

Mus --------------------CTTTGGG--GATTTATTACTTGATTTTCCAATTTTATTCT 74542

Gallus --------------------TTATCAGCAGACTTAATACTTAAAGATCTAAA-TACTTAA 47361

Anopheles ------------------------------------TACGCAAAG--------------- 3124

Homo CCAGTTGGTTGGGGCAGGGGGTCTTTTTTTCTTTTGTCCTTAATCTGTATCACTTTTTCC 98340

Pan CCAGTTGGTTGGGGCAGGGGGTCTTTTTTTCTTTTGTCCTTAATCTGTATCACTTTTTCC 99122

Drosophila ------------------------------------------------------------

Canis --------------------GTTTCTCTGTATTTTGTCCTTAATCTGTATCACCTTTTCC 65470

Bos ------------------------------------------------------------

Rattus CAGCATATATTACAGATTTATTA------------------------------------- 82998

Danio ------------------------------------------------------------

Mus CAGCATAGATTACAGATATATTTATTGCACA----------------------------- 74573

Gallus AAATCTAAACTACAG--------------------------------------------- 47376

Anopheles ------------------------------------------------------------

Homo TCCCAAAGTTGAGTTAAAGGATGAGTAGACCAGGAGAATAAAGGAGAAAGGATAAATAAA 98400

Pan TCCCAAAGTTGAGTTAAAGGATGAGTAGACCAGGAGAATAAAGGAGAAAGGATAAATAAA 99182

Drosophila ------------------------------------------------------------

Canis CGCCAAAATCTTGT---------------------------------------------- 65484

Bos ------------------------------------------------------------

Rattus ------------------------------TACTCATGCTTTTGTTGAAGATCTTGATAG 83028

Danio -------------------------------GCTCGTGCTTC------------------ 15894

Mus -----------------------------TTTCTCTTGCTTT-GGAGAAGATCTTGATAG 74603

Gallus ------------------------------------TATTTT------------------ 47382

Anopheles ------------------------------------------------------------

Homo ATATATACCCAAAGGCACCTGGAGTTAATTTTTCCAAATATTCATTTCAGTCTTTTTCAA 98460

Pan ATATATACCCAAAGGCACCTGGAGTTAATTTTTCCAAATATTCATTTCAGTCTTTTTCAA 99242

Drosophila ------------------------------------------------------------

Canis -------------------------------------ATTTTCAATTCGCAGGATTTGGG 65507

Bos ------------------------------------------------------------

Rattus ATTTT-AGATTGAAGTTTTAGAAATATGAGTAGGATATTGAGCATTCAGTGATTTCTTCT 83087

Danio --------ATTGG-----------------------------------------TCTTCC 15905

Mus ATTTTTAGATTGAGGTTTTAGAAATGTGAATAGGATATTGAACA---------------T 74648

Gallus --------GTTAATGTT------------------------------------------T 47392

Anopheles ------------------------------------------------------------

Homo TTCATAGGATTTTGTCTTTTGCTCATTACTGACTGCATAATGTGAT--------TATACC 98512

Pan TTCATAGGATTTTGTCTTTTGCTCATTACTGACTGCATAATGTGAT--------TATACC 99294

Drosophila ------------------------------------------------------------

Canis TT--TTGGATTTGGTCTTTTGTTTGCTGCTGATTATATATTATGAG--------TATACC 65557

Bos ------------------------------------------------------------

Rattus GTGATTTCTAAATGCATGTACTTTTTACAATAAAGTAAACTTTAAAAAAATCACAGTTAG 83147

Danio CTAGTTCGT-----------------------------------------TCACA----- 15919

Mus GTATTTTTTACA-------------------AAAGTAAATTTTAAAACA-TCACGCTTAG 74688

Gallus CTAATTTCTACTT--------------------------------GGCTGTCTCAGCGAT 47420

Anopheles ------------------------------------------------------------

Homo ATAGTTTAAATAGTC----------------ACTTCCTGTTACTACACACTTGGGTTTTC 98556

Pan ATAGTTTAAATAGTC----------------ACTTCCTGTTACTACACACTTGGGTTTTC 99338

Drosophila ------------------------------------------------------------

Canis ATAGTTTATATAATT----------------ACTTCCTGTTGTTGGACACTTAGGTTTAT 65601

Bos ------------------------------------------------------------

Rattus CAATAGGAATACAAAAATACTTTTTATGTGAAGTTTT--TGAGCAAAGTGTTATATTAAT 83205

Danio ----------------------TTTGCG-GCAATGTT--TGA------------------ 15936

Mus CATTAGGAATACAAAAGTACTTTTTAAGTAGAATTAC--TGAGCAAAAGAGT-TATTAAT 74745

Gallus TGGTTAATATG-----------TTGGTGATGGGTTTTCTTGA------------------ 47451

Anopheles ----------------------CCGGTGACGAATG------------------------- 3137

Homo TCAATTTTTTACTATTGTAGTACTAATATTTTACTATATTGTAATCTAATCTAAATTTTT 98616

Pan TCAATTTTTTACTATTGTAGTACTAATATTTTACTATACTGTAATCTAATCTAAATTTTT 99398

Drosophila ------------------------------------------------------------

Canis C--AGTTTTTACCATTCTA--AATAATGCAGCAGTGGATTA----CTCTTATATGTTTTT 65653

Bos ------------------------------------------------------------

Rattus AGTCATCCTATATATAGTTCTTACAAGATATAAAGTCTGGCTGATGAAAACTTACATACT 83265

Danio ------------------------AAGGTACAGAG------------------------- 15947

Mus ATTTATCCCATATATAGTTCCTACAAGATATAAAA------------------------- 74780

Gallus --------------------TTGTAACCTGTGAA-------------------------- 47465

Anopheles ------------------------AACCTG------------------------------ 3143

Homo ACGTATTC----AGAGCTGTTCAGGATAAATTTGC------------------------- 98647

Pan ATGTATTC----AGAGCTGTTCAGGATAAATTTGC------------------------- 99429

Drosophila ------------------------------------------------------------

Canis AAGTGTTTCAGTAAGATTAATTAGTATAAGT--AA------------------------- 65686

Bos ------------------------------------------------------------

Rattus AAGTATAATAATGGAATATTTGTTTACATTTTTTTCAAAATCTTTTATCAGTCCTCTTTC 83325

Danio ------------------------------------------------CAG-CCTCAGTC 15958

Mus ------------------------------------------------------TCT--- 74783

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ----------------------------------------------------------TT 98649

Pan ----------------------------------------------------------TT 99431

Drosophila ------------------------------------------------------------

Canis ----------------------------------------------------------TT 65688

Bos ------------------------------------------------------------

Rattus ATAAGTTGACTAATGAATGAATTAGTGGAAGAATGGTAAATAAAATATAATTTAGAGAAG 83385

Danio TCAGTTTGGC--ATCCAGGAATCTGT-----------------------ATTTATTGAGA 15993

Mus ---GGCTGACTAA------AACTTACAT---------------------ACTAAGTGTAA 74813

Gallus -----TTGATAAG-------ATTGGTTGG--------------------ACTTCTAAAGT 47493

Anopheles ------------------------------------------------------------

Homo GGAAATTTTTAAATC-----ACCAGAAGTGA-----TACTATCCTGATAATTAACTTCCA 98699

Pan GGAAATTTTTAAATC-----ACCAGAAGTGA-----TACTATCCTGATAATTAACTTCCA 99481

Drosophila ------------------------------------------------------------

Canis TGTAGATCCTTGATT-----ACCAGGAATGAATGTTCAGGATTTCTGATATTAATTTCCA 65743

Bos ------------------------------------------------------------

Rattus ATTGGCATTTTTAATATTCCCTATTAACTTTGGCCTGAATGATGTTGTAGTGCAATGAGC 83445

Danio ATCTGCATTGTTTGTA-------------------------ATGCCGTCGTGCT----GC 16024

Mus AT-GGTACTTTTAATATTCACTGT-GACATTGGCCT---TAATGTTGTAGTACTATGATC 74868

Gallus GTCGAAATT--TAATC------------------------GCTTTTGAAGGTCT-----C 47522

Anopheles ------------------------------------------------------------

Homo AGTTGTCTCT-TAATAT--------AGTTTTAATGCAAATCATAAGCTTATGTTA-GTAC 98749

Pan AGTTGTCTCT-TAATAT--------AGTTTTAATGCAAATCATAAGCTTATGTTA-GTAC 99531

Drosophila ------------------------------------------------------------

Canis AGTTATCTCTGTAATAT--------GGTTTTAAT--AAATCATAAACTCTTATTA-GTGC 65792

Bos ------------------------------------------------------------

Rattus TTGTTTGTAGTGAATGTTAAATTAAATCCAGTATTGTATCATTT-TTCATTAGGGAGTTC 83504

Danio TCGTTTATGG-----------------CCAGTGTTCTG-CATTT-CGCTTCAG------- 16058

Mus TTGTTTATAGTGGATGTCAAATTAAAACCAGTATTCT--CTTTT-CACATTAGGGAGTTC 74925

Gallus ACACTGAAGATTGATATCAATTC---ACTTATTTTTTTTTCTTC-CTCACTAGGGAATTC 47578

Anopheles --------------------------ACGCGTTTCATTTTCT------------------ 3159

Homo CAGTCATAA-TGAATGCCAAACTGAAACCAGTATTGTATTTTTT-CTCATTAGGGAGTTC 98807

Pan CAGTCATAA-TCAATGCCAAACTGAAACCAGTATTGTATTTTTTTCTCATTAGGGAGTTC 99590

Drosophila ------------------------------------------------------------

Canis TAGTTATAAATGAATGCCAAACTAAAATCAGTATTCTGTCTTTT----CTCAGAGAGTTC 65848

Bos ------------------------------------------------------------

Rattus TGGGAAATTGTTCATTCGTTTACAGATGAACAGAAAAGACTTTTCCTGCAGTTTACAACA 83564

Danio -------------ATTCG--------------------ACTTTTTCTCTCCCTCACA--- 16082

Mus TGGGAAATTGTTCATTCGTTTACAGATGAACAGAAAAGACTCTTTCTGCAGTTTACAACA 74985

Gallus TGGGAGATAGTCCATTCATTTACGGATGAACAGAAAAGACTGTTCTTGCAGTTTACAACA 47638

Anopheles --------------------------------AAAAACA----TCT-------------A 3170

Homo TGGGAAATCGTTCATTCATTTACAGATGAACAGAAAAGACTCTTCTTGCAGTTTACAACG 98867

Pan TGGGAAATCGTTCATTCATTTACAGATGAACAGAAAAGACTCTTCTTGCAGTTTACAACG 99650

Drosophila ------------------------------------------------------------

Canis TGGGAAATCGTTCATTCATTTACAGATGAGCAGAAAAGACTCTTCTTGCAGTTTACAACA 65908

Bos ------------------------------------------------------------

Rattus GGCACAGACAGAGCACCTGTTGGAGGACTCGGAAAATTGAAGATGATTATAGCCAAAAAT 83624

Danio --CACA-ACTGA---CCGGTTTG-------------CTAAAGAT---------------- 16107

Mus GGCACAGACAGAGCACCTGTTGGAGGACTAGGAAAATTGAAGATGATTATAGCCAAAAAT 75045

Gallus GGCACAGACAGAGCCCCCGTGGGAGGACTTGGAAAGTTAAAGATGATCATAGCCAAAAAT 47698

Anopheles GGCTCCGATCGTGTTCCTGTGGGTGGTCTTAGTCGATTGAAGCTGGTGGTAGCGCGCAAC 3230

Homo GGCACAGACAGAGCACCTGTGGGAGGACTAGGAAAATTAAAGATGATTATAGCCAAAAAT 98927

Pan GGCACAGACAGAGCACCTGTGGGAGGACTAGGAAAATTAAAGATGATTATAGCCAAAAAT 99710

Drosophila ------------------------------------------------------------

Canis GGCACAGACAGAGCACCTGTGGGCGGACTAGGAAAATTAAAGATGATTATAGCCAAAAAT 65968

Bos ------------------------------------------------------------

Rattus GGCCCAGACACAGAAAGGTAATATCAAACTC------TGTACCCACTGTAAACCTTTTCA 83678

Danio --------CACAGTGGTGCACT-------------------CCTGCCGAAAAC------- 16133

Mus GGCCCAGACACAGAAAGGTAATATCAAACTCCAACTTTGTACCCACTGTAAACCTTTTCA 75105

Gallus GGCCCAGATACAGAGAGGTA-----------------------------AAACTC----- 47724

Anopheles GGTCCCGA---------------------------------------------------- 3238

Homo GGCCCAGACACAGAAAGGTAGGTAATTATTA------ACTTGTGACTGTATACCTA---- 98977

Pan GGCCCAGACACAGAAAGGTAGGTAATTATTA------ACTTGTGACTGTATACCTA---- 99760

Drosophila ------------------------------------------------------------

Canis GGCCCAGACACAGAAAGGTAATTATTAATTT------TTTTGTAGTTTTACATAGAATTA 66022

Bos ------------------------------------------------------------

Rattus CCATATTCCATACTTGCAAGCAGAGGCAACATTTAGTCTCTATATACTTATCTGATGTTA 83738

Danio -----------------GAGTAG--------------------------------TGTTA 16144

Mus CCATATTCCATACACGCAAGCAGAGCCAACATGTAGCCTCTATATACTCTTCTGATGTTA 75165

Gallus -------------------------------------------------------TGTTT 47729

Anopheles ------------------------------------------------------------

Homo --------------CCGAAAACCTTGCATTCCTCGTCACATACATATGA-------ACTG 99016

Pan --------------CCGAAAACCTTGCATTCCTCGTCACATACATATGA-------ACTG 99799

Drosophila ------------------------------------------------------------

Canis T-------------CCAAATCACATGAAATATTAGTTCAGAGAGTGTTTTTCTATTACTG 66069

Bos ------------------------------------------------------------

Rattus TATAGAAATATTGAAGTCAGCAAACATTAGTAGAATGAATATTTTGCCTTCACAATTTGA 83798

Danio TAAAGGAG-----------------------AGA---------------TCTCAACTT-- 16164

Mus TATTGAAATATCTAAGTCAGCAAACACTAGTGGAATGGATATTTTCCCTTCATGATTTGA 75225

Gallus CAT-------------------------------------------------TTGCTTG- 47739

Anopheles ------------------------------------------------------------

Homo TCTTTATAGTTTCTGAGCACATTCG---------------------------TGATTTTA 99049

Pan TCTTTATAGTTTCTGAGCACATTCG---------------------------TGATTTTA 99832

Drosophila ------------------------------------------------------------

Canis TTTGAGGAAATTTTTAACACACTGGCCTATTTCAA----AACTAAAAAGAGCTCACTTGA 66125

Bos ------------------------------------------------------------

Rattus GGTAATTTTT-AAAGATTATCGAACTTAAAAATTTATTATGGAGAT---TACAGGAGTAC 83854

Danio ------------------------CCTATAAA---------------------------- 16172

Mus GGAATTTTTTTAAAAATTAGTGTAGTTAAAAAGTAATTATGGAGCT---TACAGAAGTAC 75282

Gallus ------------------------TTTATAAAT--------------------------- 47748

Anopheles ------------------------------------------------------------

Homo ------------------------TATACAAATCCCCAAA-------------------T 99066

Pan ------------------------TATACAAATCCCCAAA-------------------T 99849

Drosophila ------------------------------------------------------------

Canis ------------------------TTTAAAATTTTGCANNNNNNNNNNACTCATAATTTT 66161

Bos ------------------------------------------------------------

Rattus ATACTTTATCAAGTTGTTATGTTTTTATTTCCCCTTGTTTCATTGTTTATTAAGAAAGCC 83914

Danio --ACTCTGTCAG-------------------------------------------AAGCT 16187

Mus AGACGTTATCAAGTTGTTATGTTTTATTCCCCCTTTGTTTCATAGTTTATTAAGAAAGCC 75342

Gallus -----------------------------------------------------GGAAGCA 47755

Anopheles ------------------------------------------------------------

Homo CATATTAGACAATTGAGAAAATACTTTGCTGTCATTGTGTGAGGAAACTTTTAAGAAATT 99126

Pan CATATTAGACAATTGAGAAAATACTTTGCTGTCATTGTGTGAGGAAACTTGTAAGAAATT 99909

Drosophila ------------------------------------------------------------

Canis TAAATTCAAGACCTTATTATGTATTCTGTTTGGAACGGTGGAATTGAGGCTCGGAAAATT 66221

Bos ------------------------------------------------------------

Rattus TTAT-----AGAACAGCCTACCTTGAATGGCTACACTAAAATTTAGAGGATTGTCTGTTC 83969

Danio T---------------CCTAC----------------------TAG-----TGTTTGTTT 16205

Mus TTATTAT--AGAACAGTCTACTTTGAATGGCTACACTAAAATTTAGAGGATTGTCTGTTC 75400

Gallus T------------------ATT----------------------------CTGTGCTTTC 47769

Anopheles ------------------------------------------------------------

Homo GCCCT------AGTTAAAAATTATTATGGGGCTCACATTGGTTTGGAAT----CAAATTA 99176

Pan GCCCT------AGTTAAAAATTATTATGGGGCTCACATTGGTTTGGAATTTTTCAAATTA 99963

Drosophila ------------------------------------------------------------

Canis GTTCTTTTTTAGGTTTCATAATCTTAAGGGGTGAATCCAATTTCATAATCTTGGCATTTA 66281

Bos ------------------------------------------------------------

Rattus CTTTAGATTATACTA-GATTGTTACTCTAGAGTTAATTCATTTTGACTTTTGATTGTTTT 84028

Danio GTTT---------------TGTTA------------TCTGTCTTG--TTTTAATT----- 16231

Mus TTTTACATTATACTA-GATTCTTATTCTAGGGTTAAATCATTCTGACTTTTGATTGTATT 75459

Gallus GTTTA-----------ATTTATTA------ACTTAGTTAAATCTGAAAGTTGAGTCTT-- 47810

Anopheles ------------------------------------------------------------

Homo GTGTGATTCAT----------TTACT---------TTTTTGATT---CCCAGCTTGTTAA 99214

Pan GTGTGATTCAT----------TTACT---------TTTTTGATT---CCCAGCTTGTTAA 100001

Drosophila ------------------------------------------------------------

Canis ATTTGTTCTCTATTATATAAGTTAAT---------GTTTTTGTTGAGTAAGGATCATTCA 66332

Bos ------------------------------------------------------------

Rattus CTTTCTCCATTAAATACTTCACTATTTTATGTTGGGACTGAACAATATGTCCTACTTAG- 84087

Danio ------------------------------------------CAAGATG----------- 16238

Mus CTTTCTCCAATAAATACTTCACAATTTTATGGTGGGGCTGAACAATATGTCCTAG----- 75514

Gallus ----------------------------------GAAGCATAGAGGATGCTCT------- 47829

Anopheles ------------------------------------------------------------

Homo TTGAAAGCCATATA-------------ACATGATCATCTATTTAGAA------------- 99248

Pan TTGAAAGCCATATA-------------ACATGATCATCTATTTAGAA------------- 100035

Drosophila ------------------------------------------------------------

Canis TGAACAGTAGTATATTTGAGGGTTTAAATATATAGAAATATATAGAAATGTCTGTGCCTC 66392

Bos ------------------------------------------------------------

Rattus --TATGTTGACTTTGGTATACATGGACAGATATATTTTCATTACTGTTAGTTCTACATTA 84145

Danio -----GCAGACTTT---------------------------------TAGTCC------- 16253

Mus -----GTAGACTTCGATATACATCGACAGATATATTTTTATTACTGTTAATTAGACAT-- 75567

Gallus ------CTGAATTC--------------------------------CTAAATCCA----- 47846

Anopheles ------------------------------------------------------------

Homo -------TGGTTACATTGAGGCTCGGAA--------------GATTATCATTTGATTGTG 99287

Pan -------TGGTTTCATTGAGGCTCGGAA--------------GATTATCATTTGATTATG 100074

Drosophila ------------------------------------------------------------

Canis CCTTCTTTATTTCTATTAGCATTCCATAT-------TATTTGATGTATTATTTGATGACT 66445

Bos ------------------------------------------------------------

Rattus TTTTATACATCGTGGCTCTAATTTTAATTGGTTTATATTAAATCATTATCATTGTCATTT 84205

Danio ----ATG------------AATGCTAATTG------------------------------ 16267

Mus -TTTATACATCTTGGCTCTAATTTTAATTAATTTATAATCAATCATTATCATTTTCATTT 75626

Gallus ------------------------TAATAAG----------------------------- 47853

Anopheles ------------------------------------------------------------

Homo CTAGAAT-------------CCTGTTATCAA----------ATCATTTTCTTAGTCATAT 99324

Pan CTAGAAT-------------CCCGTTATCAA----------ATCATTTTCATAGTCATAT 100111

Drosophila ------------------------------------------------------------

Canis TTAATGTAAATTTGTTTATATTTGTTATTAA----------GTCATTTATATAA-CATAT 66494

Bos ------------------------------------------------------------

Rattus TGCCAGCAGTATTTGTAATCTATATAAACATGCTTAACCTTTGAAATATTTAAAATCTAG 84265

Danio ------------------------------------------------------------

Mus TGCCAGCAGTATTTCAAATCTATATACAGA-GCATAGACTTCAAAATCTTTAAAAGCCAG 75685

Gallus ------------------------------------------GAAAT------------- 47858

Anopheles ------------------------------------------------------------

Homo TGCCAGCAGTGTTTCTAATAAGCATTTAAGAGCACACACTTTGCAGTCTTGTAAAAC-AG 99383

Pan TGCCAGCAGTGTTTCTAATAAGCATTTAAGAGCACACACTTTGCAGTCTTGTAAAAC-AG 100170

Drosophila ------------------------------------------------------------

Canis TGCCAAGAATATTTCTGACTGGCATTAAAGAACACAGACTTTGAAATCTTAAAAACC-AA 66553

Bos ------------------------------------------------------------

Rattus GTTTGAATATTCTTTAAACTTTAGAGTAAGTTG--------TTTAGTGATTTCCGCTTTT 84317

Danio ------------------------------------------------------------

Mus GTTTGAATAATTTTTAATCTTTGGTGTAAGTTG--------TTTAGTGACTTCAGCTTTT 75737

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo GTTTGAGTATTTTCTCCACCTTAGAGGAAGTTACTTGACTTCTCAGTGACCTAACCTCTA 99443

Pan GTTTGAGTATTTTCTCCACCTTAGAGGAAGTTACTTGACTTCTCAGTGACCTAACCTCTA 100230

Drosophila ------------------------------------------------------------

Canis ATTTGGGTATTCTCTCCACTTTAGAGTAAATTT----GCTTCTCAGTGATGTCAGCTCTG 66609

Bos ------------------------------------------------------------

Rattus AAGTGGGTTTAGTAACAGTAT-----------GTTTGTTGTGTGAAGATTTA----AATG 84362

Danio --------------ACGGT-----------------GCCCCATGAAGA------------ 16284

Mus AATGGGTTT----AGTAAGAT-----------GTTTGTTGTGTAAAGATTTA----AATG 75778

Gallus -------------AGCAGTGT-----------ATT-GTTGCATGTAGTGC---------- 47883

Anopheles ---------------CAGCG---------------------------------------- 3243

Homo AAGTGCATTT---ACTGATGTCCTCTCTGTGGTTTTGTTGTGGAAAGATTTAGTTAAATG 99500

Pan AAGTGCATTT---ACTGATGTCCTCTCTGTGGTTTTGTTGGGGAAAGATTTAGTTAAATG 100287

Drosophila ------------------------------------------------------------

Canis TAGTGGGAAT---AATGATA-----------GGTTTATTGTGAGAAGATTTAGTTAAGTG 66655

Bos ------------------------------------------------------------

Rattus AACTTCAGTAGTAAAGTGTCTGAAACAATAGACAACATAGAGTAGAAACTCAGTAGATAT 84422

Danio -------------AAGCGTTT--------------------------------------- 16292

Mus AACTTCAGTGTTAAAGTATCTAAAGCAATAGGTAACA--GAGTGGAAACTCAATAGATAA 75836

Gallus -------------ACGTGTACA-------------------------------------- 47892

Anopheles ------------------------------------------------------------

Homo AACTGTAAGAATTCAGTACCTAAAATGGTATCTGTTATGTAGTAAAAACTCAATGGATAC 99560

Pan AACTGTAAGAATTCAGTACCTAAAATAGTATCTGTTATGTAGTAAAAACTCAATGGATAC 100347

Drosophila ------------------------------------------------------------

Canis AGATCTAACAGTTAAATACCTGAAACAATGTCTGGTTTGTCATA---ATTCAGTGGATAC 66712

Bos ------------------------------------------------------------

Rattus AAAATGTTATTATCA----------TCAGCACCACTTTAATATTTGCATAATTTAATAGG 84472

Danio ----------------------------------------TAGTTGC------------- 16299

Mus TAAATGTTACTATCA----------TCAGCATCACTTTAATTTTTGCATTATTTCATAGG 75886

Gallus -------------------------------------TGTTCCTTGA------------- 47902

Anopheles ------------------------------------------------------------

Homo AGTATCTTATCATCG-------------------TCACTAGCTTTGAGTAATTT-ATAGG 99600

Pan AGTATCTTATCATCG-------------------TCAGTAGCTTTGAGTAATTT-ATAGG 100387

Drosophila ------------------------------------------------------------

Canis AATATGTTATCATCAGTCATCACCATCTTCATTATCATCAGTATTGAGTAATAT-ATAAG 66771

Bos ------------------------------------------------------------

Rattus ATAAAGATCCAACTGATCTTTGTAGCTGGACA------GCACAATGTTTATGATTTATTT 84526

Danio ------------------------GCT--------------------------------- 16302

Mus ATAAAGACCCAACTGATCTTTTTAACTAAACA------GTACAATGTTTATGATATATTT 75940

Gallus --------------------TCTCACTTA------------------------------- 47911

Anopheles ------------------------------------------------------------

Homo ATAAAGGCAA-------CTTGGTAGTTACACA------ACAAAAAGTTTATGATTTGCAT 99647

Pan ATAAAGGCAA-------CTTGGTAGTTACACA------ACAAAAAGTTTATGATTTGCAT 100434

Drosophila ------------------------------------------------------------

Canis ATAAAGACAAACTGATACTTGATAGCTGTACACAAAAAGCAAAAAGTT--TGAGTTGCAT 66829

Bos ------------------------------------------------------------

Rattus AATCTGTAGTTTCTCATTACAAACCATCCTAACAAGA----TACGCATCTAATAGGAGCA 84582

Danio ------------------------------------------------------------

Mus AATCTGTAGTTTCTCATTAAAAACCGTCCTAACAAGA----TATGTATCTAATAGGAGCA 75996

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo TAATGTATAGTTTGCATTGCAGACCGTCTCAACTATA--TACAATCTAAAAATAGGAGCA 99705

Pan TAATGTACAGTTTGCATTGCAGACCGTCTCAACTATA--TACAATCTAAAAATAGGAGCA 100492

Drosophila ------------------------------------------------------------

Canis TAACGTGTACTCTGCATTGCAAACCGTCTCAACTACAGGTACAATCTAAAAGTAGGACTT 66889

Bos ------------------------------------------------------------

Rattus TTTAACACTGAGCATATTTCTAGTGATTTATGATTTTTTTTCCTGTTTTTTCCCTTTCTC 84642

Danio ---------------------------------TTTTTTTTTCT---------------- 16313

Mus TTTAACACTGAGCATATTTCCAATGACTCATGATTGTCCTGTTT-----TTCCCTTTCTC 76051

Gallus ----------------------------------TTTTCTGTTT---------------- 47921

Anopheles ------------------------------------------------------------

Homo TTTAATTCTAAGTGTATTTCCCATGACTTACAGTTTTCCTGTTT---TTTTCCCCTTTTC 99762

Pan TTTAATTCTAAGTGTATTTCCCATGACTTACTGTTTTCCTGTTT---TTTTCCCCTTTTC 100549

Drosophila ------------------------------------------------------------

Canis TTTAATGATGAGCATGTTCCCCATGATTTA---TTTTCCTATTT---TCCCCCCCTTCTC 66943

Bos ------------------------------------------------------------

Rattus TCTATTTAGGTTACCTACATCTCATACTTGCTTTAATGTCCTTTTACTTCCGGAATATTC 84702

Danio ---------------------------TTGCTCTG------------------------- 16321

Mus TTTATTTAGGTTACCTACATCTCATACTTGCTTTAATGTCCTTTTACTTCCGGAATATTC 76111

Gallus TCCCCACAGGTTACCTACATCTCACACATGCTTTAATGTACTTTTGCTTCCGGAGTACTC 47981

Anopheles -----ACCGATTGCCGACGAGTCACACCTGCTTCAATGTGCTGCTACTTCCCGAGTACAA 3298

Homo TCTATTTAGGTTACCTACATCTCATACTTGCTTTAATGTGCTTTTACTTCCGGAATACTC 99822

Pan TCTATTTAGGTTACCTACATCTCATACTTGCTTTAATGTGCTTTTACTTCCGGAATACTC 100609

Drosophila ------------------------------------------------------------

Canis CCTATTTAGGTTACCTACATCTCATACTTGCTTTAATGTCCTTTTACTGCCGGAATATTC 67003

Bos ------------------------------------------------------------

Rattus AAGCAAAGAAAAACTTAAAGAGAGATTGCTGAAGGCCATCACATATGCCAAAGGATTTGG 84762

Danio ------------------------------------------------CACAGTATCTGG 16333

Mus AAGCAAAGAAAAACTTAAAGAGAGATTGTTGAAGGCCATCACATATGCCAAAGGATTTGG 76171

Gallus AAGCAAAGAAAAGCTTAAAGAAAGATTATTGAAGGCCATCACATACGCCAAAGGATTTGG 48041

Anopheles TTCCAAGGAAAAGCTCGAGGAACGACTGCTGAAAGCGATCAACTATTCAAAAGGCTTCGG 3358

Homo AAGCAAAGAAAAACTTAAAGAGAGATTGTTGAAGGCCATCACGTATGCCAAAGGATTTGG 99882

Pan AAGCAAAGAAAAACTTAAAGAGAGATTGTTGAAGGCCATCACGTATGCCAAAGGATTTGG 100669

Drosophila ------------------------------------------------------------

Canis AAGCAAAGAAAAACTTAAAGAAAGATTGTTGAAGGCCATCACTTACGCCAAAGGATTTGG 67063

Bos ------------------------------------------------------------

Rattus CATGCTGTAAACAAAACAAAAACAAAAAGAAA-----------AAAAGAAAAAAGTCAAA 84811

Danio CCCG-------------------------------------------------------- 16337

Mus CATGCTGTAAACAAAAAGAAAA--AGAAAAAG-----------AAAAAGAAAAAGTTAAA 76218

Gallus CATGCTGTAATAAATGTAACAA-----------------------------------AAG 48066

Anopheles GATGCTGTA--------------------------------------------------- 3367

Homo CATGCTGTAAAACAAAACAAAACAAAATAAAACAAAAAAAAGGAAGGAAAAAAAAAGAAA 99942

Pan CATGCTGTAAAACAAAACAAAACAAAACAAAA------AAAGGAAGAAAAAAAAAGAAAA 100723

Drosophila ------------------------------------------------------------

Canis CATGCTGTAAAAAAAAAAAAAAAAAAAAAAAA------AAAGAAAGAAAAGAAAAAGAAA 67117

Bos ------------------------------------------------------------

Rattus AAACTT-------------AATAAATATAAGAGGGATAATTTGATGGTAATAGTGTCCCA 84858

Danio --------------------ATACAT-------------TTGGATGAAAATGA------- 16357

Mus AA------------------ATAAATATAAGAGGGATAATTTGATGGTAATAGTATCCCA 76260

Gallus GG------------------ATGAAAAAAAA----------TGATGGTGGTGATGTCCCT 48098

Anopheles ----------------------GAA---------------------------------CC 3372

Homo AAATTTAAAAAATTTTAAAAATATAACGAGGGATAAATTTTTGGTGGTGATAGTGTCCCA 100002

Pan AAATTTAAAAAATTTTAAAAATATAACGAGGGATAAATGTTTGGTGGTGATAGTGTCCCA 100783

Drosophila ------------------------------------------------------------

Canis AAG-----AAAA----AAAAGGAAAAAGAAATTTAAAATTTTAATAAATATAATG----- 67163

Bos ------------------------------------------------------------

Rattus GTTCAAAAAGGCTGTAAGATAGTGAACCACAGTACTCATCTATGTCTGTGCCTCCCTTCT 84918

Danio ------------------------------------------------------------

Mus GTACAAAAAGGCTGTAAGATAGTGAACCACAGTAGTCATCTATGTCTGTGCCTCCCTTCT 76320

Gallus GTCCAAAAAGGCCATAAGATAGTGAGCTACAGTAGTCACCTGTGTTTGTGCCTCCCTTCT 48158

Anopheles GCACA-------------------------------CGCCTGTGTGTGTA---------- 3391

Homo GTACAAAAAGGCTGTAAGATAGTCAACCACAGTAGTCACCTATGTCTGTGCCTCCCTTCT 100062

Pan GTACAAAAAGGCTGTAAGATAGTCAACCACAGTAGTCACCTATGTCTGTGCCTCCCTTCT 100843

Drosophila ------------------------------------------------------------

Canis -------AGGGAT----------------------------------------------- 67169

Bos ------------------------------------------------------------

Rattus TCATTGGGGACATTGTGGGCTGGAACAGCAGATTTCAGCTGCATATATGAACAAATCCTT 84978

Danio -----GGGGAAATTG---------------------------------GCACAAGTCGT- 16378

Mus TCATTGGGGACATTGTGGGCTGGAACAGCAGATTTCAGCTGCATATATGAACAAATCCTT 76380

Gallus TTACTGGGGACATTG--GGCTGGAACAGCAGATTTCAGCTGCTTATATGAACAAAATCTT 48216

Anopheles ----TGTGGCCA--------------AGCAA--------TGCTCA-----ACAA------ 3414

Homo TTATTGGGGACAT-GTGGGCTGGAACAGCAGATTTCAGCTACATATATGAACAAATCCTT 100121

Pan TTATTGGGGACAT-GTGGGCTGGAACAGCAGATTTCAGCTACATATATGAACAAATCCTT 100902

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TATTATTATTATAATTATTTTTTTGCGTGAAAGTGTTACATATTCTTTCACTTGTATGTA 85038

Danio ----------ACCACTATCTTGTCGTGCCAAACAGTTA--------------------TG 16408

Mus TATTATTATTATAATTATTTTTTTGCGTGAAAGTGTTACATATTCTTTCACTTGTATGTA 76440

Gallus TATT----------TTTTCTTTTAGCGTGAAAGTGTTACATATTCTTTCACTTGTATGTA 48266

Anopheles --------------------------GTCAGACCATCAC---TTCGTTCAATCGT----- 3440

Homo TATTATTATTATAATTATTTTTTTGCGTGAAAGTGTTACATATTCTTTCACTTGTATGTA 100181

Pan TATTATTATTATAATTATTTTTTTGCGTGAAAGTGTTACATATTCTTTCACTTGTATGTA 100962

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CAGAGAGGTTTTTCTGAATATTTATTTTAAGGGTTAAATCACTTTTGCTTGTGTTTATTA 85098

Danio CTGAGA--------------------------------------------------ATCG 16418

Mus CAGAGAGGTTTT-CTGAATATTTATTTTAAGGGTTAAATCACTTTTGCTTGTGTTTATTA 76499

Gallus CAGAGAGGTTTTCCTGAATATTTATTTTAAGGGTTAAATCACTTTTGCTTGTGTTTATTA 48326

Anopheles -------GTTCTC-------------------GTT------------------------- 3449

Homo CAGAGAGGTTTTTCTGAATATTTATTTTAAGGGTTAAATCACTTTTGCTTGTGTTTATTA 100241

Pan CAGAGAGGTTTTTCTGAATATTTATTTTAAGGGTTAAATCACTTTTGCTTGCGTTTATTA 101022

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CTGCTTGAGGTTGAGCCTTTTTGAGTATTTAAAATATATATACCAACGAAACTATTCTCG 85158

Danio CCGCTC----------------------------------------CGATTTTGTTC--- 16435

Mus CTGCTTGAGGTTGAGCCTTTTTGAGTATTTAAGATATATATACCAACGAAACTATTCTCG 76559

Gallus CTGCTTGAAGTTGAGCCTTTTTGAGTATTTACAAGAAA------ACAAACTGTACTCTCC 48380

Anopheles ------------------------------------------------------------

Homo CTGCTTGAGGTTGAGCCTTTT-GAGTATTTAAAAAATATATACCAACAGAACTACTCTCC 100300

Pan CTGCTTGAGGTTGAGCCTTTT-GAGTATTTAAAAA---TATACCAACAGAACTACTCTCC 101078

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CAAGGAAAACATTGCCACCATTTGTAGACCATGTAATCTTCAAGTATGTGGGTTTTTTTT 85218

Danio ------AGGCGTAGCTG---------------GTAATC--CAGATTAGTGA--------- 16463

Mus CAAGGAAAACATTGCCACCATTTGTAGAACATGTAATCTTCAAGTATGTG---------- 76609

Gallus CAAGGAAACTATTGCCATCATTTGTAGACTATGTAACCTTCAAGTATGTG---------- 48430

Anopheles ------------------------------------------------------------

Homo CAAGGAAAATATTGCCACCATTTGTAGACCACGTAACCTTCAAGTATGTGC--------- 100351

Pan CAAGGAAAATATTGCCACCATTTGTAGACCACGTAACCTTCAAGTATGTGC--------- 101129

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TTGTTTGTTTGTTTGTTTTTTTTTTTTTTTTTTTTTTTTTTTTT----TTTTTTTTTTTT 85274

Danio -TGCCC---TGTTCACTTTTTTTTTTTTTTTTTTGTTTATTTTG----TTTTTCCTT--- 16512

Mus ------------CTATTTTTTGTCCCTGTATCTAAGTCAAATCAGGAACTTTTTTCT--- 76654

Gallus ------------CTATATTTTTGTCCCTGTATCTAATCAAATCAAGAACTGTACTTTTTG 48478

Anopheles ------------------------------------------------------------

Homo ------------TACTTTTTTGTCCCTGTATCTAACTCAAATCAGGAACTGTATTTTTTT 100399

Pan ------------TACTTTTTTGTCCCTGTATCTAACTCAAATCAGGAACTGTATTTTTTT 101177

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TTTGTCCCTGTATCTAAGTCAAATCAGGAACTTTTTTTTAACCATTTGCTTTTGAAACTT 85334

Danio -------------------------------------------ATTCCCTCTTGCAGATT 16529

Mus ---------------------------------------AACAATTTGCTTTTGAAACTT 76675

Gallus ---------------------------------------AAGAGTTTGCTTTTGAAACTT 48499

Anopheles ------------------------------------------------------------

Homo T--------------------------------------AATGATTTGCTTTTGAAACTT 100421

Pan T--------------------------------------AATGATTTGCTTTTGAAACTT 101199

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GAAGTTAAGGAAA-CAGTGTGGTGCAAGTACTGCTGTTCTAGCCCCCAAGGA---GTTTT 85390

Danio AAA--------------TGTGA-------------------------------------- 16537

Mus GAAGTCAAGGAAA-CAGTGTGGTGCAAGTACTGCTGTTCTAGCCCCCAAAGA---GTTTT 76731

Gallus GAAGTCTTGGAAAACAGTGTGATGCAATTACTGCTGTTCTAGCCCCCAAAGA---GTTT- 48555

Anopheles ------------------------------------------------------------

Homo GAAGTCTTGAAAA-CAGTGTGATGCAATTACTGCTGTTCTAGCCCCCAAAGA---GTTTT 100477

Pan GAAGTCTTGAAAA-CAGTGTGATGCAATTACTGCTGTTCTAGCCCCCAAAGAAGAGTTTT 101258

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CTGTACAAAATTTTGAGAATCAAT------------AAAGATGGAAGGGAGAATTTGGAA 85438

Danio CTGTG------------------------------------------------------- 16542

Mus CTGTACAAAATTTTGAGAACCAAT------------AAAGATGGAAGGGAGAACTTGGAA 76779

Gallus CTGTGCAAAACCTTAAGAATCAAT------------AAAGATGGAAGGGAGAACTTGGAA 48603

Anopheles ------------------------------------------------------------

Homo CTGTGCAAAATCTTGAGAATCAATCAATAAAGAAAGATGGAAGGAAGGGAGAAATTGGAA 100537

Pan CTGTGCAAAATCTTGAGAATCAA----TAAAGAAAGATGGAA----GGGAGAAATTGGAA 101310

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TGTTTGAACCACAGCCCTCAGAACTTTA-----GTAACAGCACAACAAATTAAAA----- 85488

Danio -GTTTGATCCACTGC-------------------TGATGGCGCTA--------------- 16567

Mus TGTTTGAACCACAGCCCTCAGAACTTTA-----GTAACAGCACAACAAATTAAAA----- 76829

Gallus TGTT-AAATTGCAGCCTTGAAAACTTTACTTTAGTCACAGCACAACGATTAAAA------ 48656

Anopheles ------------------------------------------------------------

Homo TGTTTTAACTGCAGCCCTCAGAACTTTA-----GTAACAGCACAACAAATTAAAAACAAA 100592

Pan TGTTTTAACTGCAGCCCTCAGAACTTTA-----GTAACAGCACAACAAATTAAAAACAAA 101365

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus --CAACTCATGCCACAGTACGTTGTCTTCATGTGTCTTGCAATGAACTGT--------TT 85538

Danio ------------------------------------------------------------

Mus --CAACTCATGCCACAGTATGTTGTCTTCATGTGTCTTGCAATGAACTGT--------TT 76879

Gallus -----TTCATTTCACTATATGTTGTCTTCACATGTCTTGTAATAAATTGTGGGTTTAATT 48711

Anopheles ------------------------------------------------------------

Homo AACAACTCATGCCACAGTATGTCGTCTTCATGTGTCTTGCAATGAACTGT----TTCAGT 100648

Pan --CAACTCATGCCACAGTATGTCGTCTTCATGTGTCTTGCAATGAACTGT----TTCAGT 101419

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CAGTAGCCAATCCTTTTAGTATATGAAAGGACAGGGATCTTTTTT--------------A 85584

Danio --------------------ACATAAAAGG---GGGA----------------------- 16581

Mus CAGTAGCCAATCCTCTTAGTATATGAAAGGACAGGGATTTTTTTTTTGTTTTTGTTGTTG 76939

Gallus AGAAAAAAACATTTCTTAGCATATGAAAGGGTAGAGATTTTAGTTA-------------- 48757

Anopheles ------------------------------------------------------------

Homo AGCCAATCCTCTTTCTTAGTATATGAAAGGACAGGGATTTTTGTTCT------------- 100695

Pan AGCCAATCCTCTTTCTTAGTATATGAAAGGACAGGGATTTTTGTTCT------------- 101466

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTTTTGTTGTTTAAGTTTACTGGGGAA 85644

Danio ------------------------------------------------------------

Mus TTGTTGTTGTTGTTGTTTTTGTTGTTGTTGTTGTTTTTGTTGTTTAAGTTTACTGGGGAA 76999

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------TGTTGTTCTCGTTGTTGTTTTAAGTTTACTGGGGAA 100731

Pan ------------------------TGTTGTTCTTGTTGTTGTTTTAAGTTTACTGGGGAA 101502

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AGTGCATCTGGCCAAATGATAGGATAGTCAAGCCTATTGCAACAAAATTAGAAAGTTTGT 85704

Danio ----------------------------------------AACAGAACTTGA-----TAT 16596

Mus AGTGCATCTGGCCAAATGATAGGATAGTCAAGCCTATTGCAACAAAATTAGGAAGTTTGT 77059

Gallus ---------------------------------CTTTTTCTAAAGAGCAAAAAAGTTTAC 48784

Anopheles ------------------------------------------------------------

Homo AGTGCATTTGGCCAAATGAAATGGTAGTCAAGCCTATTGCAACAAAGTTAGGAAGTTTGT 100791

Pan AGTGCATTTGGCCAAATGAAATGGTAGTCAAGCCTATTGCAACAAAGTTAGGAAGCTTGT 101562

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TGTATA------------AATAAGCATGTAAAAGTGCACTTAAAATGAATCTTTATT--- 85749

Danio TG---------------------------------------AGAATGA------------ 16605

Mus TGTATA------------AATAAGCATGTAAAAGTGCACTTAAAATGAATCTTTATT--- 77104

Gallus TGGGG------------------------------------AAAGTGCATTTTCA----- 48803

Anopheles ------------------------------------------------------------

Homo TGTTTGTTTATTATAAACAAAAAGCATGTGAAAGTGCACTTAAGATAGAGTTTTTATTAA 100851

Pan TGTTTGTTTATTATAAACAAAAAGCATGTGAAAGTGCACTTAAGATAGAGTTTTTATTAA 101622

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ----------ATTCCCGAGATTTTAAATAGACAATCCAAAGTCTCCCCTTC-TCTTGCCA 85798

Danio ---------------CAACATTTGA----------------------------------- 16615

Mus ----------ATTGCTGAGATTTTAA-TAGACAATCCAAAGTCTCCCCTTC-TGTTGCCG 77152

Gallus ----------ACTGAACAGCTTTAGAGTAGG----------------------------- 48824

Anopheles ------------------------------------------------------------

Homo TTACTTACTTATTACCTAGATTTTAAATAGACAATCCAAAGTCTCCCCTTCGTGTTGCCA 100911

Pan TTACTTACTTATTACCTAGATTTTAAATAGACAATCCAAAGTCTCCCCTTCGTGTTGCCA 101682

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TCATCTTGTTTAATCAACTATTTT-TCAAGGCACTCGATCAGTGTTGCAGCATAATAGAA 85857

Danio -----TTGTTTCA--AGTTATTCT-T---------------------------------- 16633

Mus TCATCTTGTTTAATCAACCATTTT-TCAAGGCACTCGATCAGTGTTGCAGCATAACAGAA 77211

Gallus -------GAGTGATGAAGTGTTTG-GGGGGGG-------------TGGGGGAAGATAGGA 48863

Anopheles ------------------------------------------------------------

Homo TCATCTTGTTGAATCAGCCATTTTATCGAGGCACGTGATCAGTGTTGCAACATAATGAAA 100971

Pan TCATCTTGTTGAATCAGCCATTTTATCGAGGCACGTGATCAGTGTTGCAACATAATGAAA 101742

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AGTCCAGCTACTGTGCCTTGTGTTATTTATTTACACAGTAAACAGGCCTGGAAATGAATG 85917

Danio ---------------------------------------------------AAATAAAT- 16641

Mus AGTACAGCTACTGTGCCTTGTGTTACTTATTTACACAGTTAGCAGGCCTGGAAATGAATG 77271

Gallus AGT-----------------TTTTGCTATATTATAAACAAAGCATG--TGGAAGTGCAC- 48903

Anopheles ------------------------------------------------------------

Homo AAGATGGCTACTGTGCCTTGTGTTACTTAATCATACAGTAAGCTGACCTGGAAATGAATG 101031

Pan AAGATGGCTACTGTGCCTTGTGTTACTTAATCATACAGTAAGCTGACCTGGAAATGAATG 101802

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GAACTAGTACTCCTGAGAATTAAATTGTATATCCTCCAAATTAAAATTTACTTCAAAAGT 85977

Danio ----------------------------------------------------TCAAAACT 16649

Mus GAACTAGTACTCCTGAGAAATAAATTGTATATCCCCCAAATTAAAATTTACTTCAAAGGT 77331

Gallus -----------------------------------TTAAAATGAAGTTTTATTCTTAATT 48928

Anopheles ------------------------------------------------------------

Homo AAACTATTACTCCTAAGAATTACATTGTATAGCCCCACAGATTAAATTTAATTAATTAAT 101091

Pan AAACTATTACTCCTAAGAATTACATTGTATAGCCCCACAGGTTAAATTTAATTAATTAAT 101862

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GT----------------TAAAGAATTCATGTCCTATATATAAAATACAAATAGGCTTAG 86021

Danio G-----------------------------------------AAAAACAAA--------- 16659

Mus GT----------------TAAAGATTTCATGTCCTATAT-TAAAGTACAAATAGGCTTAA 77374

Gallus G------------------------------------------------------CCTAT 48934

Anopheles ------------------------------------------------------------

Homo T----CAAAACATGTTAAACGTTACTTTCATGTACTATGGAAAAGTACAAGTAGGTTTAC 101147

Pan TAATTCAAAACATGTTAAACGTTACTTTCATGTACTATGGAAAAGTACAAGTAGGTTTAC 101922

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ATTGCTGGACATTTAATGTAG-----TTTCCCATCCCTAGTCTTTTATGTTTGTGATGTT 86076

Danio ------------------------------------------------------------

Mus ATTACTGGATATTTAATGTAG-----TTTCCCATCCCTAGTCTTCTATGTCTGTGATGTT 77429

Gallus TATGTTGACCTTTTAA----A-----TAGACAATCCAAAGTCTTCCCTACGTGTTATGTC 48985

Anopheles ------------------------------------------------------------

Homo ATTACTGATTTCCAGAAGTAAGTAGTTTCCCCTTTCCTAGTCTTCTGTGTATGTGATGTT 101207

Pan ATTACTGATTTCCAGAAGTAAGTAGTTTCCCCTTTCCTAGTCTTCTGTGTATGTGATGTT 101982

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AATT-------TCTTTTGTTGCATAACAAAATAAAAGAATTATGTATTTTTAACTAAGGA 86129

Danio ------------------------------------------------------------

Mus AATT-------TCTTTTGTTGCATAACAAAATAAAAGAATTATGTATTTTTAACTAAGGA 77482

Gallus ATCG-------CCATTTATTTAAT------------GAATCGT-TGTTCCTCCTTATCAA 49025

Anopheles ------------------------------------------------------------

Homo GTTAATT----TCTTTTATTGCATTATAAAATAAAAGGATTATGTATTTTTAACTAAGGT 101263

Pan GTTAATTACTTTCTTTTATTGCATTATGAAATAAAAGGATTATGTATTTTTAACTAAGGT 102042

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GAGACATACTGGTATATCATTTTACTACAAGCTACAGATATCCTGTTGAGCTTGTGCCTT 86189

Danio ------------------------------------------------------------

Mus GAGACATACTGGTATATCATTTTACTACAAGCTACAGATAACCTGTTGAGCTTGTGCCTT 77542

Gallus GGCACATGAT----CAGTGTTGCAACGTAATCTAAAGGGA-----TGGCTGCTGTATTTT 49076

Anopheles ------------------------------------------------------------

Homo GAGACAT--TGATATATCCTTTTGCTACAAGCTATAGCTAATGTGCTGAGCTTGTGCCTT 101321

Pan GAGACAT--TGATATATCCTTTTGCTACAAGCTATAGCTAATGTGCTGAGCTTGTGCCTT 102100

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GATTGTT------------------------TTCACAACTAGTACAAATCAACCTGATGT 86225

Danio ------------------------------------------------------------

Mus GATTGTT------------------------TTAACAACTAGTGCAAATCAACCTGATGA 77578

Gallus AATCTCA------------------------TCTAACGATAAGCAAAATTGAAAAAAATA 49112

Anopheles ------------------------------------------------------------

Homo GGTGATTGATTGATTGATTGACTGATTGTTTTAACTGATTACTGTAGATCAACCTGATGA 101381

Pan GGTGATTGATTGATT--------GATTGTTTTAACTGATTACTGTAGATCAACCTGATGA 102152

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TTTA---AATTGGCAGGGAATAATTAATTGTAGCTTTCAAATCATTGGAAGG---GGAAA 86279

Danio ------------------------------------------------------------

Mus TTTT---AATTGGCAGGGGATAA----TGGTAGCTTTCAAATCATTGGAAGG---GGAAA 77628

Gallus TTAA---ACCTAAAGGCCTACTTCATGTTGTACACTTCCAACCATTAAATAAACTGTTAG 49169

Anopheles ------------------------------------------------------------

Homo TTTGTTTGTTTGAAATTGGCAGGAAAAATGCAGCTTTCAAATCATTGGGGGGA--GAAAA 101439

Pan TTTGTTTGTTTGAAATTGGCAGGAAAAATGCAGCTTTCAAATCATTGGGGGGC--GAAAA 102210

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AGGATGTCTTTTAGGATTATTTTCCTTCTTGT--------AGTAGTTGAGGCAGAGCTAT 86331

Danio ------------------------------------------------------------

Mus AGGATGTCTT--AGGATTATTTTCTTTCTTGT--------AGTAGTTGAGACAGAGCTCT 77678

Gallus AAAGTAAGTAATGAGGTTATGTTCATCT---------------------GCTACAGAAAA 49208

Anopheles ------------------------------------------------------------

Homo AGGATGTCTTTCAGGATTATTTTAATTAATTTTTTTCATAATTGAGACAGAACTGTTTGT 101499

Pan AGGATGTCTTTCAGGATTATTTTAATTAATTTTTTTCATAATTGAGACAGAACTGTTTGT 102270

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TATTTACTGTAATGCTAAATGAAACAGTGG---------CTTAAATACTTTAATGGGAAA 86382

Danio ------------------------------------------------------------

Mus TATTTACTGTAATGCTAAATGAAACAGTGG---------CTTAAATATTTTAATGGGAAA 77729

Gallus TATTCAGTAGGTTTTTAATTTAA----------------CTCAACAAATCATATCGGAAA 49252

Anopheles ------------------------------------------------------------

Homo TATGTACCATAATGCTAAATAAAACTGTGGCACTTTTCACCATAATTTAATTTAGTGGAA 101559

Pan TATGTACCATAATGCTAAATAAAACTGTGGCACTTTTCACCATAATTTAATTTAGTGGAA 102330

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AAAGAACACAGTGCGTTCCATATTGTGATAAGGTAATGTGAGGTTTTTCC---------- 86432

Danio ------------------------------------------------------------

Mus AGAGAACACAGTGCGTTCCATATTGTGATAAGGTAACGTGAGGTTTTTTTGTTTTGTTTT 77789

Gallus TAAATCCTTTACCTTTTGTAGTCTGTGTT----TAATGTTAATTTCTC------------ 49296

Anopheles ------------------------------------------------------------

Homo AAAGAAGACAATGCTTTCCATATTGTGATAAGGTAACATGGGGTTTTTCT---------- 101609

Pan AAAGAAGACAATGCTTTCCATATTGTGATAAGGTAACATGGGGTTTTTCT---------- 102380

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ----------TTTTTTTTCTGAGCTAGCCTTTAGAACACTGTTGTGGTATGTATGCTACC 86482

Danio ------------------------------------------------------------

Mus GTTTTCTTTTTTTTTTTTCTGAGCTAGCCTTTAGAACACTGTTGTGGTATGTATGCTACC 77849

Gallus --------------------------------------CTGTTGCAATATAT-------- 49310

Anopheles ------------------------------------------------------------

Homo --------------------GGGCCAGCCTTTAGAACACTGTTAGGGTACATACGCTACC 101649

Pan --------------------GGGCCAGCCTTTAGAACACTGTTAGGGTACATACGCTACC 102420

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TTGATTATAGGACCCCCTAAATGTGACTATAGTCATCATAATGGGCATCTAGTCCACTGT 86542

Danio ------------------------------------------------------------

Mus TTGATTATAGGACCCCCTAAATGTGACTATAGTCATCTTAATGGGCATCTTGTCCACTGT 77909

Gallus --GACAAAGGGATTATGCATTTTTAAGCAAAGACGT----------AACTGGCATATCTC 49358

Anopheles ------------------------------------------------------------

Homo TTGATGAAAGGGACCTTCG--TGCAACTGTAGTCATCTTAAAGGCTTCTCATCCACTGTG 101707

Pan TTGATGAAAGGGACCTTCG--TGCAACTGTAGTCATCTTAAAGGCTTCTCATCCACTGTG 102478

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GCTTCTTATGTATTATGAAAGTGATAAGAAGACAAATTAAGTGGGTATATTTTATAAAAT 86602

Danio ------------------------------------------------------------

Mus GCTTCTTATGTATTATGAAAGTGATAAGAAGACAAATTAAGTGGGTATATTTTATAAAAT 77969

Gallus TTTTATAATACAAGCTACAGCTGATGTGCAGA---GCTGAGC------------------ 49397

Anopheles ------------------------------------------------------------

Homo CTTCTTAATGTGTAATTAAAGTGAGGAGAAATTAAATACTCTGAGGGCGTTTTATATAAT 101767

Pan CTTCTTAATGTGTAATTAAAGTGAGGAGAAATTAAATACTCTGAGGGCGTTTTATATAAT 102538

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AAATTCATGAAGAGATTTGTGTTCTTCAGTTCTCAAGTTTATTATCACTACAGTATTGAA 86662

Danio ------------------------------------------------------------

Mus AAATTCATG--------------------------------------------------- 77978

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo AAATTCGTGAAGA----------------------------------------------- 101780

Pan AAATTCGTGAAGAAATGTGTGCTCTTCAGTTCTCAAGTTTTTTTATTATGGTATTTATTA 102598

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GTAGTTGTGATACTATATCTGTGTGAAAGTTTTGAAATGGTAATATAGATTATCAAACAG 86722

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AAGTTCTACAATTGTAATAACGTATCCATATGACAAGTTTTAAAGTGGTAATTGAAATAG 102658

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AAGTAACATCAGTATATTTAAAAGAAAGTGAAAACAAATAAACCTAAAATGTTTTCAGAG 86782

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GTTATCAGATATAGAGTTGCTCACATCAAGTAGACTTTAAACAGAGTCAGAATGAACCTA 102718

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GTAAAAATACATTCTCACTTGCTTCCTAGTCAGTTTTTCTTGGCATGTTGCCACATTATT 86842

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan CCCTTAAAATTTTAGAGAAAAAAAATCATCGGTTGCACAGAATAGCTGCTCTAGCTTGCT 102778

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ATGGCTGCCTTTTCATCATTGCTTTTCTAGATTGTCATGGAACAATATTTCCGAGTTAAA 86902

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TAATTATGCCGGGCATGTTGTCACTCCTCTTAGTTTTGCTGCCTTTTCATTACTATTTAA 102838

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus AAAATACCTCTTGCTATAGTAGAACATTTCAAAATTACAGCATAAAAGCACAGTCTGGAG 86962

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TGGAATGTCCCTGAACAATAAGGAAGAGCAAAACATAGACATTTTGACTATAGTGGATAC 102898

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CAAAATTTTTCTGGAGACTTGGCAGCTGCAGCAAACAAATTGAGTGTCTGTACATATTGT 87022

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTCCTCTACCCCAAATGTTATGTTATAAAAGTACTTTTTTTTTGCCCAGGTACTCTATTA 102958

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GGTCTATAAGTTAATTGTGTGATCAAATTCATTTGTAATAACCTTACCTTTATTTGGAAG 87082

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TATATTTTGGTTTTCTTTGAATTAGACCTCAATCTCCAGGAAGCTCTGGAGGGAAAAAAA 103018

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus TACATCCCTGTGTAGGAACGTATATATCAAAAGAAACCTATAAATGAGGGTTCAGAGAAC 87142

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GGAACCATAAACTAAAGTAACTAACTGGTTTTCCAAATAAATGTAAACTTTTTTAACCTT 103078

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CGGTTCATATTGACATGTGGCACATGCATCACTGGGCAGCATCACTCCCTGTTTCCATAA 87202

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTATTATTATAGAACATTTCAAACATACATAAAACATGAAAACAGCCTGCAGCCAAACTT 103138

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GGTGGCTATGCTGAAATCAACCTCTTAAAGAATTATTTTCTCAAGAATCCATATAACCTA 87262

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTCTGGACCTTGGCAGCTCCAGCAAATGAGCTGGTCATCCTAACCCTGGTTTCCTGAGAC 103198

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus GAAAAAGAAGTGTTTTACTGAGGCTACTCTTTCTGATGTTCATCCTTTAACTTCTTATCC 87322

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AACTACTTTTGGGGATGCTTGCTTGTATAGGGAGATAGATAGATAGATAGATACATATCA 103258

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus CAAGACTTATTTTTATCCTTTCTACCCT-------------------------------- 87350

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AAAAGAAACTTGAAAAAGGCTTCGAACAGAACTTGCTGATGTTACTCATCCCTCCTCGGT 103318

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ACAGACATTCTGTTAGAACAGATGGTTGTAATGGGGCAGCATCACTCCCTATTCCCATTA 103378

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AAAACATGACCATTCTGAGATTTCAGGCCCCTTCGAGGAATTTTTCTCAAGAATTCCGTA 103438

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan CAAACTGTCAGAGGAAGAAATGTCGTCCCAAGACTAGTCCCTGTGTAGTCTTGATCCCTT 103498

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TACCCCTTTACCTGCTTACTGTAATTTTTTTCTCCGCCAGTGTCTAAGCGCCATCTGTAC 103558

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan CCCTCCCACCCTTCCATGAGCCACTGTATAATCCAAAAACACACCTTCCATTTGCTCCCT 103618

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan CACTTGTCTCCTTTTACCTCAACAGTGTTAGCGTGTAAAGAATTGCCTGGGGAGGGTAGA 103678

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GGGTTTTACAAGTACAGAGTCCCAAGTCTTTTCTCCCCTCCCTGTTAGTGGGTTGGCATT 103738

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TGTTAACAGGCACTGCAAGATTTTGATGCAGGTGTGGGGTAGATATCACTGTGAAAGGCT 103798

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ACTAATGCATGGTAGTTTCACCGAAAGTACAGTCTTCAAGGATCCTCATAATCTCCTCAT 103858

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TGCCAAAATCAGTAACATCTATAACCTTGACAACACCCTAGCTTGGGCTGTTGCTTCTCT 103918

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GGCTACTTGTTTTTCCATCCCAGTTTACCCAGATTTTAGATGGATACTCCTCCAATTCTG 103978

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan CTTAAAGTCCTTACCTGTTCTTGCCCAGTTCCCTCTAGTCAACCTCAGTCACTCCCAAAG 104038

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ATTCTTCCCCAATCCCATATTTTCTGCTCAGACCTCTGTCTCTGGGATTTCTTTGTTACC 104098

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TCAAAGTCAGTAGGCCTAAAAACAAAATTCTTCATCTTGCATCTCTATCGACCATTCTTT 104158

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GTTTCTTTTTAAGAAATGTAACCTTCACCCCAATCATCAAAATCTCTCATTCCTCAATTG 104218

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TCACAGGTTGTCACTTCTTTCCCCCTAAACCTCTCCCATCATTCCTTCCTTCTTTATACT 104278

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GCCCTTACAGGTCCTGATCCTCTGACTCACCCGGACATTCTTAGCAGCTGCCTAATTTCA 104338

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan CTCCCTGACTCTCATCTCCCTCTTCCAATCCTTTTCATTGTGCTAGAACACTATCTTGCT 104398

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AATTTTAATATCCTCTGCATTCAGTGCCTCCACAGATTGCCCCCTCACTGACCTTTCCAA 104458

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTTGGCCTTGTGTTACACACTTTTCTCCCTGCATTCCTACCCAGCATCTTCACTTGTCAT 104518

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ATTTCTCAAATACTCTTCATGACCAGATATTTCAAGTACCTCATCCATGAAGACTTCATC 104578

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AACCCCCAAAGTGCCTCCAATGCTTCCGTGGTAGCACAGCATAATGGGGTACATTTCTTA 104638

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GTTGAACAGTGAGGAGTCACTGGGATTCTTACGGAGTGTCTTAGGGTCTCCTCTTGATAC 104698

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TCTTTCCACATTTCAGTTAAGGAATTTTCTTACATTTTTTTTTCTTCTAATAACCTTTGC 104758

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan CTGGAGTGTAAGTAAATTCATGATAGAGACTCATTTAAAAAAAAAAAAACCATTTTGCCT 104818

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTCACATGTTGTTGCCTCCATCTTTCTGTTATCTTGTCAGTGTTGCCACCTAAATGATTG 104878

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AAAATGACCGAGCATGCAGTAGAATGTAGTGAAGTTTCCTATTTCATCCATTTTTTGCGT 104938

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AAGTGCATTGGTATCTGTATATCCATCTGCCCAAGCACCAGTTGTTGAAAAGACTATTAT 104998

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTCCCCATGAATGGTCCTGGTACCCTTGTCAAAGAACAGTTGACCATAAATATAAGACTT 105058

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TCTGGATTCTCAGTCTTACTCCATTGCCCTATATGTCTATCGTTATACCAGCACCGCACT 105118

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GTCTTGATAGCTGTAGCTTGGTAGTAAGTTTAGATTTGGGATGTGCAAGTCCTCCATTTT 105178

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTTTTTTTTTTTCCAAAATCATTTTGTCTGTTTTGGGTCCCTTGCATTGCATATGAATTT 105238

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTATATGATCATTGTGTCAATTCCTGCAAAACAGCTGGGATCTTGATAGGGATTTAGTTG 105298

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AATTGGTAGATAAATTTGAGAAATAACTGCTATTTTAATGGTGTTAGGTTTTCTGTTCCA 105358

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TGACTGTGGGATGTCTTTGCATTTGCTTAGGTCTTTATTTCAGTGATGTTTTAGAGATTT 105418

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan CAGTGTGCAAGTCTTGACGTCTTTAATTTTTTTGTAAGTATTTTACTCTTATTGATGCCA 105478

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan CTTTAATTATATGATTATTTTCTAATTTTTATTTTTGTATTCATCACTGGTGTTAGAAAT 105538

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AAATTTTTGTATATTGATTTTGTATATTGTAGCTTTTCTAAAATTCTTTTTTTGTCACTT 105598

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AGTATTTTTTGCATATGAGATCATGCATCTGTGAACAGAAATACTTTTACTTCTTCCTTT 105658

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan CCAGTCTAGATTCCTATTATTTCATTTTCTTGCCTTAGTGTGCTGGCTAGCACCTCCAGT 105718

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan ACAATATTGGATAGAAGTGACAAGAGCAGACATCTTTTTCTTGTTCCTGATTTTAAGGGG 105778

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AAAGCATTCAGTCTTTCACCATTGAGTATGATGTTAGCTAGCTGTGGGTTTGCTTCAAGT 105838

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TGAGGAAATTCTTTTATTAAACCTAGTTTACTGAGTGTTTTTTAATCAAAAAAAAAAAAA 105898

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AGGAGGGGCTGTGGGTTTTGTTAAATGCTTCTGTATCAAGATTTTCATATTGTTTTGTCC 105958

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTTATTAATATGTTGTATTAATGGACTTTTGTATATTGAATTAACTTTGCATTCCTGGGA 106018

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TAATCTCAGTTGTCCATGCTACATAAACCTTGTTCTATGCTGCTGGATTTGGTTTGCTAG 106078

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TATTTTGTTTAGAATGTTTGCATCTATATTCATAAGGAATATTGGTCTCTAGTTTTCATA 106138

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTATATATCTGTCCAGTTTGGGGATGAGAGTCATACTCCTGACAGAATGAATTGGGAGCT 106198

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TTCCCTGTTCTTAAACCTACTGAGGTATTTTTTAAGTGAACTACTTGGAGACCTTCACCT 106258

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GTGATCTTCAGATGCTGGGGGACACAGGGATGGTACCTGACTCTGAAAAGGGTCTCAGGG 106318

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TAAGACGTGTCTGAACTGGCCTGTGGCAGTTAACTAAAGAGTACTCCTACCAATAATGGA 106378

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GTCAAGATGTATGTTTCCCATAGGCCACGCTGGTCACTGAAAGAGATGGGCTATGAGCCG 106438

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TCTTGAAAACTACCCTGCACAAATGGACTGCCGGCCTGGAGCCAGGCACCCTGCAGCTGA 106498

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GTGCCATATAATGTTGAAGCTGTTGAGGGAGGAGAGGTTGGAAGCTGCCAGCTTAGAGAA 106558

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TCTCAGCTGTGGTTTCCAGCAGGGTGTATTCCAGGAAAGAAAGTCATTCCCCACCCTGGC 106618

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TCAAAGTAATAATTAACAGTGACTGGGTAAGGCAGGATCTTTTTTTCTAATTCCCTCCCC 106678

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TCCAGAAAGGGCAGCAACAGCTCTTGAATGGGAAAGAAGGTGGAGGGAGGAAAAGAAAAA 106738

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan CCAATTGCCCCAACACTGCTGTCTTTAAGCTTCCCACCCAAAGACCTCAGTAAGAGGCGG 106798

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan AATTATGTTTTCAATTAAGAGAGAGTTTGGCATCTTGGTGTTTCAAAGGTGTAGGCTTTT 106858

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan TAATACCTAGAGAAACTGATGATTTGTTGATTACCAAAAAGGGACCAGAAAAGCTACATA 106918

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus ------------------------------------------------------------

Danio ------------------------------------------------------------

Mus ------------------------------------------------------------

Gallus ------------------------------------------------------------

Anopheles ------------------------------------------------------------

Homo ------------------------------------------------------------

Pan GCCTGAGATTTCATCCCCAGAAAAACGAATCCAGAGAGCAGACTTGCAAAAAAAAAAAAA 106978

Drosophila ------------------------------------------------------------

Canis ------------------------------------------------------------

Bos ------------------------------------------------------------

Rattus -----

Danio -----

Mus -----

Gallus -----

Anopheles -----

Homo -----

Pan AAAAA 106983

Drosophila -----

Canis -----

Bos -----