

PIG 1 CAATTTTT-----AAACCAT-----  
 COW 1 TTTTTTTCGCCGTTTAAAAACCAT-----  
 FLY 1 -----TTC  
 CELEGANS 1 -----  
 FLOWER 1 -----  
 SOY 1 -----  
 HOMO 1 -----  
 MOUSE 1 AAA-----CCGACCGGAGACCAAGGAGCTCGAAGGAACAGTTCCTAGACGCATCAGTTC  
 RAT 1 -----  
 FROG 1 GAA-----  
 TROUT 1 -----  
 DANIO 1 CTG-----  
 1 1.....10.....20.....30.....40.....50.....

PIG 16 -----TTATTTTGTGTGT-----  
 COW 25 -----TTATTTTGTGTGT-----  
 FLY 4 TCCCATCTCTATGCCAAATT-----  
 CELEGANS 1 -----  
 FLOWER 1 -----AAATTAGAACTT-----  
 SOY 1 -----  
 HOMO 1 -----  
 MOUSE 55 CTACGTGAAAAGGATTGTTTTGGTTTTTGGTTTTTGGTTTTTGGTTTTTTCACGTGAG  
 RAT 1 -----  
 FROG 4 -----  
 TROUT 1 -----  
 DANIO 4 -----  
 61 61.....70.....80.....90.....100.....110.....

PIG 29 -----GAAATGGTTATTAAGTC-----  
 COW 38 -----GAAATGGTTATTAAGAA-----  
 FLY 24 -----GTTCAGTCA-----  
 CELEGANS 1 -----  
 FLOWER 13 -----CTTTACCCT-----  
 SOY 1 -----  
 HOMO 1 -----  
 MOUSE 115 AGCAAGACGGAGGAAATAATTTTGAAAAAGAACTTCACTCACTTTTGTCCACCAGGCCGG  
 RAT 1 -----  
 FROG 4 -----TTCGGCCGGTCCGG  
 TROUT 1 -----  
 DANIO 4 -----GTAACCGGTCCGG  
 121 121.....130.....140.....150.....160.....170.....

PIG 46 -----CT-TCTA  
 COW 55 -----ATCTGTA  
 FLY 33 -----TTCTCGCC-----GT  
 CELEGANS 1 -----  
 FLOWER 22 -----TTC--GA-----GA  
 SOY 1 -----  
 HOMO 1 -----  
 MOUSE 175 CCTCTAACTTGTGAATATCCTGTTTAAATCTCCAAGTGCTGAGCTACCACCAATCTCTA  
 RAT 1 -----  
 FROG 18 -----TTCTCGC-----CGG  
 TROUT 1 -----  
 DANIO 18 -----AATTCTCGC-----GGA  
 181 181.....190.....200.....210.....220.....230.....

PIG 52 TCA-----  
 COW 62 TAC-----  
 FLY 43 AAAAC-----  
 CELEGANS 1 -----  
 FLOWER 29 AAAAA-----  
 SOY 1 -----  
 HOMO 1 -----  
 MOUSE 235 GACAACCCCTTCCCTCCCGTCAGCCGTGCGTGCAGTCCCCAGATGTCCAGGGAACCGGCGCC  
 RAT 1 -----  
 FROG 28 AAGTAC-----TAGTTTCTTGCTGT-----GTAAT-----  
 TROUT 1 -----  
 DANIO 30 TAAAA-----CCTGCTGT-----GTAATCTCGCC  
 241 241.....250.....260.....270.....280.....290.....

PIG 55 -----GGTTAGGATTCCAATGAAAAG-----  
COW 65 -----GGTTAGGATTCCAATGAAAAGAAG-----  
FLY 48 -----A---AAAGGAAAACATCGCATAAACTCATTTTTT  
CELEGANS 1 -----  
FLOWER 34 -----G---AAAAGAAAAAAGAACTTGTTTTCTCTCTCA  
SOY 1 -----  
HOMO 1 -----GAAGACACCACCGGA-----A  
MOUSE 295 CGGGCGCGGAGCTACTTCCGGTGGGGA--AGAGAAAGGGAAGACACCAGCGGA-----A  
RAT 1 -----  
FROG 53 -----TAC-----CGGCAGGTTGCGGA-----A  
TROUT 1 -----  
DANIO 54 C-----CTAC-----AGTTACTAACCGA-----A  
301 301.....310.....320.....330.....340.....350.....

PIG 76 -----TGTTTCTCATGAACA-----  
COW 89 -----TGTTTTCGCAAACA-----  
FLY 79 GC----CT-----TAAAAACCGTA--CAATTGCAATCGAATAAG---A  
CELEGANS 1 -----  
FLOWER 65 GCAAGACA-----CATAAATCGTAATCCATTTTCTCTCAACTTTAGGAA  
SOY 1 -----  
HOMO 17 GCAAGGAAGGTGCTGTGTAATCATTAAAGGAGCGGAGGCTTTTGGAGCTGCTAAAA-----  
MOUSE 347 GCGGGAAAGGTGCTGTGTAATCACCGAGACGCGGAGGCACTTGCGGCTTCTAAAA-----  
RAT 1 -----GGGCTTGCGGCTTCTAAAA-----  
FROG 70 -----TTGTTTCGGTGTGAC-----AGCTCTTGTTGTTTGTGGATAGACA  
TROUT 1 -----  
DANIO 73 -----TTTGTTAGCAATCA-----AGCAAGCAG  
361 361.....370.....380.....390.....400.....410.....

PIG 90 -----TCTCT-----  
COW 103 -----CCGCC-----  
FLY 113 ---TGCCGGACTACC---TGGGCGA---CGACCAGCGCAAGGTGAAGC-ACGATGAGA  
CELEGANS 2 ---TGCCAGATCACC---TTGGAGA---TGACATGCGCAAAACTAAAA-AAGATGATA  
FLOWER 109 ---TCTCAAATCTCCGATTGGAAATCCGGCGACAATGGTGAGAGATATTGAAGATGAGA  
SOY 1 -----  
HOMO 72 ---TGCCGGATTACCTCGGT-----GCCGATCAGCGGAAGAC-CAAAGAGGATGAGA  
MOUSE 402 ---TGCCGGATTACCTAGGT-----GCGGACCAGCGGAAAAC-CAAAGAGGAGGAGA  
RAT 20 ---TGCCGGATTACCTAGGT-----GCAGACCAGCGGAAAAC-CAAAGAGGATGAGA  
FROG 110 CCATGCCTGACTATCTGGGA-----GCGGACCAGCGGAAGAC-CAAAGAAGAAGAAA  
TROUT 1 -----  
DANIO 96 TCATGCCTGATTATTTAGGA-----ACCGAACAACGCAAAGT-AAAAGAAGAGGAGA  
421 421.....430.....440.....450.....460.....470.....

PIG 95 -----AGG-----GCTCA-----GTTGTATGTCATGTATCGAGGAGTA  
COW 108 -----AGG-----GCTCA-----GTTGTATGTCATATAGCGGGGAGTA  
FLY 161 -----AGGAGGACAAGGAGA-TCAAGTCCCTC--GACGAAGGCGACATTGAGCTTCTAA  
CELEGANS 50 CCAAGGAGGAAGAGAAGAATT-TCCAGGCTCTC--GACGAAGGAGACATTGCTGTTTTGA  
FLOWER 166 TTA-----GAGACGAGAAGAAATCCTCGTCTCTTTGATGAAGATGATATCGCTCTCCTCA  
SOY 1 -----  
HOMO 120 -----AGGACGACAAGCCCATCCGAG---CTCTGGATGAGGGGGATATTGCCTTGTTGA  
MOUSE 450 -----AGGACGACAAGCCCATCCGAG---CTCTGGATGAAGGGGATATTGCCTTGCTGA  
RAT 68 -----AGGACGACAAGCCCATCCGAG---CTCTGGATGAAGGGGATATCGCCTTGTTGA  
FROG 161 -----AGGAGGACAAACCTATCCGAT---CTCTTGTGAAGGAGATATTGCATTGCTGA  
TROUT 1 -----GATAAACCTATCAGAT---CTTTGGATGAAGGAGACATTGCCTTATTGA  
DANIO 147 -----AAGAGGACAAACCCATTCGAG---CTTTGGATGAAGGAGATATTGCACTTCTAA  
481 481.....490.....500.....510.....520.....530.....

PIG 128 GCACTGAACTTGGCATAGGACTTAAT-----  
COW 141 GCACTGAACTTGGCATAGGACTTAAT-----  
FLY 212 AGACTTA--TGGGCAGAGCCAGTATCACAAATCCATCAAGAGCATCGAGGAGGACATTCA  
CELEGANS 107 AAAGATA--CGGGCAAGGTCCATACGCGGAACAGCTCAAACATTTGGACGCGGATATTGA  
FLOWER 220 AGACTTA--TGGGTTAGGGCCTTACTCTGCACCTATCAAGAAAGTGGAGAAAGAAATT--  
SOY 1 -----  
HOMO 171 AAACCTA--TGGTCAGAGCACTTACTCTAGGCAGATCAAGCAAGTTGAAGATGACATTC-  
MOUSE 501 AAACCTA--CGGCCAAAGTACTTATTCAGGCAGATCAAGCAGGTTGAAGATGACATTC-  
RAT 119 AAACCTA--TGGCCAGAGTACTTATTCAGGCAGATCAAGCAGGTTGAAGATGACATTC-  
FROG 212 AAACCTA--TGGACAAAGCACTTATTCAGGCAGATCAAGCAGGTTAGAGGATGACATAC-  
TROUT 47 AAACCTA--TGGCCAGAGCACTTACTCCAGACAGATTAAGCAAGTGAAGATGACATCC-  
DANIO 198 AAACCTA--TGGCCAAAGCACATATTCAGACAGATTAACAAGTGAAGATGATATTC-  
541 541.....550.....560.....570.....580.....590.....

PIG 154 -----  
COW 167 -----  
FLY 270 AAAGGCTGTG--AAGCAGGTGAACGAGCTGACTGGAATCAAGGAAAGCGACACGGGTCT  
CELEGANS 165 AACTGTCTG--AAGAAGGTGAACGAACTTTCTGGAGTGAAAGAATCAGACACCGGGTT  
FLOWER 276 -AAGGATCTCGCCAAGAAGATCAACGATCTATGTGGTATCAAGGAGTCTGATACTGGTTT  
SOY 1 -----  
HOMO 228 --AGCAACTTCTCAAGAAAATTAATGAGCTCACTGGTATTAAGAATCTGACACTGGCCT  
MOUSE 558 --ACAACCTTCTCAAAAAAATTAATGAGCTCACTGGTATTAAGAGTCTGACACTGGGTT  
RAT 176 --AGCAACTTCTTAAAAAATTAATGAGCTCACTGGTATCAAAGAGTCCGACACTGGGCT  
FROG 269 --AGCAACTGCTTAAGAAAATCAATGAGCTTACAGGTATTAAGGAGTCTGATACAGGACT  
TROUT 104 --AAAACCTGCTCAAGAAGATCAATGAACTAACCGGCATTAAGGAATCGGACACTGGCCT  
DANIO 255 --AGCAGTCTTGAAGAAAATAAATGAGCTGACAGGTATTAAGAGTCTGATACAGTCT  
601 601.....610.....620.....630.....640.....650.....

PIG 154 -----AACCTTA  
COW 167 -----GACCTTA  
FLY 327 GCGCCACCAGCGCTCTGGGATTTGGCCGCGACAAGCAGATCCTGCAAAACGAGCAACC  
CELEGANS 222 GGCTCCACCAGCTCTATGGGATATTGCTGCTGATAAACAAGCAATGCAGCAAGAACAGCC  
FLOWER 335 AGTCTCTCCAGTCAATGGGATCTTGTATCTGATAAGCAAATGATGCAAGAAGAGCAACC  
SOY 1 -----  
HOMO 286 GGCCCCACCAGCACTCTGGGATTTGGCTGCAGATAAGCAGACACTCCAGAGTGAACAGCC  
MOUSE 616 GGCACCTCCGGCCCTCTGGGATTTGGCTGCAGACAAAACAACTTCAGAGTGAACAGCC  
RAT 234 GGCCCCCTCAGCCCTCTGGGATTTGGCTGCAGACAAAACAGACACTTCAGAGTGAACAGCC  
FROG 327 TGCTCCTCCAGCACTTTGGGATTTGGCTGCAGATAAACAAGCAATGCAGAGTGAACAACC  
TROUT 162 GGCTCCCCCTGCACCTTTGGGATCTGGCTGCAGACAAAACAGACTCTGCAGAGCGAGCAGCC  
DANIO 313 GGCTCCTCCGCAGTATGGGATCTGGCAGCAGACAAGCAGACTCTACAGAGTGAACAGCC  
661 661.....670.....680.....690.....700.....710.....

PIG 161 TTTACAGCTTCCAAGA-----AATCCTT  
COW 174 TTTACAGCTTCCAAGA-----AATCCTT  
FLY 387 GCTGCAGGTTGCCGATGCACCAAGATCATCAACGCGGATTCGACGACCCCAAGTATAT  
CELEGANS 282 TCTCCAAGTTGCCAGATGCACAAAATTAATCACCAGCGACAAGCAGATCCGCGTTACTT  
FLOWER 395 TCTGCAGGTTGCCGAGATGCACAAAAGATTATAAGTCCAACACTGAAGACGCCAAATACGT  
SOY 1 -----  
HOMO 346 TTTACAGGTTGCCAGGTGTACAAAAGATAATCAATGCTGATTCGGAGGACCCAAAATACAT  
MOUSE 676 ATTACAGGTTGCCAAGATGTACGAAGATAATCAACGCTGATTCGGAGGACCCAAAATACAT  
RAT 294 GCTACAGGTTGCCAAGATGTACAAAAGATAATCAACGCGGATTCAGAGGACCCAAAATACAT  
FROG 387 ACTCCAAGTTGCCAAGATGTACAAAATAATCAATGCAGACTCAGAGGACCCAAAATACAT  
TROUT 222 ACTGCAGGTTGCCAAGATGCACAAAAGATCATCAATGCTGACTCTGAAGATCCAAAATACAT  
DANIO 373 TTTGCAGGTTGCCAGATGCACCAAGATCATCAACGCTGACTCTGAGGATCCAAAATATAT  
721 721.....730.....740.....750.....760.....770.....

PIG 184 C-----TCCGTAGCAATTTTTCG-----CCGTGCTCGGATGGCAA----  
COW 197 C-----TCAGTAGCAATTTTTCG-----CCGTGCTCGGATGGCAA----  
FLY 447 CATCAATGTTAAGCAGTTTCGCCAAGTTCGTGGTGGACCTAGCTGACTCGGTGGCCCCTAC  
CELEGANS 342 GATCAACGTAAAACAGTTTCGCTAAGTTTGTGTAGACCTTGTGATTCCGTTGCACCTAC  
FLOWER 455 CATAAATGTCAAACAATTTGCTAAGTTTGTGTGGACTTGGCGATAAAGTTTCTCCAC  
SOY 1 -----  
HOMO 406 TATCAACGTAAAACAGTTTCGCCAAGTTTGTGGTGGACCTTAGTGATCAGGTGGCACCTAC  
MOUSE 736 CATCAATGTGAAGCAGTTTCGCCAAGTTCGTGGTGGATCTCAGTGATCAGGTGGCACCCAC  
RAT 354 CATCAACGTGAAGCAGTTTCGCCAAGTTCGTGGTGGATCTCAGTGATCAGGTGGCACCTAC  
FROG 447 TATTAATGTAAAACAATTTGCTAAGTTTGTAGTAGACCTCAGTGACCAAGTTGCTCCTAC  
TROUT 282 CATCAATGTGAAGCAGTTTCGCCAAGTTTGTGGTGGACCTGAGTGACCAGGTGGCCCCAC  
DANIO 433 CATTAAATGTGAACAAGTTTCGCCAAGTTTGTGGTGGACCTGAGCGATCAGGTGCTCCGAC  
781 781.....790.....800.....810.....820.....830.....

PIG 219 -----ACATACCAGCTTCA-----  
COW 232 -----ACATACCAGCTTCT-----  
FLY 507 TGACATAGAAGAGGGAATGCGTGTGGGTGTGACCCGCAACAAGTACCAGATCCACATTCC  
CELEGANS 402 TGATATTGAGGAGGGCATGAGAGTAGGAGTAGACCGTAACAAGTATCAAATTCATCTTCC  
FLOWER 515 TGATATTGAGGAAGGCATGCGTGTGGAGTTGATCGGAATAAATATCAGATTCAGATTCC  
SOY 1 -----  
HOMO 466 TGACATTGAAGAAGGGATGAGAGTGGGCGTGGATAGAAAATAAATATCAAATTCACATTCC  
MOUSE 796 TGACATTGAAGAAGGGATGAGAGTGGGCGTGGACAGAAAATAAATACCAAATTCACATTCC  
RAT 414 TGACATTGAGGAAGGGATGAGAGTGGGCGTGGACAGAAAATAAATACCAAATTCACATTCC  
FROG 507 TGATATTGAAGAGGGTATGAGAGTTGGTGTGGACAGGAACAAATACCAGATTCACATCCC  
TROUT 342 TGACATAGAGGAGGGTATGAGAGTGGGCGTGGACAGAAAACAAGTACCAGATCCACATTCC  
DANIO 493 TGACATTGAAGAAGGAATGAGGTTGGCGTTGACAGGAATAAGTATCAGATCCACATTCC  
841 841.....850.....860.....870.....880.....890.....

PIG 233 -----GTGCAGACACTTCTGAT  
COW 246 -----GTGCAGACGCTTCTAAT  
FLY 567 GCTGCCTCCCAAGATTGATCCTACGGTTACCATGATGCAGGTTGAGGACAAGC--CGAC  
CELEGANS 462 GTTGCCCGCCAAAATTGATCCAACCGTCACAATGATGCAGGTTGAAGAAAAC--CAGAT  
FLOWER 575 TCTACCTCCCAAAATCGATCCTAGCGTGACCATGATGACTGTGGAAGAGAAAC--CTGAT  
SOY 1 -----  
HOMO 526 ATTGCCTCCTAAGATTGACCCAACAGTTACCATGATGCAGGTGGAAGAGAAAC--CTGAT  
MOUSE 856 ACTACCTCCTAAGATCGACCCAACAGTTACCATGATGCAGGTGAGGAAAAC--CCGAC  
RAT 474 ACTGCCTCCTAAGATTGACCCAACAGTTACCATGATGCAGGTGAGGAAAAC--CTGAT  
FROG 567 TCTCCCTCCAAAGATTGACCCACAGTAAACAATGATGCAGGTAGAGGAGAAAC--CTGAT  
TROUT 402 TCTGCCTCCCAAGATTGACCCACAGTCACTATGATGCAGGTGAGGAGAAGC--CTGAT  
DANIO 553 TCTGCCACCCAAAATCGATCCTACGGTCACTATGATGCAGGTAGAGGAGAAGC--CTGAT  
901 901.....910.....920.....930.....940.....950.....

PIG 250 CTCAGCACCCGTGCTATTTG-----GACAGAGTCGTGCTAACAATTCAAA---TCT  
COW 263 CTCAGCACAGTGCTATTTG-----GACACAGTCGTGCTAACAATTCAAA---TCT  
FLY 625 GTCACCTACAGCGATGTGGCGGGCTGCAAGGAACAA-----ATCGAAAAGCTGC  
CELEGANS 520 GTAACATAATTCGATGTGCGAGGCTGCAAGGATCAA-----ATTGAAAAGCTTC  
FLOWER 633 GTAACCTACAATGATGTTGGTGGATGCAAGGAGCAG-----ATTGAGAAGATGC  
SOY 1 GTAACATAAATGATGTTGGCGGTTGTAAGGAGCAG-----ATTGAAAAGATGC  
HOMO 584 GTCACATACAGTGATGTTGGTGGCTGTAAGGAACAG-----ATTGAGAACTGC  
MOUSE 914 GTCACATACAGTGATGTTGGTGGCTGTAAGGAACAG-----ATTGAGAAATGC  
RAT 532 GTCACATACAGTGACGTTGGTGGCTGTAAGGAACAG-----ATTGAGAAATGC  
FROG 625 GTGACATATAGCGATGTTGGAGGTTGCAAGGAACAA-----ATAGAAAAGCTGC  
TROUT 460 GTGACCTACAGTGACGTTGGTGGATGTAAGGAGCAG-----ATTGAGAAGCTCA  
DANIO 611 GTGACCTACAGCGATGTTGGAGGCTGCAAGGAGCAG-----ATCGAGAAGCTCA  
961 961.....970.....980.....990.....1000.....1010.....

PIG 298 GATATCTCTTTCAACACTCATTGA-----ACGGGCATGGATCTTAAAAATGTGA  
COW 311 GATATCTCTTTCAACACTCATTGA-----ACGGGCATGAATCTTAAAAATGTGA  
FLY 674 GCGAGGTGGTGGAGACGCCACTGCTGCACCCGGAAAAGTTCGTCAATCTGGTATTGAGC  
CELEGANS 569 GAGAAGTTGTCGAGACTCCACTTCTTCAATCCGAGCGTTACGTAAATCTCGGAATCGAGC  
FLOWER 682 GAGAGGTGTTGAACCTGCCAATGCTTCATCCAGAGAAAATTTGTGAAGCTTGGAATAGATC  
SOY 50 GAGAAGTTGTTGAACCTCCCATGCTTCATCCAGAGAAAATTTGTCAAGCTTGGGATTGATC  
HOMO 633 GAGAAGTAGTTGAAACCCCTACTTTCATCCAGAGAGGTTTGTGAACCTTGGCATTGAGC  
MOUSE 963 GAGAAGTAGTTGAAACCCCTCTGCTCCATCCAGAGAGGTTTGTTAACCTTGGAATCGAGC  
RAT 581 GGAAGTGGTTGAAACCCCTCTACTTCATCCAGAGAGGTTTGTTAACCTTGGAATCGAGC  
FROG 674 GGAAGTTGTTGAAACCCCTCTGCTTCATCCGAGAGGTTTGTTAACCTTGGTATTGAGC  
TROUT 509 GGAAGTTGTTGAGACCCCTCTGCTCCATCCGAGAGGTTTGTCAACCTGGGTATTGAGC  
DANIO 660 GAGAGGTGGTCGAGACTCCTCTGCTCCATCCTGAGCGCTTTGTCAACCTGGGTATTGAGC  
1021 1021.....1030.....1040.....1050.....1060.....1070.....

PIG 347 GTCCGA-----CCCTCTAGATCAGGTAAGCTAAACTCAATCTTCC  
COW 360 GTCCGA-----CCCTCTAGATCAGGTAAGCTAAACTCAATCTTCC  
FLY 734 CGCCCAAAGGTGTGCTACTGTTTGGCCACCAGGAAACGG---GAAAGACCCTGTGTGCC  
CELEGANS 629 CACCAAAGGAGTTTGCTCTACGGTCCACCAGGAACAG---GAAAGACGCTTTGCGCT  
FLOWER 742 CTCCCAAAGGGTGTCTCTGCTACGGACCTCCTGGTACTG---GTAAACTCTTCTGGCT  
SOY 110 CTCCCAAAGGGTGTCTTTGTTATGGCCCCAGGAACAG---GAAAAACACTTTTAGCC  
HOMO 693 CTCCCAAAGGGCGTGTGCTCTTTGGTCCACCAGGTACAG---GCAAGACACTCTGTGCG  
MOUSE 1023 CTCCCAAAGGGTGTACTGCTGTTTGGGCCACCAGGCACAG---GCAAGACACTCTGTGCT  
RAT 641 CTCCCAAAGGGTGTGTTGTTATTTGGCCACCAGGCACAG---GCAAGACCCTCTGTGCC  
FROG 734 CTCCCAAAGGAGTACTGCTGTTTGGACCTCCTGGGACTG---GCAAAACTCTGTGTGCA  
TROUT 569 CCCCAGAGGGGGTCTGCTGTTCCGGCCACCCTGGTACAG---GTAAACCTGTGTGCC  
DANIO 720 CTCCCAAAGGGTGTGTTGTTTCCGGCCCCCTGGAACAG---GAAAAACCTGTGTGCC  
1081 1081.....1090.....1100.....1110.....1120.....1130.....

PIG 387 TGTCCAGTCTCC-----CTGGCCTCATCAGCGCT-----  
COW 400 TGTCCAGTCTCC-----CTGGCCTCATGAGTGCT-----  
FLY 790 CGCGCGTGTGCCAACCAGCAGGACGCTTGCTTTATCGCGTTCATGGCTCTGAGCTGGTG  
CELEGANS 685 CGTGCCGTGTCGAATCGAACAGATGCTTGCTTCATTCGTGTTATTGGATCAGAGTTGGTT  
FLOWER 798 AGAGCTGTGGCCAACAGAACCGATGCTTGCTTTATCAGGGTTATTGGAAGTGAGCTGTT  
SOY 166 AGGCTGTGGCTAATAGGACTGATGCTTGTTTATAAGGGTTATTGGAAGTGAGCTAGTT  
HOMO 749 CGGGCAGTGTCTAATCGGACTGATGCTTGCTTCATTCGAGTTATTGGATCTGAGCTTGTA  
MOUSE 1079 AGGGCAGTGTGCCAATCGGACTGATGCTTGCTTCATTCGAGTTATTGGGTCTGAGCTCGTA  
RAT 697 AGGGCAGTGTGCCAATCGGACTGATGCTTGCTTCATCCAGTTATTGGGTCTGAGCTTGTA  
FROG 790 CGTGCTGTAGCCAACAGAACAGATGCTTGCTTCATCCGTGTCATGGATCTGAACCTGTG  
TROUT 625 AGAGCCGTGGCCAACCAGCAGGATGCTTGCTTCATCAGGGTTCATCGGCTCAGAGCTGGTC  
DANIO 776 CGAGCTGTGGCTAAACGTACAGACGCTTGCTTCATCAGAGTTCATCGGGTCTGAACTGGTC  
1141 1141.....1150.....1160.....1170.....1180.....1190.....

PIG 416 -----GGGTCCAGAGTGT CAGGT---CTGTTTGTGGCCATTAGCA  
 COW 429 -----GGGTCCAGAGTGT CAGGT---CTGTTTGTAGCCATCAGCA  
 FLY 850 CAAAAGTACGTGGGTGAGGGCGCTCG-TATGGTGCGC-GAGCTCTTCGAAATGGCGGTT  
 CELEGANS 745 CAGAAATATGTTCGGAGAAGGAGCTCG-AATGGTTCGT-GAGTTGTTTCGAAATGGCTCGTA  
 FLOWER 858 CAGAAGTATGTTGGTGAAGGAGCTAG-GATGGTTCGT-GAACTGTTTCAGATGGCACGGT  
 SOY 226 CAGAAATATGTTGGTGAAGGGGCTAG-GATGGTTCGT-GAACTATTTTCAGATGGCTCGTT  
 HOMO 809 CAGAAATACGTTCGGTGAAGGGGCTCGA-ATGGTTCGT-GAACTCTTTGAAATGGCCAGAA  
 MOUSE 1139 CAGAAATACGTTCGGCGAGGGAGCTCGA-ATGGTTCGT-GAGCTTTTTGAAATGGCCAGGA  
 RAT 757 CAGAAGTACGTTCGGTGAAGGGGCTCGA-ATGGTTCGT-GAGCTTTTTGAAATGGCCAGGA  
 FROG 850 CAGAAATATGTGGGAGAGGGGCCCCGT-ATGGTGCGT-GAACTCTTCGAGATGGCCAGAA  
 TROUT 685 CAGAAATATGTGGGAGAGG-----  
 DANIO 836 CAGAAGTATGTTGGAGAGGGTGC CAGGGATGGTTCGTTGAACTCTT-----  
 1201 1201.....1210.....1220.....1230.....1240.....1250.....

PIG 453 C-----TTTA  
 COW 466 C-----TTTA  
 FLY 908 CAAAAAAGGCTTGTCTCATCTTCTTCGACGAAATTGATGCTATCGGTGGTGCCCGATTTCG  
 CELEGANS 803 CCAAGAAGGCATGCTTATCTTCTTTGATGAAATTGATGCTGTTGGAGGTGCTCGTTTTG  
 FLOWER 916 CCAAGAAAGCCTGCATTGTGTTCTTTGACGAAAGTTGATGCCATTGGTGGTGCAAGATTTCG  
 SOY 284 CAAAGAAAGCATGCATTGTGTTTTTTGATGAAAGTTGATGCAATTGGAGGTGCACGATTTG  
 HOMO 867 CAAAAAAGCCTGCCTTATCTTCTTTGATGAAATTGATGCTATTGGAGGGCTCGTTTTG  
 MOUSE 1197 CAAAAAAGCCTGCCTTATTTTCTTTGATGAAATTGATGCCATTGGAGGGGCTCGGTTTG  
 RAT 815 CAAAAAAGCCTGCCTTATTTTCTTTGATGAAATTGATGCCATTGGAGGGGCTCGGTTTG  
 FROG 908 CAAAAAAGCATGCTTATTTTCTTTGATGAAATTGACGCCATTGGTGGGGCTCGTTTTG  
 TROUT -----  
 DANIO 882 -----  
 1261 1261.....1270.....1280.....1290.....1300.....1310.....

PIG 458 ATGTTG-----  
 COW 471 ATGTTG-----  
 FLY 968 ACGATGGGCGCGGCGGACCAACGAGGTGCAGCGCACCATGTTGGAGCTGATTAACCAAC  
 CELEGANS 863 ATGATGGACAAGGAGGTGACAATGAAGTTCAACGTACTATGCTCGAGTTGATTAACCAAC  
 FLOWER 976 ATGATGGTGTGGTGGTGATAACGAAGTCCAACGTACTATGCTTGAGATTGTGAATCAGC  
 SOY 344 ATGATGGCGTTGGTGGTGACAATGAGGTTTCAGCGCACCATGCTTGAAATTGTGAATCAGC  
 HOMO 927 ATGATGGTGCTGGAGGTGACAATGAAGTGCAGAGAACAATGTTGGAAGTGCATCAATCAGC  
 MOUSE 1257 ACGATGGCGCTGGGGGTGACAATGAAGTGCAGAGAACCATGCTGGAGCTCATCAATCAGC  
 RAT 875 ACGATGGCGCTGGGGGTGACAATGAGGTTGCAGAGGACCATGTTGGAGCTCATCAATCAGC  
 FROG 968 ATGATGGAGCTGGGGGTGATAATGAAGTTTCAGCGCACTATGCTAGAACTAATCAACCAGT  
 TROUT -----  
 DANIO 882 ---TTGGAGATGGGCGAGA-----  
 1321 1321.....1330.....1340.....1350.....1360.....1370.....

PIG 464 -----CCTCGAGGA-----TCAA  
 COW 477 -----CCTCGAGGA-----TCAA  
 FLY 1028 TGGATGGCTTCGATCCGCGCGGAAATATCAAGGTGCTGATGGCCACCAACCGACCCGACA  
 CELEGANS 923 TTGACGGATTTCGATCCACGTGGAAACATCAAGGTGCTTATGGCAACAAACAGACCCGACA  
 FLOWER 1036 TTGATGGGTTTTCGACGCACGTGGTAACATCAAGGTTCTTATGGCAACAAACAGGCCTGACA  
 SOY 404 TTGATGGGTTTTCGATGCTCGGGGAAACATCAAAGTTTTGATGGCGACTAATAGGCCTGACA  
 HOMO 987 TTGATGGTTTTGATCCTCGAGGCAATATTAAGTGTGCTGATGGCCACTAACAGACCTGATA  
 MOUSE 1317 TGGATGGCTTTGATCCTCGCGGCAACATCAAGGTGCTCATGGCCACTAACCGCCCTGACA  
 RAT 935 TGGATGGCTTTGATCCTCGGGCAACATCAAAGTGTGCTCATGGCCACTAACCGACCTGATA  
 FROG 1028 TGGATGGCTTTGATCCAGAGGAAACATTAAGTGTTAATGGCCACTAACAGACCCGACA  
 TROUT -----  
 DANIO 898 -----  
 1381 1381.....1390.....1400.....1410.....1420.....1430.....

PIG 478 CCC---GTCCAGCT-----GGTTGATCAATT-----  
 COW 491 CCC---ATCCAGCT-----GATTGATCAGTT-----  
 FLY 1088 CGTTGGATCCGCGCTCATGCGTCCCGGTGCTGACCGAAAGGTGGAGTTCGGCCTGC  
 CELEGANS 983 CTCTCGATCCCGCTCTCATGAGACCTGGTTCGATTGGATCGTAAAGTTCGAATTCGCTCTTC  
 FLOWER 1096 CACTAGACCCAGCTCTTTTACGTCCTGAGCAGCTTTGACCGTAAAGTTGAGTTTGGTCTAC  
 SOY 464 CTCTAGATCCAGCACTACTGCGGCTGAGCGATTGGACCGTAAAGTTGAGTATGGCCTTC  
 HOMO 1047 CTTTGGATCCAGCACTGATGAGGCCAGGGAGATTGGATAGAAAAATTGAATTTAGCTTGC  
 MOUSE 1377 CTCTGGACCCAGCGCTCATGAGACCGGGGAGGCTGGACAGGAAAGATTGAGTTCAGCTTAC  
 RAT 995 CTCTGGACCCAGCGCTGATGAGGCCAGGGAGGCTGGACAGAAAGATTGAGTTCAGCTTAC  
 FROG 1088 CTTTGGATCCAGCTCTTATGAGGCCTGGAAGACTGGACAGAAAAATTGAATTTAGTTTGC  
 TROUT -----  
 DANIO 898 -----  
 1441 1441.....1450.....1460.....1470.....1480.....1490.....

PIG 501 ----CCAACATCGTTCTCTGCACTTCATTGTACCCCCAGCACCCATCA-----  
 COW 514 ----CCAACATGGTCTCTGCACTTCATTGTACCCCCAGCACCCATCG-----  
 FLY 1148 CTGACCAGGACGGTCGCTCGCACATCTTTAAGATTAC-GCCCGCTCCATGTCCGTGGAG  
 CELEGANS 1043 CAGACCTTGAGGTCGTGCTCACATTTCAAGATTAC-GCAAAACAAATGAGCGTTGAA  
 FLOWER 1156 CTGACCTGGAGAGCAGAACAAGATCTTCAAGATTAC-ACAAGAACCATGAACTGCGAA  
 SOY 524 CTGACTTAGAGAGTAGGACGCAGATATTCAAGATACAC-ACAAGAACCATGAACTGCGAA  
 HOMO 1107 CCGATCTAGAGGGTCGGACCCACATATTTAAGATTAC-GCTCGTTCAATGAGTGTGAA  
 MOUSE 1437 CTGACTTAGAGGGTCGAACGCACATCTTTAAGATTAC-GCTCGTCAATGAGTGTGAA  
 RAT 1055 CTGACTTAGAGGGTCGAACGCACATCTTTAAGATTAC-GCTCGTCAATGAGTGTGAA  
 FROG 1148 CAGATCTAGAGGGCCGTACACACATATTTAAGATTAC-GCACGTTCTATGAGTGTGAG  
 TROUT -----  
 DANIO 898 -----  
 1501 1501.....1510.....1520.....1530.....1540.....1550.....

PIG 545 -----T  
 COW 558 -----T  
 FLY 1207 CGAGATATTCGCTTCGATCTGCTGGCGCGTCTATGTCCAACTCGACTGGTGTGAGATC  
 CELEGANS 1102 AGAGATATTCGTTATGATTTACTTGCTCGTCTGTGCCCAAACAGTACAGGAGCCGAAATT  
 FLOWER 1215 AGAGACATCCGTTTCGAACTCCTTGCTCGCCTTCGCCCAAACCAACGGGAGCTGATATT  
 SOY 583 AGGGATATTCGATGTGAACTTCTGGCTCGGCT-----  
 HOMO 1166 AGAGATATCAGATTTGAACTGTTAGCACGACTGTGTCCAAATAGCACTGGTGTGAGATT  
 MOUSE 1496 AGAGACATTCGATTTGAGCTGTTGGCCCGCCTGTGTCCAAACAGTACTGGAGCGGAGATT  
 RAT 1114 AGAGACATCCGATTTGAGCTACTAGCCCGCCTGTGTCCAAACAGTACTGGAGCGGAGATT  
 FROG 1207 AGGGATATAAGATTTGAACTTCTGGCTCGGCTATGTCTAACAGTACAGGAGCAGAAATT  
 TROUT -----  
 DANIO 898 -----  
 1561 1561.....1570.....1580.....1590.....1600.....1610.....

PIG 546 CAAAACG-----GGCCCTCCAATAGCATCGATTTTCATCA---AAGAAGAT-----A  
 COW 559 CAAAACG-----AGCCCTCCAATAGCATCAATTTTCATCA---AAAAAGAT-----A  
 FLY 1267 CGGTCAGTATGCACGGAAGCGGGCATGTTCCGCAATTCGGGCGCGTCGCAAGGTGGCCACA  
 CELEGANS 1162 CGCTCAGTCTGCACCGAAGCTGGAATGTTTGAATTCGTGCTAGAAGAAAGGTGGCAACT  
 FLOWER 1275 CGAAGTGTATGCACCTGAAGCAGGAATGTACGCAATCAGAGCTAGGAGAAAGACTGTGACT  
 SOY 615 -----  
 HOMO 1226 AGAAGCGTCTGCACAGAGGCTGGTATGTTTGCATCAGAGCACGGCGAAAAATTGCTACC  
 MOUSE 1556 AGAAGTGTTTGCACAGAAGCTGGTATGTTTGAATCCGAGCACGGAGAAAAATTGCTACA  
 RAT 1174 AGAAGCGTTCGCACAGAGGCTGGTATGTTTGAATCCGAGCCCGGAGAAAGATTGCTACA  
 FROG 1267 CGTAGCGTGTGCACGGAGGCTGGAATGTTTGTATCCGAGCCCGCCGAAAGTTGCAACG  
 TROUT -----  
 DANIO 898 -----  
 1621 1621.....1630.....1640.....1650.....1660.....1670.....

PIG 590 AGGCAGGCTTTCTTGG-----TTCTGG-CC  
 COW 603 AGGCAGGCTTTCTTGG-----TTCTGGGCC  
 FLY 1327 GAGAAGGATTTCTCGAAGCCGTCAAGAAGGTTATCAAGAGCTACGCCAAGTTCAGCGCC  
 CELEGANS 1222 GAAAAAGATTTCTTGAAGCTATCAATAAGGTTGTCAAGGGATATGCCAAATTCAGCGCC  
 FLOWER 1335 GAGAAAGACTTTCTAGACGCAGTGAACAAAGTCATTAAGGTTACCAAAGTTCAGTGCC  
 SOY 615 -----  
 HOMO 1286 GAGAAGGATTTCTTGAAGCTGTAATAAGGTCATTAAGTCTTATGCCAAATTCAGTGCT  
 MOUSE 1616 GAGAAGGACTTCTTAGAAGCTGTAATAAGGTCATCAAGTCTTACGCCAAATTCAGCGCT  
 RAT 1234 GAGAAGGACTTCTTAGAAGCTGTAATAAGGTCATCAAGTCTGATGCCAAATTTAGTGCT  
 FROG 1327 GAGAAAGATTTCTTGAAGCCGTAACAAGGTCATAAATCGTATGCAAAATTCAGCGCT  
 TROUT -----  
 DANIO 898 -----  
 1681 1681.....1690.....1700.....1710.....1720.....1730.....

PIG 614 ATTTCAA-----GAGCTCTCGAACCA-----  
 COW 628 ATTTCAA-----AGAGCTCTCGAAACA-----  
 FLY 1387 ACTCCACGCTACATG-----ACC-----  
 CELEGANS 1282 ACTCCAAGATATCTG-----ACA-----  
 FLOWER 1395 ACTCCCAAGTATATGGTCTACAATTAGAGAGATTGAGACAGATAGAAGAACTCCGAAA--  
 SOY 615 -----  
 HOMO 1346 ACTCCTCGTTACATGACATACT-----GA-----ACCCTGAAGG  
 MOUSE 1676 ACTCCCGCTACATGACATACT-----GA-----GCCCCAG-GG  
 RAT 1294 ACTCCCGCTACATGACATACT-----GA-----GCCACAGAGG  
 FROG 1387 ACCCAAGATACATGACTTACACT-----AATTGTAAC--ATTACAGATGCAGCAAATG  
 TROUT -----  
 DANIO 898 -----  
 1741 1741.....1750.....1760.....1770.....1780.....1790.....

PIG 636 -----TTCGAGCCCCCTCACCAA-CATA-----C-----  
 COW 651 -----TTCGAGCCCCCTCAGCAA-CATA-----CTTCTGTACAA  
 FLY 1405 ---TACAAC TAAGTTA-----CATTTATTGGCACTATTCTGTATC---CTCTGCAA  
 CELEGANS 1300 ---CATAATT-----  
 FLOWER 1453 ---TAAAAC TCCGAAA-----CACTCTTTGTTCTTTGTTTGTGTCTCTTCCCTTCAA  
 SOY 615 -----  
 HOMO 1383 CTTTCAAGTGAAAAC TTTAAATTGGAATCCTAACCT----TATATA-----GA  
 MOUSE 1712 CTCTGAGTGAAAGAAC TTTCTGTGCTTTTGTA-----A  
 RAT 1331 CTTTGACTGAAGGAAC TTTCTGTGCGTTTATA-----A  
 FROG 1440 CTTT-----CTGTTTTTGGCACCATAATCTGTAGTGTGTG-----GG  
 TROUT -----  
 DANIO 898 -----  
 1801 1801.....1810.....1820.....1830.....1840.....1850.....

PIG -----  
 COW 684 ---GTT CAGATCCA-----ATAACTCGAA-----  
 FLY 1450 ACTGTAACTACTGCAGCTGG---CAATTTATTAAAT-----AAAG-----  
 CELEGANS 1307 -----  
 FLOWER 1502 GCTCTTTTGTAGTACTTGT TTTCACTTATTCCAG-----TAACTC---GGGTTTAT  
 SOY 615 -----  
 HOMO 1427 CTTGTTAATAACCAAT----TCATAAACAAATAAATGGCTTCAAATTTGTATGCTTTTTT  
 MOUSE 1745 CTTGTT---GCCACC---GCACAA--AAATAAAAGATTTAAA-----  
 RAT 1364 CTTGTT---ACCGCC---TCACAA--AAATAAAAGACTTAAAAACTGT-----  
 FROG 1477 ATTATAAAT-----AAATGAATAAAACGAAAAAAAA-----  
 TROUT -----  
 DANIO 898 -----  
 1861 1861.....1870.....1880.....1890.....1900.....1910.....

PIG -----  
 COW 705 -----TGAAGCAAGCA----TCAGTCTATT-----  
 FLY 1486 CGAAATCTATACCT-----CCACCAACTGAAA-----A  
 CELEGANS 1307 -----  
 FLOWER 1552 CTTCTTCAATGTCT-----ACTACTTTTGGAT  
 SOY 615 -----  
 HOMO 1483 CCATATCTCTTCTTGTAAATATAATAAAAGGTGATTTCTAATGTTAAAAAAAAAAAAAAAA  
 MOUSE -----  
 RAT -----  
 FROG 1508 -----AAAACAAAAAA-----AAAAAAAAAAACCGAA  
 TROUT -----  
 DANIO 898 -----  
 1921 1921.....1930.....1940.....1950.....1960.....1970.....

PIG ---  
 COW ---  
 FLY 1513 --A  
 CELEGANS 1308 --A  
 FLOWER 1579 TCA  
 SOY 615 --G  
 HOMO 1543 AAA  
 MOUSE ---  
 RAT ---  
 FROG 1535 TTC  
 TROUT ---  
 DANIO 898 --A  
 1981 ...