

1. BnPAL

AtPAL (1) -----
BnPAL1-1 (1) -----AACAACTCAAATTCCTTAAAACAACAAAAATAATAT
BnPAL1-2 (1) -----AGGACCAAACCTCTAAAACAACAAAAATATATATTA
BnPAL2-1 (1) AGGAACACAAAA-CCAAACTCCTTACCAACATTTCAA-AAGCTCTC--CTCTCTTTCA
BnPAL2-2 (1) AGGAACACAAACTCCAAATCACCTCACCTACAATTCAAGAAGCTCTCTCTATCTCGCT
BrPAL-1 (1) -----
BrPAL-2 (1) -----
BrPAL-3 (1) -----
BrPAL-4 (1) -----
BoPAL-1 (1) -----
BoPAL-2 (1) -----
BoPAL-3 (1) -----
BjPAL (1) -----

AtPAL (1) -----
BnPAL1-1 (37) AAAAGATCTCTCTAGCTATAATCTTCTCCTTTTAAATTTTAAATTCATAATCCCGATATTG
BnPAL1-2 (39) GACATCTCTCACCTTAGAGATCCCTCCATAATCTCCTACATTTTAAATTAACCTCAATATCC
BnPAL2-1 (56) TCCTTACCAACAATTCAAAGA-TCTGTTCC-TATTTATCAAACACTAAC-TCAAAAAC
BnPAL2-2 (61) TCCTTACCTTTTAAATCAAAGAATCTGATCCCTATATATTAACAGAAAGGTCAAATAC
BrPAL-1 (1) -----
BrPAL-2 (1) -----
BrPAL-3 (1) -----
BrPAL-4 (1) -----
BoPAL-1 (1) -----
BoPAL-2 (1) -----
BoPAL-3 (1) -----
BjPAL (1) -----

AtPAL (1) --ATGGA---GATTAACGGGGCACACAAGCAACGGAGGAGGAGTGGACGCTATGTTAT
BnPAL1-1 (97) TAATGGA---GGTTAACGGATTA--TCAC---ACGGAGGAGAAGTCGACGCTATGTTAT
BnPAL1-2 (99) AAATGGA---GATTAACGGATCA--TCAT---ACA-----AAGTCGACGCTATGTTAT
BnPAL2-1 (113) CAATGGATCAGATCAACGGATCAGTTCACCAAAACGGC--AAAA-CCGAAGCCATGTTGT
BnPAL2-2 (121) CTATGGATCAGACTAACGGTTCAGTTCACCAGAACGGC--AAGA-TCGAAGCCATGTTGT
BrPAL-1 (1) --ATGGA---GGTTAACGGATTA--TCAC---ACGGAGGAGAAGTCGACGCTATGTTAT
BrPAL-2 (1) --ATGGA---GGTTAACGGATTA--TCAC---ACGGAGGAGAAGTCGACGCTATGTTAT
BrPAL-3 (1) -----
BrPAL-4 (1) --ATGGA---GGTTAACGGATTA--TCAC---ACGGAGGAGAAGTCGACGCTATGTTAT
BoPAL-1 (1) --ATGGATCAGACTAACGGTTCAGTTCACCAGAACGGC--AAGA-TCGAAGCCATGTTGT
BoPAL-2 (1) --ATGGA---GATTAACGGATCA--TCAT---ACA-----AAGTCGACGCTATGTTAT
BoPAL-3 (1) --ATGGA---GGTTAACGGATTA--TCCC---ACGGAGGAGAAGTCGACGCTATGTTAT
BjPAL (1) -----

AtPAL (56) ---GCGGCGGAGACATCAAGACAAGAACAATGGTGATCAACGCGGAGGATCCTCTCAACT
BnPAL1-1 (148) ---GCGGCGGAGAGATCAAGAAGAATGCCACGGTGGTT---GGGGCTGATCCTCTCAACT
BnPAL1-2 (144) ---GCGGCGGAGAGACCAAGAA---TGTCACGGTGGCT---GCGGCGGATCCTCTGAACT
BnPAL2-1 (170) TGTGCGGCGGACTAGAGAAGACTAAAAGTGACGGTG-----GCGGCGGATCCGTTGAATT
BnPAL2-2 (178) ---GCGGTGGAGTAGAGAAGACAAGAAGTGGCTGTG-----GCGGCGGATCCGTTGAACT
BrPAL-1 (50) ---GCGGCGGAGAGATCAAGAAGAATGCCACGGTGGTT---GGGGCTGATCCTCTCAACT
BrPAL-2 (50) ---GCGGCGGAGAGATCAAGAAGAATGCCACGGTGGTT---GGGGCTGATCCTCTCAACT
BrPAL-3 (1) -----
BrPAL-4 (50) ---GCGGCGGAGAGATCAAGAAGAATGCCACGGTGGTT---GGGGCTGATCCTCTCAACT
BoPAL-1 (56) ---GCGGTGGAGTAGAGAAGACAAGAAGTGGCTGTG-----GCGGCGGATCCGTTGAACT
BoPAL-2 (44) ---GCGGCGGAGAGACCAAGAA---TGTCACGGTGGCT---GCGGCGGATCCTCTGAACT
BoPAL-3 (50) ---GCGACGGAGAGATCAAGAAGAATGCCACGGTGGTT---GGGGCTGATCCTCTCAACT
BjPAL (1) -----

AtPAL (113) GGGGAGCTGCAGCGGAGCAAATGAAAGGTAGCCATTTGGATGAAGTGAAGAGAATGGTTG
BnPAL1-1 (202) GGGGAGCTGCAGCGGAGCAAATGAAAGGGAGCCATTTGGATGAGGTGAAGAGAATGGTTGA
BnPAL1-2 (195) GGGGAGCTGCAGCGGATCAAATGAAAGGGAGCCATTTGGATGAAGTGAAGAGAATGGTTA
BnPAL2-1 (224) GGGGTGCTGCGGCGGAGCAGATGAAAGGGAGTCAATTTGGATGAGGTGAAGAGGATGGTTG
BnPAL2-2 (229) GGGGTGCAGCAGCGGAACAGATGAAAGGGAGTCAATTTGGATGAGTTGAAGAGGATGGTTG

BrPAL-1 (104) GGGGAGCTGCAGCGGAGCAAATGAAAGGGAGCCATTTGGATGAGGTGAAGAGAATGGTGA
 BrPAL-2 (104) GGGGAGCTGCAGCGGAGCAAATGAAAGGGAGCCATTTGGATGAGGTGAAGAGAATGGTGA
 BrPAL-3 (1) -----
 BrPAL-4 (104) GGGGAGCTGCAGCGGAGCAAATGAAAGGGAGCCATTTGGATGAGGTGAAGAGAATGGTGA
 BoPAL-1 (107) GGGGTGCAGCAGCGGAGCAGATGAAAGGGAGTCACTTGGATGAGGTGAAGAGGATGGTTG
 BoPAL-2 (95) GGGGAGCTGCGGCGGATCAAATGAAAGGGAGCCATTTGGATGAAGTGAAGAGAATGGTTA
 BoPAL-3 (104) GGGGAGCTGCAGCGGAGCAAATGAAAGGGAGCCATTTGGATGAAGTGAAGAGAATGGTGA
 BjpAL (1) -----

 AtPAL (173) CTGAGTTTAGGAAGCCAGTGTGTAATCTTGGTGGTGAGACTCTGACCATTGGACAAGTGG
 BnPAL1-1 (262) AGGAGTTTAGGAGGCCAGTGGTGAATCTCGGAGGCGAGACTCTCACGATCGGACAAGTGG
 BnPAL1-2 (255) TGGAGTTTAGGAAGCCTGTGGTGAATCTCGGAGGAGAGACTCTGACGATCGGGCAAGTAG
 BnPAL2-1 (284) AGGATTACCGTAAACCGGTGGTGAATCTCGGCGGAGAAAACACTGACGATCGGACAAGTGG
 BnPAL2-2 (289) AGGAGTACCGCAGACCGGTGGTGAATCTCGGGGGAGAGACGCTAACAAATCGGACAAGTGG
 BrPAL-1 (164) AGGAGTTTAGGAGGCCAGTGGTGAATCTCGGAGGCGAGACTCTCACGATCGGACAAGTGG
 BrPAL-2 (164) AGGAGTTTAGGAGGCCAGTGGTGAATCTCGGAGGCGAGACTCTCACGATCGGACAAGTGG
 BrPAL-3 (1) -----
 BrPAL-4 (164) AGGAGTTTAGGAGGCCAGTGGTGAATCTCGGAGGCGAGACTCTCACGATCGGACAAGTGG
 BoPAL-1 (167) AGGAGTACCGCAGACCCGTGGTGAATCTCGGGGGAGAGACGCTAACAAATCGGACAAGTGG
 BoPAL-2 (155) TGGAGTTTAGGAAGCCTGTGGTGAATCTCGGAGGAGAGACTCTGACGATCGGGCAAGTAG
 BoPAL-3 (164) AGGAGTTTAGGAGGCCAGTGGTGAATCTCGGAGGAGAGACTCTCACGATCGGACAAGTGG
 BjpAL (1) -----GACAAGTGG

 AtPAL (233) CTGCGATCTCAACTATTTGGTAACAGTGTGAAGGTGGAGCTATCGGAGACAGCTAGAGCCG
 BnPAL1-1 (322) CAGCAATCTCGACCCCTTGGAAACGGTGTGAAGGTGGAGTTGTGCGGAGACGCGGAGAGCCG
 BnPAL1-2 (315) CAGCGATCTCGACCCCTTGGAAATGGTGTGAAGGTGGAGCTGTGGAGACGCGCAAGAGCCG
 BnPAL2-1 (344) CTGCGATCTCGAACGTAGGCGGTGGCGTTAAGGTTGAGCTAGCGGAGGCTTCAAGAGCCG
 BnPAL2-2 (349) CGGCGATCTCCACCGCAGGCGGAGGTGTTAAGGTTGAGCTAGCGGAGGCTTCCGAGAGCTG
 BrPAL-1 (224) CAGCAATCTCGACCCCTTGGAAACGGTGTGAAGGTGGAGTTGTGCGGAGACGCGGAGAGCCG
 BrPAL-2 (224) CAGCAATCTCGACCCCTTGGAAACGGTGTGAAGGTGGAGTTGTGCGGAGACGCGGAGAGCCG
 BrPAL-3 (1) -----
 BrPAL-4 (224) CAGCAATCTCGACCCCTTGGAAACGGTGTGAAGGTGGAGTTGTGCGGAGACGCGGAGAGCCG
 BoPAL-1 (227) CGGCGATCTCCACCGTAGGTGGAGGTGTTAAGGTTGAGCTAGCGGAGGCTTCCGAGAGCTG
 BoPAL-2 (215) CAGCGATCTCGACCCCTTGGAAATGGTGTGAAGGTGGAGCTGTGCGGAGACGCGCAAGAGCCG
 BoPAL-3 (224) CAGCAATCTCGACCCCTTGGAAACGGTGTGAAGGTGGAGTTGTGCGGAGACGCGGAGAGCCG
 BjpAL (10) CAGCAATCTCGACCCCTTGGAAACGGTGTGAAGGTGGAGTTGTGCGGAGACGCGGAGAGCCG

 AtPAL (293) GTGTGAATGCTAGTAGTATTGGGTTATGGAGAGTATGAACAAAGGCACTGATAGTTATG
 BnPAL1-1 (382) GTGTGAAAGCGAGTAGTATTGGGTTATGGAGAGTATGGGCAAAGGAAACCGATAGTTATG
 BnPAL1-2 (375) GTGTGAAAGCGAGCAGTATTGGGTTATGGAGAGTATGGGCAAAGGCACTGATAGTTATG
 BnPAL2-1 (404) GCGTGAAAGCTAGCAGCAGTATTGGGTTATGGAAAGTATGGGCAAAGGTAAGTACTGACAGTTACG
 BnPAL2-2 (409) GCGTGAAAGCTAGCAGTATTGGGTTATGGAAAGTATGGGCAAAGGTAAGTACTGACAGTTACG
 BrPAL-1 (284) GTGTGAAAGCGAGTAGTATTGGGTTATGGAGAGTATGGGCAAAGGAAACCGATAGTTATG
 BrPAL-2 (284) GTGTGAAAGCGAGTAGTATTGGGTTATGGAGAGTATGGGCAAAGGAAACCGATAGTTATG
 BrPAL-3 (1) -----
 BrPAL-4 (284) GTGTGAAAGCGAGTAGTATTGGGTTATGGAGAGTATGGGCAAAGGAAACCGATAGTTATG
 BoPAL-1 (287) GCGTGAAAGCTAGCAGTATTGGGTTATGGAAAGTATGGGCAAAGGTAAGTACTGACAGTTACG
 BoPAL-2 (275) GTGTGAAAGCGAGCAGTATTGGGTTATGGAGAGTATGGGCAAAGGCACTGATAGTTATG
 BoPAL-3 (284) GTGTGAAAGCGAGTAGTATTGGGTTATGGAGAGTATGGGCAAAGGCAACCGATAGTTATG
 BjpAL (70) GTGTGAAAGCGAGTAGTATTGGGTTATGGAGAGTATGGGCAAAGGAAACCGATAGTTATG

 AtPAL (353) GTGTTACTACTGGTTTTGGTGCTACTTCTCATCGGAGAACCAAAAACGGGTGTCGCACTTC
 BnPAL1-1 (442) GTGTTACTACTGGTTTTGGTGCTACTTCTCACCGGAGAACCAAGAACGGGTGTCGCTCTTC
 BnPAL1-2 (435) GTGTTACAACCTGGTTTTGGTGCTACTTCTCATCGTAGAACCAAAAATGGCGTTCGCACTTC
 BnPAL2-1 (464) GTGTAACCACCGGTTTTGGAGCTACTTCTCACCGGAGAACCAAAAACGGCACCGCTTTGC
 BnPAL2-2 (469) GTGTCACCACCGGTTTTGGAGCGACTTCTCACCGGAGAACCAAAAACGGCACCGCATTGC
 BrPAL-1 (344) GTGTTACTACTGGTTTTGGTGCTACTTCTCACCGGAGAACCAAGAACGGGTGTCGCTCTTC
 BrPAL-2 (344) GTGTTACTACTGGTTTTGGTGCTACTTCTCACCGGAGAACCAAGAACGGGTGTCGCTCTTC
 BrPAL-3 (1) -----
 BrPAL-4 (344) GTGTTACTACTGGTTTTGGTGCTACTTCTCACCGGAGAACCAAGAACGGGTGTCGCTCTTC
 BoPAL-1 (347) GTGTCACCGCCGGTTTTGGAGCGACTTCTCACCGGAGAACCAAAAACGGCACCGCATTGC
 BoPAL-2 (335) GTGTTACTACTGGTTTTGGTGCTACTTCTCATCGTAGAACCAAAAATGGCGTTCGCACTTC
 BoPAL-3 (344) GTGTTACTACTGGTTTTGGTGCTACTTCTCACCGGAGAACCAAGAACGGGTGTCGCTCTTC

BjPAL (130) GTGTTACTACTGGTTTTGGTGCTACTTCTCACCGGAGAACCAAGAACGGTGTGCTCTTC

AtPAL (413) AGAAGGAACCTATTAGATTCTTAACGCCGGAATATTCGGAAGCACGAAAGAAACAAGCC
BnPAL1-1 (502) AGAAAGAGCTTATAAGATTTCTGAACGCCGGAATATTCGGCAGCACGAAGGAAACATCCC
BnPAL1-2 (495) AGAAGGAGCTTATAAGATTTCTGAACGCCGGAATATTCGGCAGCACGAAAGAAACATGCC
BnPAL2-1 (524) AAACCGAACTCATCAGGTTTTTGAACGCCGGAATATTCGGGAACACGAAGGAGACATGCC
BnPAL2-2 (529) AAACCGAACTCATCAGATTTTTGAACGCCGGAATATTCGGTAACACGAAGGAGACATGCC
BrPAL-1 (404) AGAAAGAGCTTATAAGATTTCTGAACGCCGGAATATTCGGCAGCACGAAGGAAACATCCC
BrPAL-2 (404) AGAAAGAGCTTATAAGATTTCTGAACGCCGGAATATTCGGCAGCACGAAGGAAACATCCC
BrPAL-3 (1) -----
BrPAL-4 (404) AGAAAGAGCTTATAAGATTTCTGAACGCCGGAATATTCGGCAGCACGAAGGAAACATCCC
BoPAL-1 (407) AAACCGAACTCATCAGATTTTTGAACGCCGGGATATTCGGTAACACGAAGGAGACATGCC
BoPAL-2 (395) AGAAGGAGCTTATAAGATTTCTGAACGCCGGAATATTCGGCAGCACGAAAGAAACATGCC
BoPAL-3 (404) AGAAAGAGCTTATAAGATTTCTGAACGCCGGAATATTCGGCAGCACGAAGGAAACATCCC
BjPAL (190) AGAAAGAGCTTATAAGATTTCTGAACGCCGGAATATTCGGCAGCACGAAGGAAACATCCC

AtPAL (473) ACACATTGCCACACTCCGCCACAAGAGCCGCCATGCTTGTACGAATCAACACTCTCTCTCC
BnPAL1-1 (562) ACACATTACCACACTCCGCCACAAGAGCCGCCATGCTCGTACGCATCAACACTCTCTCTCC
BnPAL1-2 (555) ACACACTGCCACACTCCGCCACAAGAGCTGCCATGCTCGTACGCATAAACACTCTCTCTCC
BnPAL2-1 (584) ACACGCTACCGGAATCCGCCACGAGAGCCGCCATGCTCGTCCGAGTCAACACTCTCTCTCC
BnPAL2-2 (589) ACACGCTACCGGAATCCGCCACGAGAGCCGCCATGCTCGTCCGAGTCAACACTCTCTCTCC
BrPAL-1 (464) ACACATTACCACACTCCGCCACAAGAGCCGCCATGCTCGTACGTATCAACACTCTCTCTCC
BrPAL-2 (464) ACACATTACCACACTCCGCCACAAGAGCCGCCATGCTCGTACGTATCAACACTCTCTCTCC
BrPAL-3 (1) -----
BrPAL-4 (464) ACACATTACCACACTCCGCCACAAGAGCCGCCATGCTCGTACGTATCAACACTCTCTCTCC
BoPAL-1 (467) ACACGCTACCGGAATCCGCCACGAGAGCCGCCATGCTCGTCCGAGTCAACACTCTCTCTCC
BoPAL-2 (455) ACACACTGCCACACTCCGCCACAAGAGCTGCCATGCTCGTACGCATAAACACTCTCTCTCC
BoPAL-3 (464) ACACATTACCACACTCCGCCACAAGAGCCGCCATGCTCGTACGCATCAACACCCTCTCTCC
BjPAL (250) ACACATTACCACACTCCGCCACAAGAGCCGCCATGCTCGTACGTATCAACACTCTCTCTCC

AtPAL (533) AAGGATTTTCCGGTATCCGATTTGAGATTCTCGAAGCAATTACCAGTTTCTCAACAACA
BnPAL1-1 (622) AAGGCTACTCAGGCATACGTTTTCGAGATCCTCGAGGCCATAACAAGTTTCTCAACAACA
BnPAL1-2 (615) AAGGATACTCCGGCATCCGCTTCGAGATCCTCGAGGCCATAACCAGCTTCTCAACACCA
BnPAL2-1 (644) AAGGATACTCCGGATCCGATTCGAAATCCTCGAAGCGATCACCAGCTTCTCAACCACA
BnPAL2-2 (649) AAGGATACTCCGGATCCGATTCGAAATCCTCGAAGCGATCACCAGCTTCTCAACCACA
BrPAL-1 (524) AAGGATACTCCGGCATACGTTTTCGAGATCCTCGAGGCCATAACAAGTTTCTCAACAACA
BrPAL-2 (524) AAGGATACTCCGGCATACGTTTTCGAGATCCTCGAGGCCATAACAAGTTTCTCAACAACA
BrPAL-3 (1) -----
BrPAL-4 (524) AAGGATACTCCGGCATACGTTTTCGAGATCCTCGAGGCCATAACAAGTTTCTCAACAACA
BoPAL-1 (527) AAGGATACTCCGGATCCGATTCGAAATCCTCGAAGCGATCACCAGCTTCTCAACCACA
BoPAL-2 (515) AAGGATACTCCGGCATCCGCTTCGAGATCCTCGAGGCCATAACCAGCTTCTCAACACCA
BoPAL-3 (524) AAGGCTACTCCGGCATACGTTTTCGAGATCCTCGAGGCCATAACAAGCTTCTCAACAGCA
BjPAL (310) AAGGATACTCCGGCATACGTTTTCGAGATCCTCGAGGCCATAACAAGTTTCTCAACAACA

AtPAL (593) ACATCACTCCATCTCTCCCCCTCCGTGGTACAATCACCGCCTCCGGAGATCTCGTTCTCTC
BnPAL1-1 (682) ACATCACTCCTTCACTCCCTCTCCGCGGCACCATCACCGCCTCCGGAGACCTCGTCCCCC
BnPAL1-2 (675) ACATCACTCCTTCCCTCCCTCTCCGCGGCACCATCACCGCCTCCGGAGACCTCGTCCCCC
BnPAL2-1 (704) ACATCTCTCCGTCTCTCCCCCTCCGTGGAACCATAACCGCCTCCGGCGATCTCGTCCCCC
BnPAL2-2 (709) ACATCTCTCCATCTCTCCCCCTCCGTGGAACCATAACCGCCTCCGGCGATCTCGTCCCCC
BrPAL-1 (584) ACATCACTCCTTCCCTCCCTCTCCGCGGCACCATCACCGCCTCCGGAGACCTCGTCCCCC
BrPAL-2 (584) ACATCACTCCTTCCCTCCCTCTCCGCGGCACCATCACCGCCTCCGGAGACCTCGTCCCCC
BrPAL-3 (1) -----
BrPAL-4 (584) ACATCACTCCTTCCCTCCCTCTCCGCGGCACCATCACCGCCTCCGGAGACCTCGTCCCCC
BoPAL-1 (587) ACATCTCTCCATCTCTCCCCCTCCGTGGAACCATAACCGCCTCCGGCGATCTCGTCCCCC
BoPAL-2 (575) ACATCACTCCTTCCCTCCCTCTCCGCGGCACCATCACCGCCTCCGGAGACCTCGTCCCCC
BoPAL-3 (584) ACATCACTCCTTCTCTCCCTCTCCGCGGCACCATCACCGCCTCCGGAGACCTCGTCCCCC
BjPAL (370) ACATCACTCCTTCCCTCCCTCTCCGCGGCACCATCACCGCCTCCGGAGACCTCGTCCCCC

AtPAL (653) TCTCTACATCGCCGGACTTCTCACCGGTGCTCCCAATTCCAAAGCTACTGGTCCCAACG
BnPAL1-1 (742) TCTCTACATCGCCGGACTTCTAACCGGACGTCCCAACTTCCAAAGCCACCGGTCCCAACG
BnPAL1-2 (735) TCTCTACATCGCCGGCCTCTCACCGGCCGTCCCAACTTCCAAAGCCACCGGTCCCAACG
BnPAL2-1 (764) TCTCTACATCGCCGGTCTCTCACCGGCCGTCCCAACTTCCAAAGCCACCGGTCCCAACG
BnPAL2-2 (769) TCTCTACATCGCCGGCCTCTCACCGGCCGTCCGAACTTCCAAAGCCACAGGTCCCAACG

BrPAL-1 (644) TCTCCTACATCGCCGGACTCTTAACCGGACGTCCCAACTCCAAAGCCACCGGTCCCAACG
 BrPAL-2 (644) TCTCCTACATCGCCGGACTCTTAACCGGACGTCCCAACTCCAAAGCCACCGGTCCCAACG
 BrPAL-3 (1) -----
 BrPAL-4 (644) TCTCCTACATCGCCGGACTCTTAACCGGACGTCCCAACTCCAAAGCCACCGGTCCCAACG
 BoPAL-1 (647) TCTCCTACATCGCCGGCCTCCTCACC GGCCGTCCGAACTCCAAAGCCACAGGTCCCAACG
 BoPAL-2 (635) TCTCCTACATCGCCGGCCTCCTCACC GGCCGTCCCAACTCCAAAGCCACCGGTCCCAACG
 BoPAL-3 (644) TCTCCTACATCGCCGGACTCTTAACCGGACGTCCCAACTCCAAAGCCACCGGTCCCAACG
 BjPAL (430) TCTCCTACATCGCCGGACTCTTAACCGGACGTCCCAACTCCAAAGCCACCGGTCCCAACG

 AtPAL (713) GTGAAGCTTTAACAGCAGAGGAAGCTTTCAAATTAGCAGGAATCAGCTCCGGATTCTTTG
 BnPAL1-1 (802) GCGAAGCCTTGAACGCAGAGGAAGCCTTCAAATGGCAGGAGTCACCTCCGGCTTCTTCG
 BnPAL1-2 (795) GCGAAGCCTTGAACGCAGAGGAAGCCTTCAAGAAGCCGGAATCCCTCTGGGTTCTTTG
 BnPAL2-1 (824) GCGAATCCCTAACCGCCGAGGAAGCCTTCAAGAAAGCGGGAATCACTTCCGGATTCTTCG
 BnPAL2-2 (829) GCGAATCCCTAACCGCCGAGAGGCCCTTCAAACAAGCCGGAATCGCTTCCGGATTCTTCG
 BrPAL-1 (704) GCGAAGCCCTAAACGCAGAGGAAGCCTTCAAATGGCTGGAGTCACCTCCGGCTTCTTCG
 BrPAL-2 (704) GCGAAGCCCTAAACGCAGAGGAAGCCTTCAAATGGCTGGAGTCACCTCAGGCTTCTTTG
 BrPAL-3 (1) -----
 BrPAL-4 (704) GCGAAGCCCTAAACGCAGAGGAAGCCTTCAAATGGCTGGAGTCACCTCAGGCTTCTTTG
 BoPAL-1 (707) GCGAATCCCTAACCGCCGAGAGGCCCTTCAAACAAGCCGGAATCGCTTCCGGATTCTTCG
 BoPAL-2 (695) GCGAAGCCTTGAACGCAGAGGAAGCCTTCAAGAAGCCGGAATCCCTCTGGATTCTTTG
 BoPAL-3 (704) GCGAAGCCTTGAACGCAGAGGAAGCCTTCAAATGGCAGGAGTCACCTCCGGCTTCTTCG
 BjPAL (490) GCGAAGCCCTAAACGCAGAGGAAGCCTTCAAATGGCTGGAGTCACCTCAGGCTTCTTTG

 AtPAL (773) ATCTCCAGCCTAAGGAAGGTCTCGCGCTAGTCAATGGCACGGCGGTGGATCTGGAATGG
 BnPAL1-1 (862) ACCTCCAGCCTAAAGAAAGCCTCGCTCTAGTCAACGGCACGGCCGTGGCTCCGGCATGG
 BnPAL1-2 (855) ACTTGCAGCCCAAGGAAGGTCTCGCCCTAGTCAACGGCACAGCCGTGGCTCCGGCATGG
 BnPAL2-1 (884) ATCTACAGCCTAAGGAAGGCTTAGCGCTCGTCAACGGCACGGCGGTGGATCCGGCATGG
 BnPAL2-2 (889) ATCTACAACCCAAGGAAGGCTTAGCGCTCGTCAACGGCACGGCGGTGGATCCGGCATGG
 BrPAL-1 (764) ACCTCCAGCCTAAGGAAGGCTCGCCCTAGTCAACGGCACGGCCGTGGCTCCGGCATGG
 BrPAL-2 (764) ACCTCCAGCCTAAGGAAGGCTCGCCCTAGTCAACGGCACGGCCGTGGCTCCGGCATGG
 BrPAL-3 (1) -----
 BrPAL-4 (764) ACCTCCAGCCTAAGGAAGGCTCGCCCTAGTCAACGGCACGGCCGTGGCTCCGGCATGG
 BoPAL-1 (767) ATCTACAACCCAAGGAAGGCTTAGCACTCGTCAACGGCACGGCGGTGGATCCGGCATGG
 BoPAL-2 (755) ACTTGCAGCCCAAGGAAGGTCTCGCCCTGGTCAACGGCACAGCCGTGGCTCCGGCATGG
 BoPAL-3 (764) ATCTCCAGCCTAAGGAAGGCTCGCCCTAGTCAACGGCACGGCCGTGGCTCCGGCATGG
 BjPAL (550) ACCTCCAGCCTAAGGAAGGCTCGCCCTAGTCAACGGCACGGCCGTGGCTCCGGCATGG

 AtPAL (833) CGTCAATGGTGTTATTCGAACGAATGTTCTCTCTGTTTTGGCTGAGATTTTGTGCGCGG
 BnPAL1-1 (922) CGTCGATGGTTCTCTTCGAAGCCAACGTCTCTCGTCTGGCCGAGGTTTTATCAGCCG
 BnPAL1-2 (915) CCTCGATGGTTCTCTTCGAGACAAACGTCTCTCGGTTCTGGCCGAGGTTCTCTCAGCTG
 BnPAL2-1 (944) CGTCGATGGTTCTCTTCGAAGCGAATGTTCAATCGGTCTCGCCGAGGTTTTATCCGCGA
 BnPAL2-2 (949) CGTCGATGGTTCTATTCGAAGCGAAGCCTTCAATCGGTGTTAGCGGAGGTCTTATCCGCGA
 BrPAL-1 (824) CGTCGATGGTTCTCTTCGAAGCCAACGTCTCTCGGTTCTGGCCGAGGTTTTATCAGCCG
 BrPAL-2 (824) CGTCGATGGTTCTCTTCGAAGCCAACGTCTCTCGGTTCTGGCCGAGGTTTTATCAGCCG
 BrPAL-3 (1) -----
 BrPAL-4 (824) CGTCGATGGTTCTCTTCGAAGCCAACGTCTCTCGGTTCTGGCCGAGGTTTTATCAGCCG
 BoPAL-1 (827) CGTCGATGGTTCTATTCGAAGCGAAGCCTTCAATCGGTGTTAGCGGAGGTCTTATCCGCGA
 BoPAL-2 (815) CCTCGATGGTTCTCTTCGAGACAAACGTCTCTCGGTTCTGGCCGAGGTTCTCTCAGCTG
 BoPAL-3 (824) CCTCGATGGTTCTCTTCGAAGCCAACGTCTCTCGGTTCTGGCCGAGGTTTTATCAGCCG
 BjPAL (610) CGTCGATGGTTCTCTTCGAAGCCAACGTCTCTCGGTTCTGGCCGAGGTTTTATCAGCCG

 AtPAL (893) TTTTCGCGAGGTGATGAGTGGAAGCCTGAGTTCACCGATCATCTCACTCACAGACTTA
 BnPAL1-1 (982) TTTTCGCGGAGGTGATGAGCGGGAAGCCGGAGTTCACCGATCATTTGACTCACCGGTGA
 BnPAL1-2 (975) TTTTCGCGGAGGTGATGAGCGGGAAGCCGGAGTTCACCGACCATTTAACCCACAGGTGA
 BnPAL2-1 (1004) TTTTCGCGGAGGTGATGAGCGGGAAGCCGGAGTTCACCGATCATTTGACTCACCGACTCA
 BnPAL2-2 (1009) TTTTCGCGGAGGTGATGAGCGGGAAGCCTGAGTTCACCGATCATCTAACGCACAGGTGA
 BrPAL-1 (884) TTTTCGCGGAGGTGATGAGCGGGAAGCCGGAGTTCACCGATCATTTGACTCACCGGTGA
 BrPAL-2 (884) TTTTCGCGGAGGTGATGAGCGGGAAGCCGGAGTTCACCGATCATTTGACTCACCGGTGA
 BrPAL-3 (1) -----
 BrPAL-4 (884) TTTTCGCGGAGGTGATGAGCGGGAAGCCGGAGTTCACCGATCATTTGACTCACCGGTGA
 BoPAL-1 (887) TTTTCGCGGAGGTGATGAGCGGGAAGCCTGAGTTCACCGATCATCTAACGCACAGGTGA
 BoPAL-2 (875) TTTTCGCGGAGGTGATGAGCGGGAAGCCGGAGTTCACCGACCATTTAACCCACAGGTGA
 BoPAL-3 (884) TTTTCGCGGAGGTGATGAGCGGGAAGCCGGAGTTCACCGATCATTTAACTCACCGGTGA

BjPAL (670) TCTTCGCCGAGGTGATGAGCGGGAAGCCGGAGTTCACCGATCATTTGACTCACCGGCTGA

AtPAL (953) AACATCATCCCGGTCAAATCGAAGCGGGCGGCGATAATGGAGCATATCCTCGACGGGAAGCT
BnPAL1-1 (1042) AGCACCACCCCGGGCAGATAGAAGCCGGCTATAATGGAACACATTCCTCGACGGGAGCT
BnPAL1-2 (1035) AGCACCACCCCGGGCAGATAGAAGCCGGCGGATAATGGAGCACATCCTCGACGGGAGCT
BnPAL2-1 (1064) AACACCACCCCGGACAAATCGAGGCGGGCGGCGATCATGGAGCACATCCTCGACGGGAAGCT
BnPAL2-2 (1069) AGCACCACCCCGGGCAAATCGAAGCGGGCGGCGATCATGGAGCACATCCTCGACGGGAAGCT
BrPAL-1 (944) AGCACCACCCCGGGCAGATAGAAGCCGGCTATAATGGAACACATTCCTCGACGGGAGCT
BrPAL-2 (944) AGCACCACCCCGGGCAGATAGAAGCCGGCTATAATGGAACACATTCCTCGACGGGAGCT
BrPAL-3 (1) -----
BrPAL-4 (944) AGCACCACCCCGGGCAGATAGAAGCCGGCTATAATGGAACACATTCCTCGACGGGAGCT
BoPAL-1 (947) AGCACCACCCCGGGCAAATCGAAGCGGGCGGCGATCATGGAGCACATCCTCGACGGGAAGCT
BoPAL-2 (935) AGCACCACCCCGGGCAGATAGAAGCCGGCGGATAATGGAGCACATCCTCGACGGGAGCT
BoPAL-3 (944) AGCACCACCCCGGGCAGATAGAAGCCGGCTATAATGGAACACATTCCTCGACGGGAGCT
BjPAL (730) AGCACCACCCCGGGCAGATAGAAGCCGGCTATAATGGAACACATTCCTCGACGGGAGCT

AtPAL (1013) CGTACATGAAATTAGCTCAGAAGCTTCACGAGATGGATCCGTTACAGAAACCTAAACAAG
BnPAL1-1 (1102) CGTACATGAAGCTAGCTCAGAAGCTTCACGAGATGGATCCGTTACAAAACCCAAACAAG
BnPAL1-2 (1095) CGTACATGAAGCTAGCTCAGAAGCTTCACGAGATGGATCCGTTACAGAAACCTAAACAAG
BnPAL2-1 (1124) CGTACATGAAGCTAGCGCAAAGCTTCACGAGATGGATCCGTTACAAAACCCGAAACAAG
BnPAL2-2 (1129) CGTACATGAAGCTAGCGCAGAAGCTTCACGAGATGGATCCGTTACAAAAGCCGAAACAAG
BrPAL-1 (1004) CGTACATGAAGCTAGCTCAGAAGCTTCACGAGATGGATCCGTTACAAAACCCAAACAAG
BrPAL-2 (1004) CGTACATGAAGCTAGCTCAGAAGCTTCACGAGATGGATCCGTTACAAAACCCAAACAAG
BrPAL-3 (1) ---ATGTTATGCG-GCGCAGAGA--TCAAGA-ATGTCACGGTGGCTGCGGCGGATCTCTCT
BrPAL-4 (1004) CGTACATGAAGCTAGCTCAGAAGCTTCACGAGATGGATCCGTTACAAAACCCAAACAAG
BoPAL-1 (1007) CGTACATGAAGCTAGCGCAGAAGCTTCACGAGATGGATCCGTTACAAAAGCCGAAACAAG
BoPAL-2 (995) CGTACATGAAGCTAGCTCAGAAGCTTCACGAGATGGATCCGTTACAGAAACCTAAACAAG
BoPAL-3 (1004) CGTACATGAAGCTAGCTCAGAAGCTTCACGAGATGGATCCGTTACAAAACCCAAACAAG
BjPAL (790) CGTACATGAAGCTAGCTCAGAAGCTTCACGAGATGGATCCGTTACAAAACCCAAACAAG

AtPAL (1073) ATCGTTACGCTCTTCG-TACTTCTCCTCAATGGTTAGGTCCTCAAATCGAAGTGATCCGT
BnPAL1-1 (1162) ACCGTTACGCTCTACG-TACCTCTCCCAATGGCTAGGTCCTCAGATAGAAGTGATCCGT
BnPAL1-2 (1155) ACCGTTACGCGCTCCG-CACATCACCTCAATGGCTAGGTCCTCAGATAGAAGTGATCCGT
BnPAL2-1 (1184) ACCGTTACGCGCTCCG-CACGTCCTCAGTGGCTCGGCCCTCAGATCGAAGTGATCCGT
BnPAL2-2 (1189) ACCGTTACGCTCTCCG-TACCTCTCCTCAGTGGCTCGGCCCTCAGATCGAAGTGATCCGT
BrPAL-1 (1064) ACCGTTACGCTCTACG-TACCTCTCCCAATGGCTAGGTCCTCAGATAGAAGTGATCCGT
BrPAL-2 (1064) ACCGTTACGCTCTACG-TACCTCTCCCAATGGCTAGGTCCTCAGATAGAAGTGATCCGT
BrPAL-3 (54) CAACTGGGGGGTGCAGGCGGAGCAAATGAAAGGGA--GCCATTTGGATGAAGTGAGAGA
BrPAL-4 (1064) ACCGTTACGCTCTACG-TACCTCTCCCAATGGCTAGGTCCTCAGATAGAAGTGATCCGT
BoPAL-1 (1067) ACCGTTACGCTCTCCG-TACCTCTCCTCAGTGGCTCGGTCCTCAGATCAAAGTGATCCGT
BoPAL-2 (1055) ACCGTTACGCGCTCCG-CACATCACCTCAATGGCTAGGTCCTCAGATAGAAGTGATCCGT
BoPAL-3 (1064) ACCGTTACGCGCTACG-TACCTCTCCTCAATGGCTAGGCCCTCAGGTAGAAGTGATCCGT
BjPAL (850) ACCGTTACGCTCTACG-TACCTCTCCCAATGGCTAGGTCCTCAGATAGAAGTGATCCGT

AtPAL (1132) TACGCAACGAAATCGATCGAGCGTGAGATAAACTCCGTCAACGATAATCCGTTGATCGAT
BnPAL1-1 (1221) TACGCGACCAAGTCCATCGAGCGTGAGATAAACTCCGTCAACGACAACCCTTTGATCGAT
BnPAL1-2 (1214) TACGCCACCAAGTCCATCGAGCGTGAGATAAACTCCGTCAACGACAACCCTTTGATCGAC
BnPAL2-1 (1243) CACGCCACGAAGTCAATCGAGCGTGAGATCAACTCCGTTAACGACAATCCGTTAATCGAC
BnPAL2-2 (1248) CACGCAACGAAGTCGATCGAGCGTGAGATCAACTCCGTTAACGATAATCCGTTGATCGAT
BrPAL-1 (1123) TACGCGACCAAGTCCATCGAGCGTGAGATAAACTCCGTCAACGACAACCCTTTGATCGAT
BrPAL-2 (1123) TACGCGACCAAGTCCATCGAGCGTGAGATAAACTCCGTCAACGACAACCCTTTGATCGAT
BrPAL-3 (112) ATGGTTATGGAGTTTAGGAAGCCTGTGGTGAATCTCGGAGGAGACTCTGACGATCGGA
BrPAL-4 (1123) TACGCGACCAAGTCCATCGAGCGTGAGATAAACTCCGTCAACGACAACCCTTTGATCGAT
BoPAL-1 (1126) CACGCCACGAAGTCGATCGAGCGTGAGATCAACTCCGTTAACGATAATCCGTTGATCGAT
BoPAL-2 (1114) TACGCCACCAAGTCCATCGAGCGTGAGATAAACTCCGTCAACGACAACCCTTTGATCGAC
BoPAL-3 (1123) TACGCGACCAAGTCCATCGAAGCTGAGATAAACTCCGTCAACGACAACCCTTTGATCGAC
BjPAL (909) TACGCGACCAAGTCCATCGAGCGTGAGATAAACTCCGTCAACGACAACCCTTTGATCGAT

AtPAL (1192) GTTTCGAGGAACAAGCGATTACGGTGGTAACCTCC---AAGGAACACCAATCGGAGTT
BnPAL1-1 (1281) GTCTCGAGAAATAAAGCCATTACGGTGGTAACCTCC---AGGGAACACCCATCGGTGTG
BnPAL1-2 (1274) GTTTCAGAAACAAGCGATTACGGAGGTAACCTCC---AGGGGACACCCATCGGTGTG
BnPAL2-1 (1303) GTTTCGAGGAACAAGCGATTACGGTGGTAACCTCC---AGGGGACTCCGATAGGAGTC
BnPAL2-2 (1308) GTTTCAGAAACAAGCGATTACGGTGGTAACCTCC---AGGGGACTCCAATCGGAGTC

BrPAL-1 (1183) GTCTCGAGAAACAAAGCCATTACGGTGGTAACCTCC---AGGGAACACCCATCGGTGTG
 BrPAL-2 (1183) GTCTCGAGAAACAAAGCCATTACGGTGGTAACCTCC---AGGGAACACCCATCGGTGTG
 BrPAL-3 (172) ----CAAGTAGCAGCGATCTCGACCGTTGGAAATGGTGTGAAGGTGGAGCTGTCCGGAGAC
 BrPAL-4 (1183) GTCTCGAGAAACAAAGCCATTACGGTGGTAACCTCC---AGGGAACACCCATCGGTGTG
 BoPAL-1 (1186) GTTTCTAGAAACAAAGCGATTACGGTGGTAACCTCC---AGGGGACTCCGATCGGAGTC
 BoPAL-2 (1174) GTTTCAAGAAACAAAGCGATTACGGAGGTAACCTCC---AGGGGACACCCATCGGTGTG
 BoPAL-3 (1183) GTTTCTAGAAACAAAGCCATTACGGTGGTAACCTCC---AGGGAACACCCATCGGTGTG
 BjpAL (969) GTCTCGAGAAACAAAGCCATTACGGTGGTAACCTCC---AGGGAACACCCATCGGTGTG

AtPAL (1249) TCAATGGATAACACGAGATTGGCGATAGCAGCGATTGGT--AAACTCATGTTTGCTCAAT
 BnPAL1-1 (1338) TCTATGGACAACACACGTTTAGCTATCGCGGCCATAGGG--AAGCTCATGTTTCGCTCAGT
 BnPAL1-2 (1331) TCCATGGACAACACGCTCTCGCTATAGCATCGATAGGG--AAGCTCATGTTTCGCTCAGT
 BnPAL2-1 (1360) TCTATGGACAACACACGTTTAGCGGTTGAGCTATTGGG--AAGCTCATGTTTCGCTCAGT
 BnPAL2-2 (1365) TCCATGGATAACACTCGTTTAGCGATTGCTTCGATAGGG--AAGCTCATGTTTCGCTCAAT
 BrPAL-1 (1240) TCTATGGACAACACACGTTTAGCTATCGCGGCCATAGGG--AAGCTCATGTTTCGCTCAGT
 BrPAL-2 (1240) TCTATGGACAACACACGTTTAGCTATCGCGGCCATAGGG--AAGCTCATGTTTCGCTCAGT
 BrPAL-3 (228) GGCA---AGAGCCGGTGTGAAG-GCAGCAGTGATTGGGTGATGGAGATGGGCAAAAG
 BrPAL-4 (1240) TCTATGGACAACACACGTTTAGCTATCGCGGCCATAGGG--AAGCTCATGTTTCGCTCAGT
 BoPAL-1 (1243) TCGATGGATAAACACTCGTTTAGCGATTGCTTCGATAGGG--AAGCTCATGTTTCGCTCAAT
 BoPAL-2 (1231) TCCATGGACAACACGCTCTCGCTATAGCATCGATAGGG--AAGCTCATGTTTCGCTCAGT
 BoPAL-3 (1240) TCGATGGACAACACACGTTTAGCTATAGCAGCGATAGGG--AAGCTCATGTTTCGCTCAGT
 BjpAL (1026) TCTATGGACAACACACGTTTAGCTATCGCGGCCATAGGG--AAGCTCATGTTTCGCTCAGT

AtPAL (1307) TCTCAGAGCTTGTGAATGATTTCTACAACAATGGTTTACCCTCGAATCTAACCGCTTCGA
 BnPAL1-1 (1396) TCTCCGAGCTGGTCAACGATTATTACAACAACGGTCTTCCTTCGAACCTAACCGCTTCGA
 BnPAL1-2 (1389) TCTCCGAGCTTGTTAACGACTTCTACAACAACGGTCTTCCTTCTAACCTAACCGCTTCGA
 BnPAL2-1 (1418) TCTCGAGCTTGTTAACGACTTCTACAACAACGGTCTTCCTTCGAATCTAACCGCTTCCA
 BnPAL2-2 (1423) TCTCGAGCTTGTTAACGATTCTACAACAACGGTCTTCCTTCGAATCTAACCGCTTCGA
 BrPAL-1 (1298) TCTCCGAGCTGGTCAACGATTATTACAACAACGGTCTTCCTTCGAACCTAACCGCTTCGA
 BrPAL-2 (1298) TCTCCGAGCTGGTCAACGATTATTACAACAACGGTCTTCCTTCGAACCTAACCGCTTCGA
 BrPAL-3 (284) GCACTGA--TAGTTATGG--TGTTACTAC--TGGTTTGGTGCCTACTT---CTCATCGT
 BrPAL-4 (1298) TCTCCGAGCTGGTCAACGATTATTACAACAACGGTCTTCCTTCGAACCTAACCGCTTCGA
 BoPAL-1 (1301) TCTCGAGCTTGTTAACGATTCTACAACAATGGACTTCCTTCGAATCTAACCGCTTCGA
 BoPAL-2 (1289) TCTCCGAGCTTGTTAACGACTTCTACAACAACGGTCTTCCTTCTAACCTAACCGCTTCGA
 BoPAL-3 (1298) TCTCCGAGCTGGTCAACGATTATTACAACAACGGTCTTCCTTCGAACCTAACCTGCTTCGA
 BjpAL (1084) TCTCCGAGCTGGTCAACGATTATTACAACAACGGTCTTCCTTCGAACCTAACCGCTTCGA

AtPAL (1367) GGAATCCAAGTTTGGATTATGGATTCA-AGGGAGCTGAGATTGCAATGGCTTCTTATTGT
 BnPAL1-1 (1456) GGAACCTAGTTTGGACTACGGTTTCA-AAGGAGCGGAGATCGCGATGGCTTTCGTAAGT
 BnPAL1-2 (1449) GGAACCTAGTTTGGACTACGGTTTCA-AAGGAGCGGAGATCGCTATGGCTTTCGTAAGT
 BnPAL2-1 (1478) ACAACCAAGCTTGGATTATGGATTCA-AAGGAGCGGAGATCGCTATGGCTTTCGTAAGT
 BnPAL2-2 (1483) ACAATCCAAGCTTGGATTACGGATTCA-AAGGAGCTGAGGTCGCTATGGCTTTCGTAAGT
 BrPAL-1 (1358) GGAACCTAGTTTGGACTACGGTTTCA-AAGGAGCGGAGATCGCGATGGCTTTCGTAAGT
 BrPAL-2 (1358) GGAACCTAGTTTGGACTACGGTTTCA-AAGGAGCGGAGATCGCGATGGCTTTCGTAAGT
 BrPAL-3 (334) AGAA-CCAAAATGGCGTTCGACTTTCAGAAAGGAGCTTA-----TAAGATTCCTGAACGC
 BrPAL-4 (1358) GGAACCTAGTTTGGACTACGGTTTCA-AAGGAGCGGAGATCGCGATGGCTTTCGTAAGT
 BoPAL-1 (1361) ACAATCCAAGTTTGGATTATGGATTCA-AAGGAGCTGAGATCGCTATGGCTTTCGTAAGT
 BoPAL-2 (1349) GGAACCTAGTTTGGACTACGGTTTCA-AAGGAGCGGAGATCGCTATGGCTTTCGTAAGT
 BoPAL-3 (1358) GGAACCTAGTTTGGACTACGGTTTCA-AAGGAGCGGAGATCGCGATGGCTTTCGTAAGT
 BjpAL (1144) GGAACCTAGTTTGGACTACGGTTTCA-AAGGAGCGGAGATCGCGATGGCTTTCGTAAGT

AtPAL (1426) TCAGAGCTTCAATACTTAGCTAATCCTGTGACTAGCCATGTTCAATCAGCAGAGCAACAT
 BnPAL1-1 (1515) TCAGAGCTTCAATACTTAGCTAATCCTGTGACTAGCCATGTTCAATCAGCAGAGCAACAC
 BnPAL1-2 (1508) TCAGAGCTTCAATACTTAGCTAATCCTGTGACTAGCCATGTTCAATCAGCAGAGCAACAC
 BnPAL2-1 (1537) TCTGAGCTTCAATACTTAGCTAATCCTGTGACTAGCCATGTTCAATCAGCAGAGCAACAT
 BnPAL2-2 (1542) TCTGAGCTTCAATACTTAGCTAATCCTGTGACTAGCCATGTTCAATCAGCAGAGCAACAT
 BrPAL-1 (1417) TCAGAGCTTCAATACTTAGCTAATCCTGTGACTAGCCATGTTCAATCAGCAGAGCAACAC
 BrPAL-2 (1417) TCAGAGCTTCAATACTTAGCTAATCCTGTGACTAGCCATGTTCAATCAGCAGAGCAACAC
 BrPAL-3 (387) CGGAATATTCGGCAGC--ACGAA---AGAAACATGCCACACACTACCAC-----A-CTC
 BrPAL-4 (1417) TCAGAGCTTCAATACTTAGCTAATCCTGTGACTAGCCATGTTCAATCAGCAGAGCAACAC
 BoPAL-1 (1420) TCTGAGCTTCAATACTTAGCTAATCCTGTGACTAGCCATGTTCAATCAGCAGAGCAACAT
 BoPAL-2 (1408) TCAGAGCTTCAATACTTAGCTAATCCTGTGACTAGCCATGTTCAATCAGCAGAGCAACAC
 BoPAL-3 (1417) TCAGAGCTTCAATACTTAGCTAATCCTGTGACTAGCCATGTTCAATCAGCAGAGCAACAT

BjPAL (1203) TCAGAGCTTCAGTACTTGGCCAACCCCGTGACTAGCCATGTTCAATCAGCTGAGCAACAC

 AtPAL (1486) AACCAAGATGTCAACTCTTTGGGACTAATCTCGTCTCGCAAAACTTCTGAAGCTGTTGAT
 BnPAL1-1 (1575) AACCAAGACGTGAACCTTTTAGGACTAATCTCATCTCGCAAGACATCAGAAGCTGTAGAC
 BnPAL1-2 (1568) AACCAAGACGTGAACCTTTTAGGACTAATCTCATCACGGAAGACGGCAGAAGCTGTCGAC
 BnPAL2-1 (1597) AACCAAGATGTAACTCTTTTAGGACTCATCTCGTCTCGTAAGACGTCAGAAGCTGTTGAC
 BnPAL2-2 (1602) AACCAAGATGTGAACCTTTGGGACTCATCTCGTCTCGCAAAACGTCAGAAGCTGTTGAC
 BrPAL-1 (1477) AACCAAGACGTGAACCTTTTAGGACTAATCTCATCTCGCAAGACATCAGAAGCTGTAGAC
 BrPAL-2 (1477) AACCAAGACGTGAACCTTTTAGGACTAATCTCATCTCGCAAGACATCAGAAGCTGTAGAC
 BrPAL-3 (435) CGCCACGA---G-----AGCCGCATGCTCTCTCGCAAGACGGCAGAAGCTGTTGAC
 BrPAL-4 (1477) AACCAAGACGTGAACCTTTTAGGACTAATCTCATCTCGCAAGACATCAGAAGCTGTAGAC
 BoPAL-1 (1480) AACCAAGATGTAACTCTTTGGGACTAATCTCGTCTCGCAAAACGTCAGAAGCTGTTGAC
 BoPAL-2 (1468) AACCAAGACGTGAACCTTTTAGGACTAATCTCATCACGCAAGACGGCAGAAGCTGTCGAC
 BoPAL-3 (1477) AACCAAGACGTGAACCTTTTAGGACTAATCTCGTCTCGCAAGACGGCAGAAGCTGTCGAC
 BjPAL (1263) AACCAAGACGCGAACTCTTTTAGGACTAATCTCATCTCGCAAGACATCAGAAGCTGTAGAC

 AtPAL (1546) ATTCTCAAGCTTATGTCAACAACGTTCCCTCGTTGCGATTGTTCAAGCTGTGGATTTGAGA
 BnPAL1-1 (1635) ATACTCAAACCTCATGTCGACAACGTTCCCTGTCGGAATCTGCCAAGCCATCGATCTAAGA
 BnPAL1-2 (1628) ATACTCAAACCTCATGTCGACAACGTTCCCTGTCGGAATCTGCCAAGCTGTGGATCTAAGA
 BnPAL2-1 (1657) ATTCTCAAGCTCATGTCACAACGTTCCCTCGTAGCGATTGTTCAAGCTGTTGATTTGAGA
 BnPAL2-2 (1662) ATCTCAAGCTTATGTCGGCAACGTTCCCTGTTGGTATATGCAAGCTGTTGATTTGAGA
 BrPAL-1 (1537) ATACTCAAACCTCATGTCGACAACGTTCCCTGTCGGAATCTGCCAAGCCATCGATCTACGA
 BrPAL-2 (1537) ATACTCAAACCTCATGTCGACAACGTTCCCTGTCGGAATCTGCCAAGCCATCGATCTAAGA
 BrPAL-3 (484) ATTCTCAAACCTCATGTCGACAACGTTCCCTGTCGGAATCTGCCAAGCTGTAGATCTAAGA
 BrPAL-4 (1537) ATACTCAAACCTCATGTCGACAACGTTCCCTGTCGGAATCTGCCAAGCCATCGATCTAAGA
 BoPAL-1 (1540) ATCTCAAGCTGATGTCGCAACGTTCCCTGTTGCTATATGCAAGCTGTTGATTTGAGA
 BoPAL-2 (1528) ATACTCAAACCTCATGTCGACAACGTTCCCTGTCGGAATCTGCCAAGCTGTGGATCTAAGA
 BoPAL-3 (1537) ATACTCAAACCTCATGTCGACAACGTTCCCTGTCGGAATCTGCCAAGCCATCGATCTACGA
 BjPAL (1323) ATACTCAAACCTCATGTCGACAACGTTCCCTGTCGGAATCTGCCAAGCCATCGATCTAAGA

 AtPAL (1606) CATTGAGGAGAATTTGAGACAGACTGTGAAGAACACTGTCTCTCAAGTGGCGAAGAAA
 BnPAL1-1 (1695) CACTTGGAGGAGAATCTAAAACAAACCGTCAAGAACACAGTCTCTCAAGTGGCCAAGAAA
 BnPAL1-2 (1688) CACTTGGAGGAGAATCTAAAACAAACCGTGAAGAACACTGTCTCTCAAGTGGCCAAGAAA
 BnPAL2-1 (1717) CATCTCGAGGAGAATCTGAGACAGACCGTGAAGAACACGGTTTCTCAAGTGGCGAAGAAA
 BnPAL2-2 (1722) CATCTGAGGAGAATCTGAGACAAACCGTGAAGAACACAGTTTCTCAAGTGGCGAAGAAA
 BrPAL-1 (1597) CACTTGGAGGAGAATCTAAAACAAACCGTCAAGAACACAGTCTCTCAAGTGGCCAAGAAA
 BrPAL-2 (1597) CACTTGGAGGAGAATCTAAAACAAACCGTCAAGAACACAGTCTCTCAAGTGGCCAAGAAA
 BrPAL-3 (544) CACTTGGAGGAGAATCTAAAACAAACCGTGAAGAACACGGTCTCTCAAGTGGCTAAGAAA
 BrPAL-4 (1597) CACTTGGAGGAGAATCTAAAACAAACCGTCAAGAACACAGTCTCTCAAGTGGCCAAGAAA
 BoPAL-1 (1600) CATCTGAGGAGAATCTGAGACAAACCGTGAAGAACACAGTTTCTCAAGTGGCGAAGAAA
 BoPAL-2 (1588) CACTTGGAGGAGAATCTAAAACAAACCGTGAAGAACACTGTCTCTCAAGTGGCCAAGAAA
 BoPAL-3 (1597) CACTTGGAGGAGAATCTAAAACAAACCGTCAAGAACACAGTCTCTCAAGTGGCCAAGAAA
 BjPAL (1383) CACTTGGAGGAGAATCTAAAACAAACCGTCAAGAACACAGTCTCTCAAGTGGCCAAGAAA

 AtPAL (1666) GTTCTTACTACTGGAGTCAATGGTGAGCTTCACTCTCTCGCTTCTGCGAAAAGGATTTA
 BnPAL1-1 (1755) GTTCTCACCACCTGGAGTCAACGGTGAGCTTCAACCCATCACGCTTCTGCGAGAAAGACTTA
 BnPAL1-2 (1748) GTTCTAACCACCTGGAGTCAACGGTGAGCTTCAACCCATCTCGCTTCTGCGAGAAAGACTTA
 BnPAL2-1 (1777) GTGTTGACTACTGGAGTCAACGGGGAGTTGCATCCATCGCGGTTCTGTGAGAAAGACTTG
 BnPAL2-2 (1782) GTTTTAACCACCTGGAGTCTACGGTGAGCTGCATCCGTCGCGGTTCTGCGAGAAGGACTTG
 BrPAL-1 (1657) GTTCTCACCACCTGGAGTCAACGGTGAGCTTCAACCCATCACGCTTCTGCGAGAAAGACTTA
 BrPAL-2 (1657) GTTCTCACCACCTGGAGTCAACGGTGAGCTTCAACCCATCACGCTTCTGCGAGAAAGACTTA
 BrPAL-3 (604) GTTCTAACCACCTGGAGTCAACGGTGAGCTTCAACCCATCTCGCTTCTGCGAGAAAGACTTTA
 BrPAL-4 (1657) GTTCTCACCACCTGGAGTCAACGGTGAGCTTCAACCCATCACGCTTCTGCGAGAAAGACTTTA
 BoPAL-1 (1660) GTGCTAACCACCTGGAGTCAACGGTGAGCTGCATCCGTCGCGGTTCTGCGAGAAGGACTTG
 BoPAL-2 (1648) GTTCTAACCACCTGGAGTCAACGGTGAGCTTCAACCCATCTCGCTTCTGCGAGAAAGACTTTA
 BoPAL-3 (1657) GTTCTCACCACCTGGAGTCAACGGTGAGCTTCAACCCATCACGCTTCTGCGAGAAAGACTTTA
 BjPAL (1443) GTTCTCACCACCTGGAGTCAACGGTGAGCTTCAACCCATCACGCTTCTGCGAGAAAGACTTTA

 AtPAL (1726) CTCAAAAGTGTAGACCGTGAAACAAGTCTACACATACGCGGATGATCCTTGTAGCGCAACG
 BnPAL1-1 (1815) CTCAAAAGTCGTGACCGTGAGCAAGTCTACACGTACGCGGACGACCCATGCAGCGCCACG
 BnPAL1-2 (1808) CTCAAAATCGTTGACCGTGAAACAAGTCTACACGTACGCGGACGATCCATGCAGCGCCACG
 BnPAL2-1 (1837) CTTAAGGTCGTTGATCGTGAAACAAGTGTTCACATACGTTGACGATCCTTGTAGCGCTACG
 BnPAL2-2 (1842) CTTAAGGTCGTTGATCGCGAGCAAGTGTTCACGTACGTTGATGATCCTTGTAGCGCTACG

BrPAL-1 (1717) CTCAAAGTCGTCGACCGTGAGCAAGTCTACACGTACGCGGACGACCCATGCAGCGCCACG
 BrPAL-2 (1717) CTCAAAGTCGTCGACCGTGAGCAAGTCTACACGTACGCGGACGACCCATGCAGCGCCACG
 BrPAL-3 (664) CTCAAAGTCGTTGACCGTGAAACAAGTCTACACGTACGCGGACGATCCATGCAGCGCCACG
 BrPAL-4 (1717) CTCAAAGTCGTCGACCGTGAGCAAGTCTACACGTACGCGGACGACCCATGCAGCGCCACG
 BoPAL-1 (1720) CTTAAGGTCGTTGATCGCGAGCAAGTGTTCACGTACGTGGATGATCCTTGTAGCGCTACG
 BoPAL-2 (1708) CTCAAAGTCGTTGACCGTGAAACAAGTCTACACGTACGCGGACGATCCATGCAGCGCCACG
 BoPAL-3 (1717) CTCAAAGTCGTCGACCGTGAGCAAGTCTACACGTACGCGGACGACCCATGCAGCGCCACG
 BjpAL (1503) CTCAAAGTCGTCGACCGTGAGCAAGTCTACACGTACGCGGACGACCCATGCAGCGCCACG

AtPAL (1786) TACCCGTTGATTCCAGAAGCTGAGACAAGTTATTGTTGACCATGCTTTGATCAATGGTGAG
 BnPAL1-1 (1875) TACCCGTTGATCCAGAAGCTGAGGCAAGTCATCGTTGACCATGCTTTGGTCAACGGTGAG
 BnPAL1-2 (1868) TACCCGTTGATCCAGAAGCTAAGGCAAGTTATCGTTGACCATGCTTTGGTCAACGGTGAG
 BnPAL2-1 (1897) TACCCATTGATGCAGAACTAAGACAAGTTATCGTTGATCACGCGTTATCCAATGGTGAG
 BnPAL2-2 (1902) TACCCGTTGATGCAGAACTGAGACAAGTTATTGTTGATCATGCTTTGTCTAACGGTGAG
 BrPAL-1 (1777) TACCCGTTGATCCAGAAGCTGAGGCAAGTCATCGTTGACCATGCTTTGGTCAACGGTGAG
 BrPAL-2 (1777) TACCCGTTGATCCAGAAGCTGAGGCAAGTCATCGTTGACCATGCTTTGGTCAACGGTGAG
 BrPAL-3 (724) TACCCGTTGATCCAGAAGCTAAGGCAAGTTATCGTTGACCATGCTTTGGTCAACGGTGAG
 BrPAL-4 (1777) TACCCGTTGATCCAGAAGCTGAGGCAAGTCATCGTTGACCATGCTTTGGTCAACGGTGAG
 BoPAL-1 (1780) TACCCGTTGATGCAGAACTGAGACAAGTTATTGTTGATCATGCTTTGTCTAACGGTGAG
 BoPAL-2 (1768) TACCCGTTGATCCAGAAGCTAAGGCAAGTTATCGTTGACCATGCTTTGGTCAACGGTGAG
 BoPAL-3 (1777) TACCCGCTGATTCCAGAAGCTGAGGCAAGTCATCGTTGACCATGCTTTGGTCAACGGTGAG
 BjpAL (1563) TACCCGTTGATCCAGAAGCTGAGGCAAGTCATCGTTGACCATGCTTTGGTCAACGGTGAG

AtPAL (1846) AGTGAGAAGAATGCAGTGACTTCAATCTTCCATAAGATTGGAGCTTTCGAGGAGGAGCTT
 BnPAL1-1 (1935) AGCGAGAAGAATGCAATGACTTCCGATCTTCCATAAGATTGGAGCTTTCGAGGAGGAGCTC
 BnPAL1-2 (1928) AGCGAGAAGAACGCTATGACTTCGATCTTCCACAAGATTGGTGCTTTCGGGGAGGAGCTC
 BnPAL2-1 (1957) ACTGAGAAGAACGCAGTGACTTCCGATCTTCCAAAAGATTGGAGCTTTCGAGGAGGAGCTT
 BnPAL2-2 (1962) ACTGAGAAGAACGCAGTGACTTCCGATCTTCCAAAAGATCGGAGCTTTCGAGGAAGAGCTC
 BrPAL-1 (1837) AGCGAGAAGAATGCAATGACTTCCGATCTTCCATAAGATTGGAGCTTTCGAGGAGGAGCTC
 BrPAL-2 (1837) AGCGAGAAGAATGCAATGACTTCCGATCTTCCATAAGATTGGAGCTTTCGAGGAGGAGCTC
 BrPAL-3 (784) AGCGAGAAGAACGCTATGACTTCGATCTTCCACAAGATTGGTGCTTTCGAGGAGGAGCTC
 BrPAL-4 (1837) AGCGAGAAGAATGCAATGACTTCCGATCTTCCATAAGATTGGAGCTTTCGAGGAGGAGCTC
 BoPAL-1 (1840) ACTGAGAAGAACGCAGTGACTTCCGATCTTCCAAAAGATCGGAGCTTTCGAGGAAGAGCTC
 BoPAL-2 (1828) AGCGAGAAGAACGCTATGACTTCCGATCTTCCACAAGATTGGTGCTTTCGAGGAGGAGCTC
 BoPAL-3 (1837) AGCGAGAAGAATGCGATGACTTCCGATCTTCCATAAGATTGGGGCTTTCGAGGAGGAGCTC
 BjpAL (1623) AGCGAGAAGAATGCAATGACTTCCGATCTTCCATAAGATTGGAGCTTTCGAGGAGGAGCTC

AtPAL (1906) AAGGCGGTGCTACCTAAAGAAGTGGAGGCAGCTAGAGCGGCGTATGATAACGGAACAGCT
 BnPAL1-1 (1995) AAGGCGGTGCTACCTAAAGAAGTGGAGGCAGCTAGAGCGGCGTATGATAACGGAACAGCT
 BnPAL1-2 (1988) AAGGCGGTGCTTCCCTGACGAAGTGGAGGCAGCTAGAGCGGCGTATGATAACGGGACATCT
 BnPAL2-1 (2017) AAGATGGTGCTTCCCTAAGGAAGTGGATGCGACTAGAGAGGCTTACGGTAATGGAACGGCG
 BnPAL2-2 (2022) AAGATGGTGCTCCCTAAAGAAGTGGATGCGGCTAGAGAGGCTTACGGTAACGGAACGGCG
 BrPAL-1 (1897) AAGGCGGTGCTACCTAAAGAAGTGGAGGCAGCTAGAGCGGCGTATGATAACGGAACAGCT
 BrPAL-2 (1897) AAGGCGGTGCTACCTAAAGAAGTGGAGGCAGCTAGAGCGGCGTATGATAACGGAACAGCT
 BrPAL-3 (844) AAGGCGGTGCTTCCCTGATGAAGTGGAGGCAGCTAGAGTGGCGTACGATAACGGGACATCT
 BrPAL-4 (1897) AAGGCGGTGCTACCTAAAGAAGTGGAGGCAGCTAGAGCGGCGTATGATAACGGAACAGCT
 BoPAL-1 (1900) AAGATGGTGCTCCCTAAAGAAGTGGATGCGGCTAGAGAGGCTTACGGTAACGGAACGGCG
 BoPAL-2 (1888) AAGGCGGTGCTTCCCTGACGAAGTGGAGGCAGCTAGAGTGGCGTATGATAACGGGACATCT
 BoPAL-3 (1897) AAGGCGGTGCTACCTAAAGAAGTGGAGGCAGCTAGAGCGGCGTATGATAACGGAACAGCT
 BjpAL (1683) AAGGCGGTGCTACCTAAAGAAGTGGAGGCAGCTAGAGCGGCGTATGATAACGGAACAGCT

AtPAL (1966) GCTATCCGAACAGGATCAAGGAATGTAGGTCGTATCCATTGTATAGATTTCGTGAGGGAA
 BnPAL1-1 (2055) GCGATACCGAACAGGATCAAGGAGTGTAGGTCGTATCCTTTGTATAGGTTTGTGAGGGAG
 BnPAL1-2 (2048) GCTATACCGAACAGGATCAAGGAGTGTAGGTCGTATCCTTTGTATAGGTTTCGTGAGGGAG
 BnPAL2-1 (2077) GCGATTCCGAACAGGATTAAGGAATGTCGGTCTTATCCATTATATAAGTTTGTGAGGGAA
 BnPAL2-2 (2082) GCGATTCCGAACAGGATTAAGGAATGTCGGTCTTACCCGTTGTATAAGTTTCGTGAGGGAA
 BrPAL-1 (1957) GCGATACCGAACAGGATCAAGGAGTGTAGGTCGTATCCTTTGTATAGGTTTGTGAGGGAG
 BrPAL-2 (1957) GCGATACCGAACAGGATCAAGGAGTGTAGGTCGTATCCTTTGTATAGGTTTGTGAGGGAG
 BrPAL-3 (904) GCTATACCGAACAGGATCAAGGAGTGTAGGTCGTATCCTTTGTATAGGTTTCGTGAGGGAG
 BrPAL-4 (1957) GCGATACCGAACAGGATCAAGGAGTGTAGGTCGTATCCTTTGTATAGGTTTGTGAGGGAG
 BoPAL-1 (1960) GCGATTCCGAACAGGATTAAGGAATGTCGGTCTTACCCGTTGTATAAGTTTCGTGAGGGAA
 BoPAL-2 (1948) GCTATACCGAACAGGATCAAGGAGTGTAGGTCGTATCCTTTGTATAGGTTTCGTGAGGGAG
 BoPAL-3 (1957) GCGATACCGAACAGGATCAAGGAGTGTAGGTCGTATCCTTTGTATAGGTTTGTGAGGGAG

BjPAL (1743) GCGATACCGAACAGGATCAAGGAGTGTAGGTCTGATCCTTTGTATAGTTTGTGAGGGAG

AtPAL (2026) GAGCTTGGAAACAGAGCTTTTGACCGGAGAGAAAAGTGACGTCGCCTGGAGAAGAGTTTCGAC
BnPAL1-1 (2115) GAGCTTGGAAACAGAGCTTTTGACCGGAGAGAAAAGCGACGTCGCCCGGAGAAGAGTTTGAT
BnPAL1-2 (2108) GAGCTTGGAACTGAGCTTTTGACCGGAGAGAAAAGTGACGTCGCCCGGAGAAGAGTTTGAT
BnPAL2-1 (2137) GAGCTCGGGACGAAGTTGCTGACCGGAGAGAAAAGTTGTCTCTCCGGGAGAGGAGTTTGAT
BnPAL2-2 (2142) GAGCTTGGAAACGAAGCTGTTGACCGGAGAGAAAAGTTGTGTCTCCGGGAGAGGAGTTTGAT
BrPAL-1 (2017) GAGCTTGGAAACAGAGCTTTTGACCGGAGAGAAAAGCGACGTCGCCCGGAGAAGAGTTTGAT
BrPAL-2 (2017) GAGCTTGGAAACAGAGCTTTTGACCGGAGAGAAAAGCGACGTCGCCCGGAGAAGAGTTTGAT
BrPAL-3 (964) GAGCTTGGAAACAGAGCTTTTGACCGGAGAGAAAAGTGACGTCGCCCGGAGAAGAGTTTGAT
BrPAL-4 (2017) GAGCTTGGAAACAGAGCTTTTGACCGGAGAGAAAAGCGACGTCGCCCGGAGAAGAGTTTGAT
BoPAL-1 (2020) GAGCTTGGAAACGAAGCTGTTGACCGGAGAGAAAAGTTGCTGTCTCCGGGAGAGGAGTTTGAT
BoPAL-2 (2008) GAGCTTGGAACTGAGCTTTTGACCGGAGAGAAAAGTGACGTCGCCCGGAGAAGAGTTTGAT
BoPAL-3 (2017) GAGCTTGGAAACAAAGCTTTTGACCGGAGAGAAAAGCGACGTCGCCCGGAGAAGAGTTTGAT
BjPAL (1803) GAGCTTGGAAACAGAGCTTTTGACCGGAGAGAAAAGCGACGTCGCCCGGAGAAGAGTTTGAT

AtPAL (2086) AAGGTTTTACGGCGATTTGTGAAGGTAATAATCATTGATCCGATGATGGAATGTCTCAAC
BnPAL1-1 (2175) AAGGTTTTACGGCGATTTGTGAAGGGAAGATTATTGATCCGTTGATGGAGTGTCTCGAT
BnPAL1-2 (2168) AAGGTTTTACGGCGATATGTGAAGGGAAGATCATTGATCCGTTGATGGAGTGTCTCAGT
BnPAL2-1 (2197) AAGGTGTTCACTGCAATGTGTGAAGGTAAGATTATTGATCCATTGATGGATTGTCTCAAG
BnPAL2-2 (2202) AAGGTGTTCACTGCAATGTGTGAAGGTAAGATCATTGATCCGTTGATGGAGTGCCTCAAG
BrPAL-1 (2077) AAGGTTTTACGGCGATTTGTGAAGGGAAGATTATTGGTCCGTTGATGGAGTGTCTCGAT
BrPAL-2 (2077) AAGGTTTTACGGCGATCTGTGAAGGGAAGATTATTGATCCGTTGATGGAGTGTCTCGAT
BrPAL-3 (1024) AAGGTTTTACGGCGATATGTGAAGGGAAGATCATTGATCCGTTGATGGAGTGTCTCAGT
BrPAL-4 (2077) AAGGTTTTACGGCGATATGTGAAGGGAAGATTATTGATCCGTTGATGGAGTGTCTCGAT
BoPAL-1 (2080) AAGGTGTTCACTGCAATGTGTGAAGGTAAGATCATTGATCCGTTGATGGAGTGCCTCAAG
BoPAL-2 (2068) AAGGTTTTACGGCGATATGTGAAGGGAAGATCATTGATCCGTTGATGGAGTGTCTCAGT
BoPAL-3 (2077) AAGGTTTTACGGCGATTTGTGAAGGGAAGATTATTGATCCGTTGATGGAGTGTCTCGAT
BjPAL (1863) AAGGTTTTACGGCGATCTGTGAAGGGAAGATTATTGGTCCGTTGA-----

AtPAL (2146) GAGTGAACGGAGCTCCCATTCCAATATGTTAA-----
BnPAL1-1 (2235) GAGTGAACGGAGCTCCCATTCCTATATGTTAAGAGTGATTAAGGTTCTCTGTTTTTTT
BnPAL1-2 (2228) GAGTGAACGGAGCTCCCATTCCAATATGCTAAGAGTGAAGGGTTCTGTTTTTTTTTTA
BnPAL2-1 (2257) GAATGAACGGAGCTCCCATTCCTATATGTTAAGAGAGCCTTCCTCTGTTATGCTCTGTT
BnPAL2-2 (2262) GAATGAACGGAGCTCCGATTCGATATGCTAAGACATCATTCCCTCTGTTTT--TTGTT
BrPAL-1 (2137) GAGTGAACGGAGCTCCCATTCCTATATGTTAA-----
BrPAL-2 (2137) GAGTGAACGGAGCTCCCATTCCTATATGTTAA-----
BrPAL-3 (1084) GAGTGAACGGAGCTCCCATTCCTATGCTAA-----
BrPAL-4 (2137) GAGTGAACGGAGCTCCCATTCCTATATGTTAA-----
BoPAL-1 (2140) GAATGAACGGAGCTCCCATTCGATATGTTAA-----
BoPAL-2 (2128) GAGTGAACGGAGCTCCCATTCCTATGCTAA-----
BoPAL-3 (2137) GAGTGAACGGAGCTCCCATTCCTATATGTTAA-----
BjPAL (1909) -----

AtPAL (2179) -----
BnPAL1-1 (2295) TTTTACTATAAAGTTTTATTTTTTAAATGTCTGAATAATTTTACCAAATGATTCCTGT
BnPAL1-2 (2288) CTACAAAAGTTCTTTTTTTTTTCCCTTTAAATATCTGAATAATTTGTAATAATGGTACT
BnPAL2-1 (2317) CTGTTTTGTCCAGCTCAGTTTTGTGTCTTTTGCTTTTGAATTTGAGTGTAAATGCA
BnPAL2-2 (2320) GC-TTTTACCTTTTTTATATGTTTGAATTGAGTGTTTTATCAGTGAGTAATTGTAATGTA
BrPAL-1 (2170) -----
BrPAL-2 (2170) -----
BrPAL-3 (1117) -----
BrPAL-4 (2170) -----
BoPAL-1 (2173) -----
BoPAL-2 (2161) -----
BoPAL-3 (2170) -----
BjPAL (1909) -----

AtPAL (2179) -----
BnPAL1-1 (2355) GAAGTGGTTTCTGTCTTTGTCTAGTTTATAAATCTGTAAAACCTCATTGTAAGTTCTCAA
BnPAL1-2 (2348) CTGTGAAGTCTTTTTTATTTGTCTAATTCCAAAGTTGTTTTATAAACTAAAAA
BnPAL2-1 (2377) ATGGTGTCACTTTGTATAATATATATGAAAATACGTGTAATTCTCAAAAAAAAAAAAA
BnPAL2-2 (2379) ATGGTGTCACTTTGTATGATATATATGAAAATCACGTGTAACATAAAAAAAAAAAAA

BrPAL-1 (2170) -----
 BrPAL-2 (2170) -----
 BrPAL-3 (1117) -----
 BrPAL-4 (2170) -----
 BoPAL-1 (2173) -----
 BoPAL-2 (2161) -----
 BoPAL-3 (2170) -----
 BjPAL (1909) -----

AtPAL (2179) -----
 BnPAL1-1 (2415) ATGAACATTTTTTTCTTGTACAAGTGTGAAATGATACATTTTGTCAAAAAAAAAAAAA
 BnPAL1-2 (2408) AAAAAAAAAAAAAA-----
 BnPAL2-1 (2437) AAAAAAAA-----
 BnPAL2-2 (2439) AAAAAAAA-----
 BrPAL-1 (2170) -----
 BrPAL-2 (2170) -----
 BrPAL-3 (1117) -----
 BrPAL-4 (2170) -----
 BoPAL-1 (2173) -----
 BoPAL-2 (2161) -----
 BoPAL-3 (2170) -----
 BjPAL (1909) -----

AtPAL (2179) -----
 BnPAL1-1 (2475) AAAAAAAAAAAAAA
 BnPAL1-2 (2422) -----
 BnPAL2-1 (2445) -----
 BnPAL2-2 (2447) -----
 BrPAL-1 (2170) -----
 BrPAL-2 (2170) -----
 BrPAL-3 (1117) -----
 BrPAL-4 (2170) -----
 BoPAL-1 (2173) -----
 BoPAL-2 (2161) -----
 BoPAL-3 (2170) -----
 BjPAL (1909) -----

2. BnC4H

AtC4H (1) -----
 BnC4HA (1) -----AGCAGCTCCTTCTGCTT-T
 BnC4HB (1) -----TCAGCAGCTCCTTCTGCTT-T
 Br-cr-C4HL (1) -----
 BrA-C4HL (1) -----
 Br-sk-C4HL (1) -----
 BcCyp450_C4H (1) CCTTATTTAACTCATCTAGAGGCCAATCGGCCATCACGCTCAGCAGCTTCTTCTGCTTCT
 BrC4H(DQ457008) (1) -----
 BrC4H-1 (1) -----
 BrC4H-2 (1) -----
 BrC4H-3 (1) -----
 BrC4H-4 (1) -----
 BrC4H-5 (1) -----
 BoC4H-1 (1) -----
 BoC4H-2 (1) -----
 BoC4H-3 (1) -----
 BoC4H-4 (1) -----
 BoC4H-5 (1) -----

AtC4H (1) -----
 BnC4HA (19) CTCTCACATTTGCCTGAAAATCAA-----TCAATCACTGTAACAACAAAGAAAA-TC
 BnC4HB (21) CTCTCACATTTGCCTGAAAATCAA-----TCAATCACTGTAACAACAAAGAAAA-TC
 Br-cr-C4HL (1) --CTCACATTTGCCTGAAAATCAACCAATCAATCAATCACTGTAATAACAAAAAATC
 BrA-C4HL (1) --CTCACATTTGCCTGAAAATCAACCAATCAATCAATCACTGTAATAACAAAAA--TC
 Br-sk-C4HL (1) --CTCACATTTGCCTGAAAATCAACCAATCAATCAATCACTGTAATAACAAAAA--TC

BrC4H-5	(89)	TACTAAAACCTACCTCCCGGTCCTATACCGATACCAATCTTCGGAAACTGGCTCCAGGTCC
BoC4H-1	(89)	AACTGAAGCTACCTCCTGGTCCTATACCGGTTCCGGTCTTCGGAAACTGGCTCCAGGTCC
BoC4H-2	(89)	AACTGAAACTACCTCCCGGTCCTATACCGATACCAATCTTCGGAAACTGGCTCCAGGTCC
BoC4H-3	(89)	AGCTGAAGCTCCCTCCAGGTCCATGCGGATTCCAATATTCGGAAACTGGCTCCAAGTCC
BoC4H-4	(89)	AACTGAAGCTACCTCCTAGTCCCTATACCTATTCCCTATCTTCGGAAACTGGCTCCAGGTCC
BoC4H-5	(89)	AACTAAAACCTACCTCCTGGTCCTATCCCCATTCCCATCTTCGGAAACTGGCTCCAAGTCC
AtC4H	(149)	GAGATGATCTCAACCACCGTAACCTCGTTCGACTACGCTAAGAAATTCGGCGATCTCTTCC
BnC4HA	(242)	GAGACGATCTAAACCACCGCAACCTCGTTCGACTACGCTAAAAAATTCGGCGACCTCTTCC
BnC4HB	(244)	GAGATGATCTCAACCACCGTAACCTCGTTCGACTACGCTAAGAAATTCGGGAGACCTCTTCC
Br-cr-C4HL	(238)	GAGACGATCTAAACCACCGTAACCTCGTTCGACTACGCTAAGAAATTCGGGAGACCTCTTCC
BrA-C4HL	(236)	GAGACGATCTAAACCACCGTAACCTCGTTCGACTACGCTAAAAAATTCGGGAGACCTCTTCC
Br-sk-C4HL	(236)	GAGACGATCTAAACCACCGTAACCTCGTTCGACTACGCTAAAAAATTCGGGAGACCTCTTCC
BcCyp450_C4H	(298)	GAGACGATCTAAACCACCGTAACCTCGTTCGACTACGCTAAAAAATTCGGGAGACCTCTTCC
BrC4H(DQ457008)	(237)	GAGACGATCTAAACCACCGTAACCTCGTTCGACTACGCTAAGAAATTCGGGAGACCTCTTCC
BrC4H-1	(149)	GAGACGATCTAAACCACCGTAACCTCGTTCGACTACGCTAAAAAATTCGGGAGACCTCTTCC
BrC4H-2	(149)	GAGATGATCTCAACCACCGTAACCTCGTTCGACTACGCTAAAAAATTCGGGAGACCTCTTCC
BrC4H-3	(149)	GAGATGATCTCAACCACCGTAACCTCGTTCGACTACGCTAAGAAATTCGGGAGACCTCTTCC
BrC4H-4	(149)	GAAATGATCTAAATCACCGTAACCTCGTTCGACTACGCTAAGAAATTCGGGAGACCTCTTCC
BrC4H-5	(149)	GAGACGATCTCAACCACCGTAACCTCGTTCGACTACGCTAAAAAATTCGGGAGACCTCTTCC
BoC4H-1	(149)	GAGATGATCTAAACCACCGTAACCTCGTAGACTACGCTAAGAAATTCGGGAGACCTCTTCC
BoC4H-2	(149)	GAGACGATCTCAACCACCGTAACCTCGTTCGACTACGCTAAAAAATTCGGGAGACCTCTTCC
BoC4H-3	(149)	GAGACGATCTAAACCACCGCAACCTCGTTCGACTACGCTAAAAAATTCGGGAGACCTCTTCC
BoC4H-4	(149)	GAGATGATCTCAACCACCGTAACCTCGTTCGACTACGCTAAAAAATTCGGGAGACCTCTTCC
BoC4H-5	(149)	GAGATGATCTCAACCACCGCAACCTCGTTCGACTACGCTAAGAAATTCGGGAGACCTCTTCC
AtC4H	(209)	TCCTCCGTATGGGTCAAGCAAACCTAGTTCGTCGTCCTCACCAGGATCTAACAAAGGAAG
BnC4HA	(302)	TCCTCAGGATGGGCCAGCGAAACCTAGTTCGTCGTCCTCACCAGGATCTAACAAAGGAAG
BnC4HB	(304)	TCCTCCGTATGGGCCAGCGAAACCTAGTTCGTCGTCCTCCTCCCAACTTACCAAAGGAAG
Br-cr-C4HL	(298)	TCCTCAGGATGGGCCAGCGAAACCTAGTTCGTCGTCCTCCTCCCAACTCACCAGGAAG
BrA-C4HL	(296)	TCCTCAGGATGGGCCAGCGAAACCTAGTTCGTCGTCCTCCTCCCAACTCACCAGGAAG
Br-sk-C4HL	(296)	TCCTCAGGATGGGCCAGCGAAACCTAGTTCGTCGTCCTCCTCCCAACTCACCAGGAAG
BcCyp450_C4H	(358)	TCCTCAGGATGGGCCAGCGAAACCTAGTTCGTCGTCCTCCTCCCAACTCACCAGGAAG
BrC4H(DQ457008)	(297)	TCCTCAGGATGGGCCAGCGAAACCTAGTTCGTCGTCCTCCTCCCAACTCACCAGGAAG
BrC4H-1	(209)	TCCTCAGGATGGGCCAGCGAAACCTAGTTCGTCGTCCTCCTCCCAACTCACCAGGAAG
BrC4H-2	(209)	TTTTCAAGATGGGTCAAGCAAACCTAGTTCGTCGTCCTCCTCCCAACTTACCAAAGGAAG
BrC4H-3	(209)	TCCTCCGTATGGGCCAGAGAAACCTAGTTCGTCGTCCTCCTCACCAACTAACCAAAGGAAG
BrC4H-4	(209)	ACCTAAGGATGGGTCAAGCAAACCTAGTTCGTCGTCCTCCTCACCAGGATCTAGCCAAAGGAAG
BrC4H-5	(209)	TCCTCAGGATGGGACAGCGAAACCTAGTTCGTCGTCCTCCTCCCAACTAACCAAAGGAAG
BoC4H-1	(209)	ACTTACGGATGGGTCAAGCAAACCTAGTTCGTCGTCCTCCTCACCAGGATCTAGCCAAAGGAAG
BoC4H-2	(209)	TCCTCAGGATGGGACAGCGAAACCTAGTTCGTCGTCCTCCTCACCAGGATCTAACCAAAGGAAG
BoC4H-3	(209)	TCCTCAGGATGGGCCAGCGAAACCTAGTTCGTCGTCCTCCTCCCAACTCACCAGGAAG
BoC4H-4	(209)	TTTTCAAGATGGGTCAAGCAAACCTAGTTCGTCGTCCTCCTCACCAGGATCTAACCAAAGGAAG
BoC4H-5	(209)	TCCTCCGTATGGGACAGAGAAACCTAGTTCGTCGTCCTCCTCCCAACTCACCAGGAAG
AtC4H	(269)	TGCTCCCTCACTCAAGGCGTTGAGTTGGATCCAGAACGAGAAACGTCGTGTTTCGACATTT
BnC4HA	(362)	TCCTCCACACGCAGGGAGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
BnC4HB	(364)	TGCTCCACACGCAGGGAGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
Br-cr-C4HL	(358)	TCCTCCACACGCAGGGGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
BrA-C4HL	(356)	TCCTCCACACGCAGGGGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
Br-sk-C4HL	(356)	TCCTCCACACGCAGGGGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
BcCyp450_C4H	(418)	TCCTCCACACGCAGGGGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
BrC4H(DQ457008)	(357)	TCCTCCACACGCAGGGGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
BrC4H-1	(269)	TCCTCCACACGCAGGGGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
BrC4H-2	(269)	TACTCCACACACAAGGCGTAGAGTTTGGTTCCCGACACAGAAACATGGTGTACGATATCT
BrC4H-3	(269)	TGCTCCACACGCAGGGGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
BrC4H-4	(269)	TGCTCCAAACGCAAGGTGTAGAGTTTGGATCCAGATACAGAAACATCGTCTACGACATCT
BrC4H-5	(269)	TGCTCCACACGCAGGGGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
BoC4H-1	(269)	TGCTCCAAACACAAGGTGTAGAGTTTGGATCCAGATACAGAAACATCGTCTACGACATCT
BoC4H-2	(269)	TGCTCCACACGCAGGGGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
BoC4H-3	(269)	TCCTCCACACGCAGGGGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT
BoC4H-4	(269)	TGCTCCACACACAAGGCGTAGAGTTTGGTTCCCGACACAGAAACATGGTGTACGATATCT
BoC4H-5	(269)	TGCTCCACACGCAGGGGTCGAGTTCGGATCTCGAACGAGAAACGTCGTCTTCGACATCT

AtC4H (329) TCACGGGAAAGGTCAAGATATGGTGTTCACCTGTTACGGCGAGCATTGGAGGAAGATGA
BnC4HA (422) TCACGGGCAAAGGGCAGGACATGGTGTTCACCGTCTACGGAGAGCACTGGCGCAAGATGA
BnC4HB (424) TCACAGGCAAAGGACAGGACATGGTGTTCACCTGTTACGGCGAACACTGGCGTAAGATGA
Br-cr-C4HL (418) TCACGGGAAAGGACAGGACATGGTGTTCACCGTCTACGGAGAGCACTGGCGCAAGATGA
BrA-C4HL (416) TCACGGGCAAAGGGCAGGACATGGTGTTCACCGTCTACGGAGAGCACTGGCGCAAGATGA
Br-sk-C4HL (416) TCACGGGCAAAGGGCAGGACATGGTGTTCACCGTCTACGGAGAGCACTGGCGCAAGATGA
BcCyp450_C4H (478) TCACGGGCAAAGGGCAGGACATGGTGTTCACCGTCTACGGAGAGCACTGGCGCAAGATGA
BrC4H(DQ457008) (417) TCACGGGAAAGGACAGGACATGGTGTTCACCGTCTACGGTGTGAGCACTGGAGGAAGATGC
BrC4H-1 (329) TCACGGGCAAAGGGCAGGACATGGTGTTCACCGTCTACGGAGAGCACTGGCGCAAGATGA
BrC4H-2 (329) TCACGGGAAGGGACAAGACATGGTGTTCACCGTGTATGGTGAGCACTGGAGGAAGATGC
BrC4H-3 (329) TCACAGGCAAAGGACAGGACATGGTGTTCACCGTGTACGGCGAACACTGGCGTAAGATGC
BrC4H-4 (329) TCACTGGGAAAGGACAAGACATGGTGTTCACCTGTTACGGTGTGAGCACTGGAGGAAGATGA
BrC4H-5 (329) TCACGGGCAAAGGGCAGGACATGGTGTTCACCGTCTACGGAGAGCACTGGAGGAAGATGA
BoC4H-1 (329) TCACTGGGAAAGGACAAGACATGGTGTTCACCTGTTACGGTGTGAGCACTGGAGGAAGATGC
BoC4H-2 (329) TCACGGGCAAAGGGCAGGACATGGTGTTCACCGTCTACGGCGAGCACTGGAGGAAGATGA
BoC4H-3 (329) TCACGGGCAAAGGGCAGGACATGGTGTTCACCGTATAACGGAGAGCACTGGCGCAAGATGA
BoC4H-4 (329) TCACGGGAAGGGACAAGACATGGTGTTCACCGTGTACGGCGAGCACTGGAGGAAGATGC
BoC4H-5 (329) TCACAGGCAAAGGACAGGACATGGTGTTCACCGTCTACGGTGTGAGCACTGGCGTAAGATGA

AtC4H (389) GAAGAATCATGACGGTTCCTTTCTTCACCAACAAAGTTGTTCAACAGAATCGTGAAGGTT
BnC4HA (482) GGAGGATCATGACGGTTCCTTTCTTCACCAACAAGGTGGTTTCAGCAGAAACAGAGAAGGAT
BnC4HB (484) GAAGGATCATGACGGTTCCTTTCTTCACCAACAAGGTTGTGCAACGGAAACAGAGAAGGAT
Br-cr-C4HL (478) GACGGATCATGACGGTTCCTTTCTTCACCAACAAGGTGGTTTCAGCAGAAACAGAGAAGGAT
BrA-C4HL (476) GACGGATCATGACGGTTCCTTTCTTCACCAACAAGGTGGTTTCAGCAGAAACAGAGAAGGAT
Br-sk-C4HL (476) GACGGATCATGACGGTTCCTTTCTTCACCAACAAGGTGGTTTCAGCAGAAACAGAGAAGGAT
BcCyp450_C4H (538) GACGGATCATGACGGTTCCTTTCTTCACCAACAAGGTGGTTTCAGCAGAAACAGAGAAGGAT
BrC4H(DQ457008) (477) GACGTATCATGACGGTTCCTTTCTTCACCAACAAAGTTGTTTCAGCAGAAATCATGAAGGTT
BrC4H-1 (389) GACGGATCATGACGGTTCCTTTCTTCACCAACAAGGTGGTTTCAGCAGAAACAGAGAAGGAT
BrC4H-2 (389) GACGTATCATGACGGTTCCTTTCTTCACCAACAAGGTGGTTTCAGCAGAAATCATGAAGGTT
BrC4H-3 (389) GTCGGATCATGACGGTTCCTTTCTTCACCAACAAGGTTGTGTCAGCGGAAACAGAGAAGGAT
BrC4H-4 (389) GACGTATCATGACGGTTCCTTTCTTCACCAACAAGGTGGTTTCAGCAGAAACCGGGAAGGAT
BrC4H-5 (389) GGAGGATCATGACGGTTCCTTTCTTCACCAACAAGGTTGTGTCAGCGGAAACAGAGAAGGAT
BoC4H-1 (389) GACGTATCATGACGGTTCCTTTCTTCACCAACAAGGTGGTTTCAGCAGAAACCGGGAAGGAT
BoC4H-2 (389) GAAGGATCATGACGGTTCCTTTCTTCACCAACAAGGTTGTGTCAGCGGAAACAGAGAAGGAT
BoC4H-3 (389) GACGGATCATGACGGTTCCTTTCTTCACCAACAAGGTGGTTTCAGCAGAAACAGAGAAGGAT
BoC4H-4 (389) GACGTATCATGACGGTTCCTTTCTTCACCAACAAAGTTGTTTCAGCAGAAATCATGAAGGAT
BoC4H-5 (389) GAAGGATCATGACGGTTCCTTTCTTCACCAACAAAGTTGTGTCAGCGGAAACAGGGAAGGTT

AtC4H (449) GGGAGTTTGAAGCAGCTAGTGTGTTGAAGATGTTAAGAAGAATCCAGATTCTGCTACGA
BnC4HA (542) GGGAGTTTGAAGCCGCGAGCGTGGTGGAGGATGTCAAGAAGAATCCTGACTCCGCGACCA
BnC4HB (544) GGGAGTTTGAAGCTGCGAGTGTGCTGGAGGACGTGAAGAAGAATCCTGACTCCGCGACCA
Br-cr-C4HL (538) GGGAGTTTGAAGCCGCGAGCGTGGTGGAGGATGTGAAGAAGAATCCTGACTCCGCGACCA
BrA-C4HL (536) GGGAGTTTGAAGCCGCGAGCGTGGTGGAGGATGTGAAGAAGAATCCTGACTCCGCGACCA
Br-sk-C4HL (536) GGGAGTTTGAAGCCGCGAGCGTGGTGGAGGATGTGAAGAAGAATCCTGACTCCGCGACCA
BcCyp450_C4H (598) GGGAGTTTGAAGCCGCGAGCGTGGTGGAGGATGTGAAGAAGAATCCTGACTCCGCGACCA
BrC4H(DQ457008) (537) GGGAGTTTGAAGCCGCGAGCGTGGTGGAGGATGTGAAGAAGAATCCTGACTCCGCGACCA
BrC4H-1 (449) GGGAGTTTGAAGCCGCGAGCGTGGTGGAGGATGTGAAGAAGAATCCTGACTCCGCGACCA
BrC4H-2 (449) GGGAGTTTGAAGCCGCGAGCGTGGTGGAGGATGTGAAGAAGAATCCTGACTCCGCGACCA
BrC4H-3 (449) GGGAGTTTGAAGCCGCGAGTGTGCTGGAGGACGTGAAGAAGAATCCTGACTCCGCGACCA
BrC4H-4 (449) GGGAGTTTGAAGCTGCGAGCGTGGTGGAGGAAAGTGAAGAAGAATCCTGACTCCGCGACCA
BrC4H-5 (449) GGGAGCTTGAAGCCGCGAGCGTGGTGGAGGACGTGAAGAAGAATCCTGACTCCGCGACCA
BoC4H-1 (449) GGGAGTTTGAAGCTGCGAGCGTGGTGGAGGAAAGTGAAGAAGAATCCTGACTCCGCGACCA
BoC4H-2 (449) GGGAGTTTGAAGCCGCGAGCGTGGTGGAGGAAAGTGAAGAAGAATCCTGACTCCGCGACCA
BoC4H-3 (449) GGGAGTTTGAAGCCGCGAGCGTGGTGGAGGATGTGAAGAAGAATCCTGACTCCGCGACCA
BoC4H-4 (449) GGGAGTTTGAAGCCGCGAGCGTGGTGGAGGATGTGAAGAAGAATCCTGACTCCGCGACCA
BoC4H-5 (449) GGGAGTTTGAAGCTGCGAGCGTGGTGGAGGACGTGAAGAAGAATCCTGACTCCGCGACCA

AtC4H (509) AAGGAATCGTGTGAGGAAACGTTTTCGCAATTGATGATGTATAACAATATGTTCCGTATCA
BnC4HA (602) AAGGGATCGTGTGAGGAAACGTTTTCGAGTTGATGATGTACAACAACATGTTCCGTATCA
BnC4HB (604) AAGGGATTGTGTTGAGGAAACGTTTTCGAGTTGATGATGTACAACAACATGTTCCGTATCA
Br-cr-C4HL (598) AAGGGATCGTGTGAGGAAACGTTTTCGAGTTGATGATGTACAACAACATGTTCCGTATCA
BrA-C4HL (596) AAGGGATCGTGTGAGGAAACGTTTTCGAGTTGATGATGTACAACAACATGTTCCGTATCA

Br-sk-C4HL (596) AAGGGATCGTGTTGAGGAAGCGCTTGCAGTTGATGATGTACAACAACATGTTCCGTATCA
 BcCyp450_C4H (658) AAGGGATCGTGTTGAGGAAGCGCTTGCAGTTGATGATGTACAACAACATGTTCCGTATCA
 BrC4H(DQ457008) (597) AAGGGATCGTGGTGAGGAAGCGTTTGCAGTTGATGGTGTATAACAACATGTTCCGTATCA
 BrC4H-1 (509) AAGGGATCGTGTTGAGGAAGCGCTTGCAGTTGATGATGTACAACAACATGTTCCGTATCA
 BrC4H-2 (509) AAGGGATCGTGGTGAGGAAGCGTTTGCAGTTGATGGTGTATAACAACATGTTCCGTATCA
 BrC4H-3 (509) AAGGGATGATATTGAGGAAACGCTTGCAGTTGATGATGTACAACAACATGTTCCGTATCA
 BrC4H-4 (509) AAGGGATCGTGGCGAGGAAGCGTTTGCAGTTGATGATGTACAACAACATGTTCCGTATCA
 BrC4H-5 (509) AAGGGATCGTGTTGAGGAAGCGCTTGCAGTTGATGATGTACAACAACATGTTCCGTATCA
 BoC4H-1 (509) AAGGGATCGTGGTGAGGAAGCGTTTGCAGTTGATGATGTACAACAACATGTTCCGTATCA
 BoC4H-2 (509) AAGGGATCGTGTTGAGGAAGCGCTTGCAGTTGATGATGTACAACAACATGTTCCGTATCA
 BoC4H-3 (509) AAGGGATCGTGTTGAGGAAGCGCTTGCAGTTGATGATGTACAACAACATGTTCCGTATCA
 BoC4H-4 (509) AAGGGATCGTGGTGAGGAAGCGTTTGCAGTTGATGGTGTATAACAACATGTTCCGTATCA
 BoC4H-5 (509) AAGGGATGATGTTAAGGAAACGCTTGCAGTTGATGATGTACAACAACATGTTCCGTATCA

AtC4H (569) TGTTTCGATAGAAGATTTGAGAGTGAGGATGATCCTCTTTTCCTTAGGCTTAAGGCCTTGA
 BnC4HA (662) TGTTTCGATAGGAGGTTTGTATAGTGAGGATGATCCCTGTTTATAAGGCTTAAGGCCTTGA
 BnC4HB (664) TGTTTCGATAGAAGTTTCGAGAGTGAGGATGATCCTCTGTTTCCTCAGGCTCAAAGCCTTGA
 Br-cr-C4HL (658) TGTTTCGATAGGAGGTTTGTATAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BrA-C4HL (656) TGTTTCGATAGGAGGTTTGTATAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 Br-sk-C4HL (656) TGTTTCGATAGGAGGTTTGTATAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BcCyp450_C4H (718) TGTTTCGATAGGAGGTTTGTATAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BrC4H(DQ457008) (657) TGTTTCGATAGAAGGTTTTCGAGAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BrC4H-1 (569) TGTTTCGATAGGAGGTTTGTATAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BrC4H-2 (569) TGTTTCGATAGAAGGTTTTCGAGAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BrC4H-3 (569) TGTTTCGATAGAAGGTTTTCGAGAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BrC4H-4 (569) TGTTTCGATAGAAGGTTTTCGAGAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BrC4H-5 (569) TGTTTCGATAGAAGGTTTTCGAGAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BoC4H-1 (569) TGTTTCGATAGAAGGTTTTCGAGAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BoC4H-2 (569) TGTTTCGATAGAAGGTTTTCGAGAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BoC4H-3 (569) TGTTTCGATAGGAGGTTTGTATAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BoC4H-4 (569) TGTTTCGATAGAAGGTTTTCGAGAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA
 BoC4H-5 (569) TGTTTCGATAGAAGGTTTTCGAGAGTGAGGATGATCCTCTGTTTATAAGGCTTAAGGCCTTGA

AtC4H (629) ATGGTGAGAGAAGTCGATTAGCTCAGAGCTTTGAGTATAACTATGGAGATTTTCATCCCTA
 BnC4HA (722) ACGGAGAGAGGAGCAGGTTGGCTCAGAGCTTTGAGTATAACTACGGAGACTTCATCCCTA
 BnC4HB (724) ACGGAGAGAGAAGTAGGTTGGCTCAGAGCTTTGAGTATAACTATGGAGACTTCATCCCTA
 Br-cr-C4HL (718) ACGGAGAGAGGAGCAGGTTGGCTCAGAGCTTTGAGTATAACTACGGAGACTTCATCCCTA
 BrA-C4HL (716) ACGGAGAGAGGAGCAGGTTGGCTCAGAGCTTTGAGTATAACTACGGAGACTTCATCCCTA
 Br-sk-C4HL (716) ACGGAGAGAGGAGCAGGTTGGCTCAGAGCTTTGAGTATAACTACGGAGACTTCATCCCTA
 BcCyp450_C4H (778) ACGGAGAGAGGAGCAGGTTGGCTCAGAGCTTTGAGTATAACTACGGAGACTTCATCCCTA
 BrC4H(DQ457008) (717) ACGGAGAGAGGAGCAGGTTGGCTCAGAGCTTTGAGTATAACTATGGAGATTTTCATCCCTA
 BrC4H-1 (629) ACGGAGAGAGGAGCAGGTTGGCTCAGAGCTTTGAGTATAACTACGGAGACTTCATCCCTA
 BrC4H-2 (629) ACGGAGAGAGAGGAGCAGGTTGGCTCAGAGCTTTGAGTATAACTATGGAGATTTTCATCCCTA
 BrC4H-3 (629) ACGGAGAGAGAAGCAGGTTGGCTCAGAGCTTTGAGTATAACTATGGAGACTTCATCCCTA
 BrC4H-4 (629) ACGGGAGAGAAGCAGGTTGGCTCAGAGCTTTGAGTATAACTATGGAGATTTTCATCCCTA
 BrC4H-5 (629) ACGGAGAGAGAAGTAGATTGGCTCAGAGCTTTGAGTATAACTATGGAGATTTTCATCCCTA
 BoC4H-1 (629) ACGGGAGAGAAGCAGGTTGGCTCAGAGCTTTGAGTATAACTATGGAGATTTTCATCCCTA
 BoC4H-2 (629) ACGGAGAGAGAAGCAGGTTGGCTCAGAGCTTCGAGTACAACATGGAGATTTTCATCCCTA
 BoC4H-3 (629) ACGGAGAGAGGAGCAGGTTGGCTCAGAGCTTTGAGTATAACTACGGAGACTTCATCCCTA
 BoC4H-4 (629) ACGGAGAGAGAGGAGCAGGTTGGCTCAGAGCTTTGAGTATAACTATGGAGATTTTCATCCCTA
 BoC4H-5 (629) ACGGAGAGAGAAGCAGGTTGGCTCAGAGCTTTGAGTACAACATGGAGACTTCATCCCTA

AtC4H (689) TCCTTAGACCATTCCCTCAGAGGCTATTTGAAGATTTGTCAAGATGTGAAAGATCGAAGAAC
 BnC4HA (782) TCCTTAGGCCGTTCCCTTAGAGGCTACTTGAAGATCTGTCAAGATGTGAAAGATCGAAGAC
 BnC4HB (784) **TCCTCAGGCCGTTCTG**AGAGGTTACTTGAAGATTTGTCAAGATGTGAAAGATCGAAGAC
 Br-cr-C4HL (778) TCCTTAGGCCGTTCCCTTAGAGGCTACTTGAAGATCTGTCAAGATGTGAAAGATCGAAGAC
 BrA-C4HL (776) TCCTTAGGCCGTTCCCTTAGAGGCTACTTGAAGATCTGTCAAGATGTGAAAGATCGAAGAC
 Br-sk-C4HL (776) TCCTTAGGCCGTTCCCTTAGAGGCTACTTGAAGATCTGTCAAGATGTGAAAGATCGAAGAC
 BcCyp450_C4H (838) TCCTTAGGCCGTTCCCTTAGAGGCTACTTGAAGATCTGTCAAGATGTGAAAGATCGAAGAC
 BrC4H(DQ457008) (777) TCCTTAGGCCGTTCCCTTAGAGGCTACTTGAAGATCTGTCAAGATGTGAAAGATCGAAGAC
 BrC4H-1 (689) TCCTTAGGCCGTTCCCTTAGAGGCTACTTGAAGATCTGTCAAGATGTGAAAGATCGAAGAC
 BrC4H-2 (689) TCCTCAGGCCGTTCTTAGAGGCTACTTGAAGATCTGCCAGGATGTGAAAGATCGAAGAT
 BrC4H-3 (689) TCCTCAGGCCGTTCTTAGAGGCTACTTGAAGATCTGTCAAGATGTGAAAGATAGGAGAC

BrC4H-4 (689) TCCTTAGGCCGTTCCCTTAGAGGCTATTTGAAGAGCTGCCAAGATGTGAAAGAGAGAAGAC
 BrC4H-5 (689) TCCTTAGGCCGTTCCCTTAGAGGCTACTTGAGGATCTGTCAGGATGTGAAAGACAGAAGAT
 BoC4H-1 (689) TCCTTAGGCCGTTCCCTTAGAGGCTATTTGAAGATCTGCCAAGATGTGAAAGAGAGAAGAC
 BoC4H-2 (689) TCCTTAGGCCCTTCCCTTAGAGGCTACTTGAAGATCTGTCAGGATGTGAAAGACAGAAGAC
 BoC4H-3 (689) TCCTTAGGCCGTTCCCTTAGAGGCTACTTGAAGATCTGTCAGGATGTGAAAGATCGAAGAC
 BoC4H-4 (689) TCCTCAGGCCGTTCTTAGAGGGTATTTGAAGATCTGCCAGGATGTGAAAGACCGAAGAT
 BoC4H-5 (689) TCCTTAGGCCGTTCTTAGAGGCTACTTGAAGATTTGTCAAGATGTGAAAGATCGGAGAC

AtC4H (749) TCGCTCTTTTCAAGAAGTACTTTGTTGATGAGAGGAAGCAAATTCGAGTTCTAAGCCTA
 BnC4HA (842) TCGCGTATTCAAGAAGTACTTTGTTGATGAGAGGAAGCAAATTCGCGAGTTCCAAGCCTA
 BnC4HB (844) TATCGCTTTTCAAGAAGTACTTTGTTGATGAGAGGAAGCAGATTTCGAGCTCTAAGCCTA
 Br-cr-C4HL (838) TCGCGCTCTTCAAGAAGTACTTTGTTGACGAGAGGAAGCAAATTCGCGAGTTCCAAGCCTA
 BrA-C4HL (836) TCGCGCTCTTCAAGAAGTACTTTGTTGACGAGAGGAAGCAAATTCGCGAGTTGGAAGCCTA
 Br-sk-C4HL (836) TCGCGCTCTTCAAGAAGTACTTTGTTGACGAGAGGAAGCAAATTCGCGAGTTGGAAGCCTA
 BcCyp450_C4H (898) TCGCGCTCTTCAAGAAGTACTTTGTTGACGAGAGGAAGCAAATTCGCGAGTTGGAAGCCTA
 BrC4H(DQ457008) (837) TAGCGCTCTTCAAGAAGTACTTTGTTGACGAGAGGAAGCAAATTCGCGAGTTCCAAGCCTA
 BrC4H-1 (749) TCGCGCTCTTCAAGAAGTACTTTGTTGACGAGAGGAAGCAAATTCGCGAGTTGGAAGCCTA
 BrC4H-2 (749) TTGCGCTCTTCAAGAAGTACTTTGTTGACGACAGGAAGCAAATTCGCGAGTTGGAAGCCTA
 BrC4H-3 (749) TGTGCTTTTCAAGAAGTACTTTCGTTGAGGAGAGGAAGCAGATTTCGCGCTCTAAGCCTA
 BrC4H-4 (749) TAGCGCTCTTCAAGAAGTACTTTGTTGACGAGAGGAAGGAGATTTCGAGTGCTAAGCCTA
 BrC4H-5 (749) TAGCTCTCTTGAAGAAGTACTTTGTTGACGAGAGGAAGCAAATTCGCAAGTTCCAAGCCTA
 BoC4H-1 (749) TAGCGCTCTTCAAGAAGTACTTTGTTGACGAGAGGAAGGAGATTTCGAGTGCTAAGCCTA
 BoC4H-2 (749) TAGCTCTCTTGAAGAAGTACTTTGTTGACGAGAGGAAGCAAATTCGCGAGTTCTAAGCCTA
 BoC4H-3 (749) TCGCGTATTCAAGAAGTACTTTGTTGATGAGAGGAAGCAAATTCGCGAGTTCCAAGCCTA
 BoC4H-4 (749) TTGCGCTCTTCAAGAAGTACTTTGTTGACGACAGGAAGCAAATTCGCGAGTTCCAAGCCTA
 BoC4H-5 (749) TATCGCTTTTCAAGAAGTACTTTCGTTGAGGAGAGGAAGCAGATTTCGAGCTCTAAGCCTA

AtC4H (809) CAGGTAGTGAAGGATTGAAATGTGCCATTGATCACATCCTTGAAGTGAAGCAGAGGGAG
 BnC4HA (902) CAGGAAGCGAAGGATTGAAATGCGCCATCGATCACATCCTTGTGTGCTCAACAGAAGGGAG
 BnC4HB (904) **CGGTAGCGAGGGTTAAAAAT**GCGCCATTGATCACATCTTGTGCTCAACAGAAGGGGG
 Br-cr-C4HL (898) CAGGAAGCGAAGGATTGAAATGCGCTATTGATCACATCCTTGAAGCTCAACAGAAGGGTG
 BrA-C4HL (896) CAGGAAGCGAAGGATTGAAATGCGCTATTGATCACATCCTTGAAGCTCAACAGAAGGGTG
 Br-sk-C4HL (896) CAGGAAGCGAAGGATTGAAATGCGCTATTGATCACATCCTTGAAGCTCAACAGAAGGGTG
 BcCyp450_C4H (958) CAGGAAGCGAAGGATTGAAATGCGCTATTGATCACATCCTTGAAGCTCAACAGAAGGGTG
 BrC4H(DQ457008) (897) CAGGAAGCGAAGGATTGAAATGCGCTATTGATCACATCCTTGAAGCTCAACAGAAGGGTG
 BrC4H-1 (809) CAGGAAGCGAAGGATTGAAATGCGCTATTGATCACATCCTTGAAGCTCAACAGAAGGGTG
 BrC4H-2 (809) CAGGAGGTGGAGGATTGAAATGCGCCATTGATCACATCCTTGAAGCTCAAAAGAAGGGAG
 BrC4H-3 (809) CGGGTAGCGAAGGGTTGAAATGCGCCATTGATCATATCCTTGTGCTCAACAGAAGGGGG
 BrC4H-4 (809) CGGGAGCG-----TGAAATACGCCATTGATCACATCCTTGAAGCTGAAGAGAAGGGAG
 BrC4H-5 (809) CAGGAAGCGAAGGATTGAAATGCGCCATTGATCATATCATTGAAGCTCAACAGAAGGGAG
 BoC4H-1 (809) CGGGAGCG-----TGAAATACGCCATTGATCACATCCTTGAAGCTGAAGAGAAGGGAG
 BoC4H-2 (809) CAGGAAGCGAAGGACTGAAATGCGCCATTGATCATATCGTTGAAGCACAAACAGAAGGGAG
 BoC4H-3 (809) CAGGAAGCGAAGGATTGAAATGCGCCATTGATCACATCCTTGAAGCTCAACAGAAGGGAG
 BoC4H-4 (809) CAGGAGTTGGAGGATTGAAATGCGCCATTGATCACATCCTTGAAGCTCAAAACAAGGGAG
 BoC4H-5 (809) CGGGTAGCGAGGGTTGAAATGTGCCATCGATCACATCTTGTGCTCAACAGAAGGGGG

AtC4H (869) AAATCAACGAGGACAACGTTCTTTTACATCGTTCGAGAACATCAATGTCGCGCGATTGAGA
 BnC4HA (962) AGATCAACGAGGACAACGTTCTTTTACATCGTTGAGAACATCAATGTCGCTGCTATTGAGA
 BnC4HB (964) AGATCAATGAGGACAACGTTCTTTTACATCGTTGAGAACATTAATGTCGCTGCGATTGAGA
 Br-cr-C4HL (958) AGATCAACGAGGACAACGTTCTTTTACATCGTTGAGAACATCAATGTCGCTGCTATTGAGA
 BrA-C4HL (956) AGATCAACGAGGACAACGTTCTTTTACATCGTTGAGAACATCAATGTCGCTGCTATTGAGA
 Br-sk-C4HL (956) AGATCAACGAGGACAACGTTCTTTTACATCGTTGAGAACATCAATGTCGCTGCTATTGAGA
 BcCyp450_C4H (1018) AGATCAACGAGGACAACGTTCTTTTACATCGTTGAGAACATCAATGTCGCTGCTATTGAGA
 BrC4H(DQ457008) (957) AGATCAACGAGGACAACGTTCTTTTACATCGTTGAGAACATCAATGTCGCTGCTATTGAGA
 BrC4H-1 (869) AGATCAACGAGGACAACGTTCTTTTACATCGTTGAGAACATCAATGTCGCTGCTATTGAGA
 BrC4H-2 (869) AAATCAACGAGGATAACGTTCTTTTACATCGTTGAGAACATCAATGTCGCTGCGATTGAGA
 BrC4H-3 (869) AGATTAATGAGGACAACGTTCTTTTACATCGTTGAGAACATTAATGTCGCTGCGATTGAGA
 BrC4H-4 (863) AAATCAATGCGGACAACGTTCTTTTATATCGTTCGAGAACATCAACGTAGCTGCTATTGAGA
 BrC4H-5 (869) AGATCAACGAGGACAACGTTCTTTTACATCGTTCGAGAACATCAATGTCGCTGCTATTGAGA
 BoC4H-1 (863) AAATCAATGCGGACAACGTTCTTTTATATCGTTCGAGAACATCAACGTAGCTGCTATTGAGA
 BoC4H-2 (869) AGATCAACGAGGACAACGTTCTTTTACATCGTTCGAGAACATCAATGTCGCTGCTATTGAGA
 BoC4H-3 (869) AGATCAACGAGGACAACGTTCTTTTACATCGTTGAGAACATCAATGTCGCTGCTATTGAGA
 BoC4H-4 (869) AAATCAATGAGGACAACGTTCTTTTACATCGTTGAGAACATCAATGTCGCTGCGATTGAGA

BoC4H-5 (869) AGATCAATGAGGACAACGTTCTTTACATTGTTGAGAACATTAATGTCGCTGCGATTGAGA

 AtC4H (929) CAACATTGTGGTCTATCGAGTGGGGAATTGCAGAGCTAGTGAACCATCCTGAAATCCAGA
 BnC4HA (1022) **CAACATTGTGGTCCATCGAATG**GGGAATTGCGGAGCTAGTGAACCATCCTGAGATCCAAA
 BnC4HB (1024) CAACATTGTGGTCCATCGAATGGGGAGTTGCGGAGCTAGTGAACCATCCTGAGATCCAAA
 Br-cr-C4HL (1018) CAACATTATGGTCCATCGAATGGGGAATTGCGGAGCTAGTGAACCATCCAGAGATCCAGA
 BrA-C4HL (1016) CAACATTATGGTCCATCGAATGGGGAATTGCGGAGCTAGTGAACCATCCAGAGATCCAGA
 Br-sk-C4HL (1016) CAACATTATGGTCCATCGAATGGGGAATTGCGGAGCTAGTGAACCATCCAGAGATCCAGA
 BcCyp450_C4H (1078) CAACATTATGGTCCATCGAATGGGGAATTGCGGAGCTAGTGAACCATCCAGAGATCCAGA
 BrC4H(DQ457008) (1017) CAACATTATGGTCCATCGAATGGGGAATTGCGGAGCTAGTGAACCATCCAGAGATCCAGA
 BrC4H-1 (929) CAACATTATGGTCCATCGAATGGGGAATTGCGGAGCTAGTGAACCATCCAGAGATCCAGA
 BrC4H-2 (929) CAACACTAACGTCTATGGAGTGGGGAATAGCAGAGCTAGTGAACCATCCTGAAATCCAGA
 BrC4H-3 (929) CAACATTGTGGTCCATCGAATGGGGAGTTGCGGAGCTAGTGAACCATCCGGAGATCCAAA
 BrC4H-4 (923) CAACACTATGGTCTATTGAATGGGGAATTGCGGAGCTAGTGAACCATCCTGAGATCCAGA
 BrC4H-5 (929) CAACATTGTGGTCTATCGAGTGGGGAATAGCGGAGCTAGTGAACCATCCTGAGATCCAGA
 BoC4H-1 (923) CAACACTATGGTCTATTGAATGGGGAATTGCGGAGCTAGTGAACCATCCTGAGATCCAGA
 BoC4H-2 (929) CAACACTGTGGTCTATCGAGTGGGGAATGCGGAGCTAGTGAACCATCCTGAGATCCAGA
 BoC4H-3 (929) CAACATTGTGGTCCATCGAATGGGGAATTGCGGAGCTAGTGAACCATCCAGAGATCCAAA
 BoC4H-4 (929) CAACACTAACGTCTATGGAGTGGGGAATAGCAGAGCTAGTGAACCATCCTGATATCCAGA
 BoC4H-5 (929) CAACATTGTGGTCCATCGAATGGGGAGTTGCGGAGCTAGTGAACCATCCTGAGATCCAAA

 AtC4H (989) GTAAGCTAAGGAACGAACTCGACACAGTTCTTGGACC GGGTGTGCAAGTCACCGAGCCTG
 BnC4HA (1082) GCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGAGTTCAAGTCACGGAGCCTG
 BnC4HB (1084) CCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGCGTCAAGTCACAGAGCCTG
 Br-cr-C4HL (1078) CCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGAGTTCAAGTCACGGAGCCTG
 BrA-C4HL (1076) CCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGAGTTCAAGTCACGGAGCCTG
 Br-sk-C4HL (1076) CCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGAGTTCAAGTCACGGAGCCTG
 BcCyp450_C4H (1138) CCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGAGTTCAAGTCACGGAGCCTG
 BrC4H(DQ457008) (1077) CCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGAGTTCAAGTCACGGAGCCTG
 BrC4H-1 (989) CCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGAGTTCAAGTCACGGAGCCTG
 BrC4H-2 (989) GCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGCGTGCATGTCAACGGAGCCTG
 BrC4H-3 (989) CCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGCGTGCAGTCAACGGAGCCTG
 BrC4H-4 (983) GCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGCGTGCAGTCAACAGAGCCTG
 BrC4H-5 (989) GCAAGCTAAGGAACGAAATCGATACGGTTCTTGGACCAGGCGTTCAAATCACAGAGCCTG
 BoC4H-1 (983) GCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGCGTGCAGTCAACAGAGCCTG
 BoC4H-2 (989) GCAAGCTAAGGAACGAGATCGACACGGTTCTTGGACCAGGAGTTCAAATCACAGAGCCTG
 BoC4H-3 (989) GCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGAGTTCAAGTCACGGAGCCTG
 BoC4H-4 (989) GCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACTAGGCGTGCAGTCAACGGAGCCTG
 BoC4H-5 (989) CCAAGCTAAGGAACGAAATCGACACGGTTCTTGGACCAGGCGTGCAGTCAACAGAGCCTG

 AtC4H (1049) ATCTTCACAACTTCCATACCTTCAAGCTGTGGTTAAGGAGACTCTTCGTCTGAGAATGG
 BnC4HA (1142) AGCTTCACAAGCTTCCATATCTCCAAGCCGTGATCAAGGAAACACTTCGTCTAAGAATGG
 BnC4HB (1144) AGCTTCACAAGCTTCCATACCTCCAAGCCGTGATCAAGGAGACGCTTCGACTAAGAATGG
 Br-cr-C4HL (1138) AGCTTCACAAGCTTCCATACCTCCAAGCCGTGATCAAGGAAACGCTTCGTCTAAGAATGG
 BrA-C4HL (1136) AGCTTCACAAGCTTCCATACCTCCAAGCCGTGATCAAGGAAACGCTTCGTCTAAGAATGG
 Br-sk-C4HL (1136) AGCTTCACAAGCTTCCATACCTCCAAGCCGTGATCGAGGAAACGCTTCGTCTAAGAATGG
 BcCyp450_C4H (1198) AGCTTCACAAGCTTCCATACCTCCAAGCCGTGATCAAGGAAACGCTTCGTCTAAGAATGG
 BrC4H(DQ457008) (1137) AGCTTCACAAGCTTCCATACCTCCAAGCCGTGATCAAGGAAACGCTTCGTCTAAGAATGG
 BrC4H-1 (1049) AGCTTCACAAGCTTCCATACCTCCAAGCCGTGATCAAGGAAACGCTTCGTCTAAGAATGG
 BrC4H-2 (1049) CGCTTCACAAGCTTCCGTACCTCCAAGCTGTGATAAAAGAGACCATCCGTAGAAGAATGG
 BrC4H-3 (1049) AGCTTCACAAGCTTCCATACCTCCAAGCCGTGATCAAGGAGACGCTTCGACTAAGAATGG
 BrC4H-4 (1043) ACCTTCACAAGCTTCCATACCTCCAAGTCGTGCTCAAGGAGACACTTCGTCTAAGAATGG
 BrC4H-5 (1049) AGCTGCACAAGCTTCCCTACCTCCAAGCCGTGATCAAGGAGACGCTTAGACTAAGAATGG
 BoC4H-1 (1043) GCCTTCACAAGCTTCCATACCTCCAAGCCGTGCTCAAGGAGACACTTCGTCTAAGAATGG
 BoC4H-2 (1049) AGCTACACAAGCTTCCCTACCTCCAAGCAGTGATCAAGGAGACGCTTCGACTAAGAATGG
 BoC4H-3 (1049) AGCTTCACAAGCTTCCATACCTCCAAGCCGTGATCAAGGAAACACTTCGTCTAAGAATGG
 BoC4H-4 (1049) AGCTTCACAGGCTTCCATACCTCCAAGCTGTGATCAAGGAGACAATCCGTAGAAGAATGG
 BoC4H-5 (1049) AGCTTCACAAGCTTCCATACCTCCAAGCCGTGATCAAGGAGACACTTCGACTAAGAATGG

 AtC4H (1109) CGATTCTCTCCTCGTGCTCACATGAACCTCCATGATGCGAAGCTCGCTGGCTACGATA
 BnC4HA (1202) CTATTCTCTCCTCGTCCCTCACATGAACCTCAACGACGCTAAGCTCGCTGGCTACGACA
 BnC4HB (1204) CTATTCCCCTCCTAGTCCCTCACATGAACCTCAACGACGCTAAGCTCGCCGGCTACGATA
 Br-cr-C4HL (1198) CTATTCTCTCCTCGTCCCTCACATGAACCTCAACGACGCTAAGCTCGCTGGCTACGACA

BrA-C4HL (1196) CTATTCTCTCCTCGTCCCTCACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGACA
Br-sk-C4HL (1196) CTATTCTCTCCTCGTCCCTCACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGACA
BcCyp450_C4H (1258) CTATTCTCTCCTCGTCCCTCACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGACA
BrC4H(DQ457008) (1197) CTATTCTCTCCTCGTCCCTCACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGACA
BrC4H-1 (1109) CTATTCTCTCCTCGTCCCTCACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGACA
BrC4H-2 (1109) CTGTTCTCTCCTCGTCCCTCACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGACA
BrC4H-3 (1109) CTATTCCCTCCTAGTCCCTCACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGATA
BrC4H-4 (1103) GTGTACCACTCCTCGTACCACACATGAACCTCAAGGACGCTAAGCTTGCTGGCTACGACA
BrC4H-5 (1109) CTATACCTCTCCTTGTCACACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGACA
BoC4H-1 (1103) GTGTACCACTCCTCGTACCACACATGAACCTCAAGGACGCTAAGCTTGCTGGCTACGATA
BoC4H-2 (1109) CTATACCTCTCCTTGTCACACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGACA
BoC4H-3 (1109) CTATTCTCTCCTCGTCCCTCACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGACA
BoC4H-4 (1109) CTGTTCTCTCCTCGTCCCTCACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGACA
BoC4H-5 (1109) CTATTCCCTCCTAGTCCCTCACATGAACCTCAACGACGCTAAGCTTGCTGGCTACGATA

AtC4H (1169) TCCCAGCAGAAAGCAAAATCCTTGTAAATGCTTGGTGGCTAGCAAACAACCCAAACAGCT
BnC4HA (1262) TCCCAGCGAAAGCAAGATCCTGGTCAATGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BnC4HB (1264) TCCCAGCGAAAGCAAGATCCTGGTCAATGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
Br-cr-C4HL (1258) TCCCAGCGAAAGCAAGATCCTGGTCAACGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BrA-C4HL (1256) TCCCAGCGAAAGCAAGATCCTGGTCAACGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
Br-sk-C4HL (1256) TCCCAGCGAAAGCAAGATCCTGGTCAACGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BcCyp450_C4H (1318) TCCCAGCGAAAGCAAGATCCTGGTCAACGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BrC4H(DQ457008) (1257) TCCCAGCGAAAGCAAGATCCTGGTCAACGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BrC4H-1 (1169) TCCCAGCGAAAGCAAGATCCTGGTCAACGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BrC4H-2 (1169) TCCCAGCAGAAAGCAGAATCTTGATCAATGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BrC4H-3 (1169) TCCCAGCGAAAGCAAGATCCTTGTCATGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BrC4H-4 (1163) TCCCAGCAGAAAGCAAAATCCTGGTCAATGCATGGTGGCTAGCGAAACAACCTGAGAGCT
BrC4H-5 (1169) TCCCAGCGAAAGCAAGATCCTGGTCAATGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BoC4H-1 (1163) TCCCAGCAGAAAGCAAAATCCTGGTCAATGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BoC4H-2 (1169) TCCCAGCGAAAGCAAGATCCTGGTCAATGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BoC4H-3 (1169) TCCCAGCGAAAGCAAGATCCTGGTCAATGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BoC4H-4 (1169) TCCCAGAAAGCAAGATCCTTGATCAATGCCTGGTGGCTAGCGAAACAACCTGAGAGCT
BoC4H-5 (1169) TCCCAGCGAAAGCAAGATCCTGGTCAATGCCTGGTGGCTAGCGAAACAACCTGAGAGCT

AtC4H (1229) GGAAGAAGCCTGAAGAGTTTAGACCAGAGAGGTTCTTTGAAGAAGAAATCGCACGTGGAAG
BnC4HA (1322) GGAAGAAGCCTGAAGAGTTTAGGCCCGAGAGATTTCTTTGAAGAAGAGGCACACGTGGAAG
BnC4HB (1324) GGAAGAAGCCTGAAGAGTTTAGACCAGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
Br-cr-C4HL (1318) GGAAGAAGCCTGAAGAGTTTAGGCCCGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
BrA-C4HL (1316) GGAAGAAGCCTGAAGAGTTTAGGCCCGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
Br-sk-C4HL (1316) GGAAGAAGCCTGAAGAGTTTAGGCCCGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
BcCyp450_C4H (1378) GGAAGAAGCCTGAAGAGTTTAGGCCCGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
BrC4H(DQ457008) (1317) GGAAGAAGCCTGAAGAGTTTAGGCCCGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
BrC4H-1 (1229) GGAAGAAGCCTGAAGAGTTTAGGCCCGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
BrC4H-2 (1229) GGAATTCGCCTGAAGAGTTTAGACCAGAGGTTCTCGAAGAAGAGGCACACGTGGAAG
BrC4H-3 (1229) GGAAGAAGCCTGAAGAGTTTAGACCAGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
BrC4H-4 (1223) GGAAGAAACCTGAAGAGTTTAGGCCCGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
BrC4H-5 (1229) GGAAGAAACCTGAAGAGTTTAGGCCCGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
BoC4H-1 (1223) GGAAGAAACCTGAAGAGTTTAGGCCCGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
BoC4H-2 (1229) GGAAGAAGCCTGAAGAGTTTAGACCAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
BoC4H-3 (1229) GGAAGAAGCCTGAAGAGTTTAGGCCCGAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG
BoC4H-4 (1229) GGAATTCGCCTGAAGAGTTTAGACCAGAGGTTCTCGAAGAAGAGGCACACGTGGAAG
BoC4H-5 (1229) GGGAGAAGCCTGAAGAGTTTAGACCAGAGGTTCTTTGAAGAAGAGGCACACGTGGAAG

AtC4H (1289) CTAACGGTAATGACTTCAGGTATGTGCCATTTGGTGTGGACGTCGAAGCTGTCCGGGA
BnC4HA (1382) CGAACGGTAATGACTTTAAGTATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCGGGA
BnC4HB (1384) CCAACGGTAATGACTTTAGGTATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCGGGA
Br-cr-C4HL (1378) CGAACGGTAATGACTTTAGGTATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCGGGA
BrA-C4HL (1376) CGAACGGTAATGACTTTAGGTATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCGGGA
Br-sk-C4HL (1376) CGAACGGTAATGACTTTAGGTATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCGGGA
BcCyp450_C4H (1438) CGAACGGTAATGACTTTAGGTATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCGGGA
BrC4H(DQ457008) (1377) CGAACGGTAATGACTTTAGGTATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCGGGA
BrC4H-1 (1289) CGAACGGTAATGACTTTAGGTATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCGGGA
BrC4H-2 (1289) CAAACGGTAATGACTTCAGGTATGTACCGTTTGGTGTGGACGTAGAAGCTGTCCGGGA

BrC4H-3 (1289) CCAATGGTAACGACTTTAGGGATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCAGGGA
 BrC4H-4 (1283) CAAACGGTAACGACTTCAGGTAAGTGTGCCGTTTGGTCTTGGACGTAGAAGCTGTCCAGGGA
 BrC4H-5 (1289) CCAATGGTAATGACTTCAGGTAATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCAGGGA
 BoC4H-1 (1283) CAAACGGTAACGACTTCAGGTAAGTGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCAGGGA
 BoC4H-2 (1289) CCAATGGTAATGACTTCAGGTAATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCAGGGA
 BoC4H-3 (1289) CGAACGGTAATGACTTTAAGTAATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCAGGGA
 BoC4H-4 (1289) CAAACGGTAATGACTTCAGGTAATGTGCCGTTTGGTGTGGACGTAGAAGCTGTCCAGGGA
 BoC4H-5 (1289) CCAATGGTAACGACTTTAGGTAATGTGCCGTTTGGTGTGGGCGTAGAAGCTGTCCAGGGA

 AtC4H (1349) TTATATTGGCATTGCCTATTTTGGGATCACCATTGGTAGGATGGTCCAGAACTTCGAGC
 BnC4HA (1442) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGTTGGTCCAGAACTTCGAGC
 BnC4HB (1444) TTATATTGGCGTTGCCCTATTTTGGGAATCACTATTGGTAGGTTGGTCCAAAACCTTCGAGC
 Br-cr-C4HL (1438) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGATGGTACAGAACTTCGAGC
 BrA-C4HL (1436) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGATGGTACAGAACTTCGAGC
 Br-sk-C4HL (1436) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGATGGTACAGAACTTCGAGC
 BcCyp450_C4H (1498) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGATGGTACAGAACTTCGAGC
 BrC4H(DQ457008) (1437) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGATGGTCCAGAACTTCGAGC
 BrC4H-1 (1349) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGATGGTCCAGAACTTCGAGC
 BrC4H-2 (1349) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGATGGTCCAGAACTTCGAGC
 BrC4H-3 (1349) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGATGGTCCAAAACCTTCGAGC
 BrC4H-4 (1343) TTGTAAGTACGATTGCCCTATTTTGGGAATCACGATTGGTAGGATGGTACAAAACCTTCGAGC
 BrC4H-5 (1349) TTATATTGGCGTTGCCCTATTTTGGGAATCACTATCGTAGGTTGGTACAGAACTTCGAGC
 BoC4H-1 (1343) TTGTAAGTACGATTGCCCTATTTTGGGAATCACGATTGGTAGGATGGTACAGAACTTCGAG-
 BoC4H-2 (1349) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGTTGGTACAGAACTTCGAGC
 BoC4H-3 (1349) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGTTGGTCCAGAACTTCGAGC
 BoC4H-4 (1349) TTATATTGGCGTTGCCCTATTTTGGGAATCACGATTGGTAGGTTGGTCCAGAACTTCGAGC
 BoC4H-5 (1349) TTATATTGGCGTTGCCCTATTTTGGGAATCACTATTGGTAGGTTGGTCCAAAACCTTCGAGC

 AtC4H (1409) TTCCTCCTCCTCCAGGACAGTCTAAAAGTGGATACTAGTGAGAAAGGTGGACAATTCAGCT
 BnC4HA (1502) TTCCTCCTCCTCCGGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BnC4HB (1504) TACTTCCTCCTCCGGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 Br-cr-C4HL (1498) TTCCTCCTCCTCCAGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BrA-C4HL (1496) TTCCTCCTCCTCCAGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 Br-sk-C4HL (1496) TTCCTCCTCCTCCAGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BcCyp450_C4H (1558) TTCCTCCTCCTCCAGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BrC4H(DQ457008) (1497) TTCCTCCTCCTCCGGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BrC4H-1 (1409) TTCCTCCTCCTCCAGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BrC4H-2 (1409) TACTTCCTCCTCCGGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BrC4H-3 (1409) TACTTCCTCCTCCGGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BrC4H-4 (1403) TTTTTCCTCCTCCGGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCC
 BrC4H-5 (1409) TACTTCCTCCTCCAGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BoC4H-1 (1402) TTTTTCCTCCTCCGGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BoC4H-2 (1409) TTCCTCCTCCTCCAGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BoC4H-3 (1409) TTCCTCCTCCTCCGGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BoC4H-4 (1409) TTCCTCCTCCTCCGGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT
 BoC4H-5 (1409) TACTTCCTCCTCCGGGACAGTCTAAAAGTGGATACTTCTGAGAAAGGTGGACAGTTTCAGCT

 AtC4H (1469) TGCACATCCTTAACCACTCCATAATCGTTATGAAACCAAGGAAGCTTTAA-----
 BnC4HA (1562) TGCACATCCTTACCATTCCACCATCGTAATGAAGCAAGGTCCTTTAA-----AAT
 BnC4HB (1564) TGCACATCCTAAACCACTCAACAATCGTAATGAAGCAAGGACCAATTTGA-----ATT
 Br-cr-C4HL (1558) TGCACATCCTTACCATTCCACCATCGTAATGAAGCAAGGTCCTTTAA-----AAT
 BrA-C4HL (1556) TGCACATCCTTACCATTCCACCATCGTAATGAAGCAAGGTCCTTTAA-----AAT
 Br-sk-C4HL (1556) TGCACATCCTTACCATTCCACCATCGTAATGAAGCAAGGTCCTTTAA-----A-T
 BcCyp450_C4H (1618) TGCACATCCTTACCATTCCACCATCGTAATGAAGCAAGGTCCTTTAA-----AAT
 BrC4H(DQ457008) (1557) TGCAGATCCTTAACCAATCCACAATAGTAATGAAACCAAGGGCCTTCTGAGAAAAGTAAT
 BrC4H-1 (1469) TGCACATCCTTACCATTCCACCATCGTAATGAAGCAAGG-----
 BrC4H-2 (1469) TGCAGATCCTTAACCAATCCACAATAGTAATGAAACCAAGG-----
 BrC4H-3 (1469) TGCACATCCTTAACCACTCCACAATCGTAATGAAGCAAGG-----
 BrC4H-4 (1463) TGAAGATCCTTAACCACTCCACAATCGTTATGAAACCAAGG-----
 BrC4H-5 (1469) TGCACATCCTTAACCACTCCACAATGTAATGAAGCAAGG-----
 BoC4H-1 (1447) -----
 BoC4H-2 (1469) TGCATATCCTTAACCACTCCACAATGTAATGAAGCAAGG-----
 BoC4H-3 (1469) TGCACATCCTTACCATTCCACCATCGTAATGAAGCAAGGCAAAAACAA-----TACT

BoC4H-4 (1469) TGCAGATCCTTAACCAATCCACAATAGTAATGAAACCAAGG-----
 BoC4H-5 (1469) TGCACATCCTTAACCACTCCACAATCGTAATGAAGCCAAGG-----

 AtC4H (1519) -----
 BnC4HA (1615) GACTTCTGTTTACACTATAGTGATGTTTGTGGAATATTCCACGTTTTTGTTC-GTATTT
 BnC4HB (1617) TTCTAAATAATAAAGACAAGAAAATATA----AATTCTGCAAAAATGACTTTT-GTAAT-
 Br-cr-C4HL (1611) GACTTCTGTTTACACTATAGTGATGTTTGTGGAATATTCCATGTT-----
 BrA-C4HL (1609) GACTTCTTTTTACACTATAGTGATGTTTGTGGAATATTCCATGTT-----
 Br-sk-C4HL (1608) GACTTCTGTTTACACTATAGTGATGTTTGTGGAATATTCC-----
 BcCyp450_C4H (1671) GACTTCTTTTTACACTATAGTGATGTTTGTGGAATATTCCCTGTTTTTGTTC-GTACTA
 BrC4H(DQ457008) (1617) TTCTGCCAAATGACTTCTTGTATGTGAATGGCATTATAACTATGTTTTTGT-ATAACC
 BrC4H-1 (1510) -----
 BrC4H-2 (1510) -----
 BrC4H-3 (1510) -----
 BrC4H-4 (1504) -----
 BrC4H-5 (1510) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1510) -----
 BoC4H-3 (1523) TTGAGCAGAGGAGACGGCAACAGCATCAGTTCACGGCTGGGTCTGGGAGCTGTAGTAGTG
 BoC4H-4 (1510) -----
 BoC4H-5 (1510) -----

 AtC4H (1519) -----
 BnC4HA (1674) TGTAAGGTGTTTGTGTAAAAAATGGT---TTCGT-TCCAATATTGCAATAACTATTGGT
 BnC4HB (1671) -G---GATGGTTGTGAGATATGTTG-----AATATTCAATGTGTTGTTTCT
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1730) TTTTGTAAAGGTGTTGTGTAAAAATGGAT---T-CGT-TCCAATATCGCAATAACTATTGGT
 BrC4H(DQ457008) (1676) TGTT-GAATATTGTGTAAAAATGTTGAAGGGTTCGT-TCCATGGTTGCAAGAATAAGTGGT
 BrC4H-1 (1510) -----
 BrC4H-2 (1510) -----
 BrC4H-3 (1510) -----
 BrC4H-4 (1504) -----
 BrC4H-5 (1510) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1510) -----
 BoC4H-3 (1583) ATAGAAACAGTAGTAATCAACACCAATCTTTGGATATTCTCAATTCATCAACTGTGCAA
 BoC4H-4 (1510) -----
 BoC4H-5 (1510) -----

 AtC4H (1519) -----
 BnC4HA (1730) TCCCCTGTTTTGAAAAAAAAAAAAAAAAAAAAAAAA-----
 BnC4HB (1713) TCGGAAAAAAAAAAAAAAAAAAAAAAAA-----
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1785) TCCCCTGTTTTGAAAAAAAAAAAAAAAA-----
 BrC4H(DQ457008) (1734) -----
 BrC4H-1 (1510) -----
 BrC4H-2 (1510) -----
 BrC4H-3 (1510) -----
 BrC4H-4 (1504) -----
 BrC4H-5 (1510) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1510) -----
 BoC4H-3 (1643) CTCCTGCTACTCCTGAATGCAAACCTTCTCGTCCAGAAGATGTGAAACAAGTAGTGGGAA
 BoC4H-4 (1510) -----
 BoC4H-5 (1510) -----

 AtC4H (1519) -----
 BnC4HA (1768) -----
 BnC4HB (1740) -----

Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1814) -----
 BrC4H(DQ457008) (1734) -----
 BrC4H-1 (1510) -----
 BrC4H-2 (1510) -----
 BrC4H-3 (1510) -----
 BrC4H-4 (1504) -----
 BrC4H-5 (1510) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1510) -----
 BoC4H-3 (1703) ATCGGGATGCTAGTTTCTACAGTCTGAAGGACAACATTACAGGAGAAGTTCATTTAACAA
 BoC4H-4 (1510) -----
 BoC4H-5 (1510) -----

 AtC4H (1519) -----
 BnC4HA (1768) -----
 BnC4HB (1740) -----
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1814) -----
 BrC4H(DQ457008) (1734) -----
 BrC4H-1 (1510) -----
 BrC4H-2 (1510) -----
 BrC4H-3 (1510) -----
 BrC4H-4 (1504) -----
 BrC4H-5 (1510) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1510) -----
 BoC4H-3 (1763) TAAAGCAGAACTAGTTTCTCAAAGAGGCAAGATTTTCGCTTAGTCTCCCTGACAACCAGA
 BoC4H-4 (1510) -----
 BoC4H-5 (1510) -----

 AtC4H (1519) -----
 BnC4HA (1768) -----
 BnC4HB (1740) -----
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1814) -----
 BrC4H(DQ457008) (1734) -----
 BrC4H-1 (1510) -----
 BrC4H-2 (1510) -----
 BrC4H-3 (1510) -----
 BrC4H-4 (1504) -----
 BrC4H-5 (1510) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1510) -----
 BoC4H-3 (1823) CAAATGATTTTAAGAAAGCGAACACAACAGCGGATCTGATGGGCGGCACAGAGCGGAAGT
 BoC4H-4 (1510) -----
 BoC4H-5 (1510) -----

 AtC4H (1519) -----
 BnC4HA (1768) -----
 BnC4HB (1740) -----
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1814) -----
 BrC4H(DQ457008) (1734) -----
 BrC4H-1 (1510) -----TCCTTT

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BrC4H-2 (1510) -----GCCTTCTG
BrC4H-3 (1510) -----ACCTTTTG
BrC4H-4 (1504) -----GCCGTCTG
BrC4H-5 (1510) -----TCCTTTTA
BoC4H-1 (1447) -----
BoC4H-2 (1510) -----TCCTTTTA
BoC4H-3 (1883) TATCCGTCTTTGATTTGGTTGGTGATGATCACACAACAACCAATCGGAAAGAATGTTCTC
BoC4H-4 (1510) -----GCCTTCTG
BoC4H-5 (1510) -----ACCTTTTG

    AtC4H (1519) -----
    BnC4HA (1768) -----
    BnC4HB (1740) -----
Br-cr-C4HL (1656) -----
    BrA-C4HL (1654) -----
    Br-sk-C4HL (1648) -----
    BcCyp450_C4H (1814) -----
BrC4H(DQ457008) (1734) -----
    BrC4H-1 (1516) TAA-----
    BrC4H-2 (1518) A-----
    BrC4H-3 (1518) A-----
    BrC4H-4 (1512) A-----
    BrC4H-5 (1518) A-----
    BoC4H-1 (1447) -----
    BoC4H-2 (1518) A-----
    BoC4H-3 (1943) CATCTGAGCCTCACATGGCATT'TTCAGTTGAAGGTTTAGGTAATAAACACGGAAACTC
    BoC4H-4 (1518) A-----
    BoC4H-5 (1518) A-----

    AtC4H (1519) -----
    BnC4HA (1768) -----
    BnC4HB (1740) -----
Br-cr-C4HL (1656) -----
    BrA-C4HL (1654) -----
    Br-sk-C4HL (1648) -----
    BcCyp450_C4H (1814) -----
BrC4H(DQ457008) (1734) -----
    BrC4H-1 (1519) -----
    BrC4H-2 (1519) -----
    BrC4H-3 (1519) -----
    BrC4H-4 (1513) -----
    BrC4H-5 (1519) -----
    BoC4H-1 (1447) -----
    BoC4H-2 (1519) -----
    BoC4H-3 (2003) CGCCTAATTCTCCACAACCATCAAGCAGAAACTTTGCGTACGGGTGCTCCTCTCCATGGA
    BoC4H-4 (1519) -----
    BoC4H-5 (1519) -----

    AtC4H (1519) -----
    BnC4HA (1768) -----
    BnC4HB (1740) -----
Br-cr-C4HL (1656) -----
    BrA-C4HL (1654) -----
    Br-sk-C4HL (1648) -----
    BcCyp450_C4H (1814) -----
BrC4H(DQ457008) (1734) -----
    BrC4H-1 (1519) -----
    BrC4H-2 (1519) -----
    BrC4H-3 (1519) -----
    BrC4H-4 (1513) -----
    BrC4H-5 (1519) -----
    BoC4H-1 (1447) -----
    BoC4H-2 (1519) -----

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BoC4H-3	(2063)	ATGATTCCGGTCAACCTACATCAAACGTCAGGGAAAGGCTCAGCGACTTTGAGAAGGAAA
BoC4H-4	(1519)	-----
BoC4H-5	(1519)	-----
AtC4H	(1519)	-----
BnC4HA	(1768)	-----
BnC4HB	(1740)	-----
Br-cr-C4HL	(1656)	-----
BrA-C4HL	(1654)	-----
Br-sk-C4HL	(1648)	-----
BcCyp450_C4H	(1814)	-----
BrC4H(DQ457008)	(1734)	-----
BrC4H-1	(1519)	-----
BrC4H-2	(1519)	-----
BrC4H-3	(1519)	-----
BrC4H-4	(1513)	-----
BrC4H-5	(1519)	-----
BoC4H-1	(1447)	-----
BoC4H-2	(1519)	-----
BoC4H-3	(2123)	GGGACATCATTGAAAGTAGCAAAATGTTCCAAGATGACAAACATTATAGGTCTCCCATCG
BoC4H-4	(1519)	-----
BoC4H-5	(1519)	-----
AtC4H	(1519)	-----
BnC4HA	(1768)	-----
BnC4HB	(1740)	-----
Br-cr-C4HL	(1656)	-----
BrA-C4HL	(1654)	-----
Br-sk-C4HL	(1648)	-----
BcCyp450_C4H	(1814)	-----
BrC4H(DQ457008)	(1734)	-----
BrC4H-1	(1519)	-----
BrC4H-2	(1519)	-----
BrC4H-3	(1519)	-----
BrC4H-4	(1513)	-----
BrC4H-5	(1519)	-----
BoC4H-1	(1447)	-----
BoC4H-2	(1519)	-----
BoC4H-3	(2183)	ACATACATGCTACATATGGGGCAGAAAGTCAAAAAGTGGCGACTTCCACTGATCACTTGC
BoC4H-4	(1519)	-----
BoC4H-5	(1519)	-----
AtC4H	(1519)	-----
BnC4HA	(1768)	-----
BnC4HB	(1740)	-----
Br-cr-C4HL	(1656)	-----
BrA-C4HL	(1654)	-----
Br-sk-C4HL	(1648)	-----
BcCyp450_C4H	(1814)	-----
BrC4H(DQ457008)	(1734)	-----
BrC4H-1	(1519)	-----
BrC4H-2	(1519)	-----
BrC4H-3	(1519)	-----
BrC4H-4	(1513)	-----
BrC4H-5	(1519)	-----
BoC4H-1	(1447)	-----
BoC4H-2	(1519)	-----
BoC4H-3	(2243)	ACAAACCATATATCAGCGACTCAAGAGGCTACTTATGTGACTGCAGATTTCACAAAA
BoC4H-4	(1519)	-----
BoC4H-5	(1519)	-----
AtC4H	(1519)	-----
BnC4HA	(1768)	-----

BnC4HB (1740) -----
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1814) -----
 BrC4H(DQ457008) (1734) -----
 BrC4H-1 (1519) -----
 BrC4H-2 (1519) -----
 BrC4H-3 (1519) -----
 BrC4H-4 (1513) -----
 BrC4H-5 (1519) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1519) -----
 BoC4H-3 (2303) GCAGGGTATTTGATGAAAACGAGTGGAATGCTAAACCCACCTTTCTAGATGACGGGGTGG
 BoC4H-4 (1519) -----
 BoC4H-5 (1519) -----

AtC4H (1519) -----
 BnC4HA (1768) -----
 BnC4HB (1740) -----
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1814) -----
 BrC4H(DQ457008) (1734) -----
 BrC4H-1 (1519) -----
 BrC4H-2 (1519) -----
 BrC4H-3 (1519) -----
 BrC4H-4 (1513) -----
 BrC4H-5 (1519) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1519) -----
 BoC4H-3 (2363) GCAGATTTTACTGGGAAGGACCAACAGCCACGTCAAGAAAACCTTAATTTCAACAATTTGA
 BoC4H-4 (1519) -----
 BoC4H-5 (1519) -----

AtC4H (1519) -----
 BnC4HA (1768) -----
 BnC4HB (1740) -----
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1814) -----
 BrC4H(DQ457008) (1734) -----
 BrC4H-1 (1519) -----
 BrC4H-2 (1519) -----
 BrC4H-3 (1519) -----
 BrC4H-4 (1513) -----
 BrC4H-5 (1519) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1519) -----
 BoC4H-3 (2423) AAACCTACCACTTCTTCTGCAGAACACCATGCTACAAGAAGAGGGATTACCTGGAAACGA
 BoC4H-4 (1519) -----
 BoC4H-5 (1519) -----

AtC4H (1519) -----
 BnC4HA (1768) -----
 BnC4HB (1740) -----
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1814) -----
 BrC4H(DQ457008) (1734) -----

BrC4H-1	(1519)	-----
BrC4H-2	(1519)	-----
BrC4H-3	(1519)	-----
BrC4H-4	(1513)	-----
BrC4H-5	(1519)	-----
BoC4H-1	(1447)	-----
BoC4H-2	(1519)	-----
BoC4H-3	(2483)	CCTGGAGGTCCAACATCGAAGGTTACCAGTTCGAAGACCACAGCGTCTAGAAAGGGCCA
BoC4H-4	(1519)	-----
BoC4H-5	(1519)	-----
AtC4H	(1519)	-----
BnC4HA	(1768)	-----
BnC4HB	(1740)	-----
Br-cr-C4HL	(1656)	-----
BrA-C4HL	(1654)	-----
Br-sk-C4HL	(1648)	-----
BcCyp450_C4H	(1814)	-----
BrC4H(DQ457008)	(1734)	-----
BrC4H-1	(1519)	-----
BrC4H-2	(1519)	-----
BrC4H-3	(1519)	-----
BrC4H-4	(1513)	-----
BrC4H-5	(1519)	-----
BoC4H-1	(1447)	-----
BoC4H-2	(1519)	-----
BoC4H-3	(2543)	TCGATCATCCGAGTTTTGAAAGGGAAACAACCCTCGACTTTAACTTTGACAAAGTATTTG
BoC4H-4	(1519)	-----
BoC4H-5	(1519)	-----
AtC4H	(1519)	-----
BnC4HA	(1768)	-----
BnC4HB	(1740)	-----
Br-cr-C4HL	(1656)	-----
BrA-C4HL	(1654)	-----
Br-sk-C4HL	(1648)	-----
BcCyp450_C4H	(1814)	-----
BrC4H(DQ457008)	(1734)	-----
BrC4H-1	(1519)	-----
BrC4H-2	(1519)	-----
BrC4H-3	(1519)	-----
BrC4H-4	(1513)	-----
BrC4H-5	(1519)	-----
BoC4H-1	(1447)	-----
BoC4H-2	(1519)	-----
BoC4H-3	(2603)	ACCCACCGGTTTTGGTCATCCGTTGTACTTGAGGAAGACAAAGACAGCCATAGCTTGCGTA
BoC4H-4	(1519)	-----
BoC4H-5	(1519)	-----
AtC4H	(1519)	-----
BnC4HA	(1768)	-----
BnC4HB	(1740)	-----
Br-cr-C4HL	(1656)	-----
BrA-C4HL	(1654)	-----
Br-sk-C4HL	(1648)	-----
BcCyp450_C4H	(1814)	-----
BrC4H(DQ457008)	(1734)	-----
BrC4H-1	(1519)	-----
BrC4H-2	(1519)	-----
BrC4H-3	(1519)	-----
BrC4H-4	(1513)	-----
BrC4H-5	(1519)	-----
BoC4H-1	(1447)	-----

BoC4H-2 (1519) -----
 BoC4H-3 (2663) GTGAAGAATCTTGCTCGTCTAGTGCAGTTTGGGCCAATGAAACCTCCATTTACATGAGA
 BoC4H-4 (1519) -----
 BoC4H-5 (1519) -----

 AtC4H (1519) -----
 BnC4HA (1768) -----
 BnC4HB (1740) -----
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1814) -----
 BrC4H(DQ457008) (1734) -----
 BrC4H-1 (1519) -----
 BrC4H-2 (1519) -----
 BrC4H-3 (1519) -----
 BrC4H-4 (1513) -----
 BrC4H-5 (1519) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1519) -----
 BoC4H-3 (2723) CCAATACAAGACAGAGAAAGGGGAAACTGATTCTTTTACACCTTGGAACAAGAAGT
 BoC4H-4 (1519) -----
 BoC4H-5 (1519) -----

 AtC4H (1519) -----
 BnC4HA (1768) -----
 BnC4HB (1740) -----
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1814) -----
 BrC4H(DQ457008) (1734) -----
 BrC4H-1 (1519) -----
 BrC4H-2 (1519) -----
 BrC4H-3 (1519) -----
 BrC4H-4 (1513) -----
 BrC4H-5 (1519) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1519) -----
 BoC4H-3 (2783) ATTTGAATAATGGCCTTTCCTATGAATCTTGGGAAGACTGGGATGTGGATGATCAACAAC
 BoC4H-4 (1519) -----
 BoC4H-5 (1519) -----

 AtC4H (1519) -----
 BnC4HA (1768) -----
 BnC4HB (1740) -----
 Br-cr-C4HL (1656) -----
 BrA-C4HL (1654) -----
 Br-sk-C4HL (1648) -----
 BcCyp450_C4H (1814) -----
 BrC4H(DQ457008) (1734) -----
 BrC4H-1 (1519) -----
 BrC4H-2 (1519) -----
 BrC4H-3 (1519) -----
 BrC4H-4 (1513) -----
 BrC4H-5 (1519) -----
 BoC4H-1 (1447) -----
 BoC4H-2 (1519) -----
 BoC4H-3 (2843) TGAAGAGAAAAGTTGGGTCTGGAAAGCAGGTCAGACTATCAAACCCAGGAATGTTGAGAT
 BoC4H-4 (1519) -----
 BoC4H-5 (1519) -----

 AtC4H (1519) -----

BnC4HA (1768) -----
BnC4HB (1740) -----
Br-cr-C4HL (1656) -----
BrA-C4HL (1654) -----
Br-sk-C4HL (1648) -----
BcCyp450_C4H (1814) -----
BrC4H(DQ457008) (1734) -----
BrC4H-1 (1519) -----
BrC4H-2 (1519) -----
BrC4H-3 (1519) -----
BrC4H-4 (1513) -----
BrC4H-5 (1519) -----
BoC4H-1 (1447) -----
BoC4H-2 (1519) -----
BoC4H-3 (2903) CTACCAGTCAGAGAGACTCCTCTTCCCGTGGTGGTCTCGACGCCCTTACAATTGGTTTG
BoC4H-4 (1519) -----
BoC4H-5 (1519) -----

AtC4H (1519) -----
BnC4HA (1768) -----
BnC4HB (1740) -----
Br-cr-C4HL (1656) -----
BrA-C4HL (1654) -----
Br-sk-C4HL (1648) -----
BcCyp450_C4H (1814) -----
BrC4H(DQ457008) (1734) -----
BrC4H-1 (1519) -----
BrC4H-2 (1519) -----
BrC4H-3 (1519) -----
BrC4H-4 (1513) -----
BrC4H-5 (1519) -----
BoC4H-1 (1447) -----
BoC4H-2 (1519) -----
BoC4H-3 (2963) CAGAAGGATTTACAGCTGCAGGCATAAGCTCAGATATTACAACCGAGAGACAAACCAT
BoC4H-4 (1519) -----
BoC4H-5 (1519) -----

AtC4H (1519) -----
BnC4HA (1768) -----
BnC4HB (1740) -----
Br-cr-C4HL (1656) -----
BrA-C4HL (1654) -----
Br-sk-C4HL (1648) -----
BcCyp450_C4H (1814) -----
BrC4H(DQ457008) (1734) -----
BrC4H-1 (1519) -----
BrC4H-2 (1519) -----
BrC4H-3 (1519) -----
BrC4H-4 (1513) -----
BrC4H-5 (1519) -----
BoC4H-1 (1447) -----
BoC4H-2 (1519) -----
BoC4H-3 (3023) ATCCTTTCCTAAACCCCGTTGTTGGTAGCTCGCACCGCGTCAATCTCGAGCCCCTGATT
BoC4H-4 (1519) -----
BoC4H-5 (1519) -----

AtC4H (1519) -----
BnC4HA (1768) -----
BnC4HB (1740) -----
Br-cr-C4HL (1656) -----
BrA-C4HL (1654) -----
Br-sk-C4HL (1648) -----
BcCyp450_C4H (1814) -----

BrC4H(DQ457008)	(1734)	-----
BrC4H-1	(1519)	-----
BrC4H-2	(1519)	-----
BrC4H-3	(1519)	-----
BrC4H-4	(1513)	-----
BrC4H-5	(1519)	-----
BoC4H-1	(1447)	-----
BoC4H-2	(1519)	-----
BoC4H-3	(3083)	CTATTCGGAAACATGGGTCCCTAAGTATTTCAGCAGAAGGCAGTGGATATGGTGATGATG
BoC4H-4	(1519)	-----
BoC4H-5	(1519)	-----
AtC4H	(1519)	-----
BnC4HA	(1768)	-----
BnC4HB	(1740)	-----
Br-cr-C4HL	(1656)	-----
BrA-C4HL	(1654)	-----
Br-sk-C4HL	(1648)	-----
BcCyp450_C4H	(1814)	-----
BrC4H(DQ457008)	(1734)	-----
BrC4H-1	(1519)	-----
BrC4H-2	(1519)	-----
BrC4H-3	(1519)	-----
BrC4H-4	(1513)	-----
BrC4H-5	(1519)	-----
BoC4H-1	(1447)	-----
BoC4H-2	(1519)	-----
BoC4H-3	(3143)	AACACAACCTACATGAACTGTGTATCAGCAAACCATAAATCTAAACTAGCAGGAGACGTAT
BoC4H-4	(1519)	-----
BoC4H-5	(1519)	-----
AtC4H	(1519)	-----
BnC4HA	(1768)	-----
BnC4HB	(1740)	-----
Br-cr-C4HL	(1656)	-----
BrA-C4HL	(1654)	-----
Br-sk-C4HL	(1648)	-----
BcCyp450_C4H	(1814)	-----
BrC4H(DQ457008)	(1734)	-----
BrC4H-1	(1519)	-----
BrC4H-2	(1519)	-----
BrC4H-3	(1519)	-----
BrC4H-4	(1513)	-----
BrC4H-5	(1519)	-----
BoC4H-1	(1447)	-----
BoC4H-2	(1519)	-----
BoC4H-3	(3203)	GCAGTTTTGGGAGTGATACGTTATCAGAGAACGATAATGAACAAAGCAAAGAAGTGAATG
BoC4H-4	(1519)	-----
BoC4H-5	(1519)	-----
AtC4H	(1519)	-----
BnC4HA	(1768)	-----
BnC4HB	(1740)	-----
Br-cr-C4HL	(1656)	-----
BrA-C4HL	(1654)	-----
Br-sk-C4HL	(1648)	-----
BcCyp450_C4H	(1814)	-----
BrC4H(DQ457008)	(1734)	-----
BrC4H-1	(1519)	-----
BrC4H-2	(1519)	-----
BrC4H-3	(1519)	-----
BrC4H-4	(1513)	-----
BrC4H-5	(1519)	-----

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BoC4H-1 (1447) -----
BoC4H-2 (1519) -----
BoC4H-3 (3263) ATCCAAAAAATCAGGGAGATGAGACCTCATCATCCGTTGCAAAGAGCCTCTCAGACGAAA
BoC4H-4 (1519) -----
BoC4H-5 (1519) -----

    AtC4H (1519) -----
    BnC4HA (1768) -----
    BnC4HB (1740) -----
Br-cr-C4HL (1656) -----
  BrA-C4HL (1654) -----
  Br-sk-C4HL (1648) -----
BcCyp450_C4H (1814) -----
BrC4H(DQ457008) (1734) -----
  BrC4H-1 (1519) -----
  BrC4H-2 (1519) -----
  BrC4H-3 (1519) -----
  BrC4H-4 (1513) -----
  BrC4H-5 (1519) -----
  BoC4H-1 (1447) -----
  BoC4H-2 (1519) -----
  BoC4H-3 (3323) ATGAGTATGTACGATGTAACCCGAACAAGGAGGTTGTGAAAGCTCGGCATCAAGGAAACA
  BoC4H-4 (1519) -----
  BoC4H-5 (1519) -----

    AtC4H (1519) -----
    BnC4HA (1768) -----
    BnC4HB (1740) -----
Br-cr-C4HL (1656) -----
  BrA-C4HL (1654) -----
  Br-sk-C4HL (1648) -----
BcCyp450_C4H (1814) -----
BrC4H(DQ457008) (1734) -----
  BrC4H-1 (1519) -----
  BrC4H-2 (1519) -----
  BrC4H-3 (1519) -----
  BrC4H-4 (1513) -----
  BrC4H-5 (1519) -----
  BoC4H-1 (1447) -----
  BoC4H-2 (1519) -----
  BoC4H-3 (3383) GAGGAGGAGAAAAGACAAGTAGAGACTCGCACCAACAAATGATAATGCTGGAAAGACGCA
  BoC4H-4 (1519) -----
  BoC4H-5 (1519) -----

    AtC4H (1519) -----
    BnC4HA (1768) -----
    BnC4HB (1740) -----
Br-cr-C4HL (1656) -----
  BrA-C4HL (1654) -----
  Br-sk-C4HL (1648) -----
BcCyp450_C4H (1814) -----
BrC4H(DQ457008) (1734) -----
  BrC4H-1 (1519) -----
  BrC4H-2 (1519) -----
  BrC4H-3 (1519) -----
  BrC4H-4 (1513) -----
  BrC4H-5 (1519) -----
  BoC4H-1 (1447) -----
  BoC4H-2 (1519) -----
  BoC4H-3 (3443) CGCTTCAATTCGTTTGTTTAAACAAGACATTGCTCCTTGAAGCTCTTTAAAAACTTAG
  BoC4H-4 (1519) -----
  BoC4H-5 (1519) -----

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3. BnTT4

AtTT4 (1) -----
 BnTT4A1 (1) -----
 BnTT4A2 (1) -----GAA
 BnTT4B1 (1) GATACATACATAACTTGCTTATTACGCCAAAGTAACACATCGATCAAACCTTTAGTTAAAC
 BnTT4B2 (1) ---ACATACATAACTTGCTTACTACGCCAAAGTTACACATCGATCTAACTCTAGTTAAAC
 BrTT4-1 (1) -----
 BrTT4-2 (1) -----
 BrTT4-3 (1) -----
 BrTT4-4 (1) -----
 BrTT4-5 (1) -----
 BrTT4-6 (1) -----
 BoTT4-1 (1) -----
 BoTT4-2 (1) -----
 BoTT4-3 (1) -----
 BoTT4-4 (1) -----
 BjTT4 (1) -----

AtTT4 (1) -----ATGGTGATGGCTGGTG---CTTCTTCTTTGGATGAGATCAGACAGG
 BnTT4A1 (1) -----
 BnTT4A2 (4) ACCAAGTTGGTAATACTATGGTGATGTGTACACCGTCTTCGTTGGATGAGATCAGAAAGG
 BnTT4B1 (61) CTAGTTGGTTTAATATGGTGATGGGGCT-----TCTTCGTTGGATGAGATCAGAAAGG
 BnTT4B2 (58) CTAGTTGGTTTAATATGGTGATGGTGGGTACAACCTCTTCGTTGGATGAGATCAGAAAGG
 BrTT4-1 (1) -----ATGGTGATGTGTACACCGTCTTCGTTGGATGAGATCAGAAAGG
 BrTT4-2 (1) -----ATGGTGATGAGTAGGCCGTCATCATCGTTGGATGAGATCAGAAAGG
 BrTT4-3 (1) -----ATGGTGATGGGTACACCGTCTTCGTTGGATGAGATCAGAAAGG
 BrTT4-4 (1) -----ATGGTGATGGGTG---CCTTGCTCTTGGATGAGATCAGAAAGG
 BrTT4-5 (1) -----ATGGTGATGGGGCT-----TCTTCGTTGGATGAGATCAGAAAGG
 BrTT4-6 (1) -----ATGTCACGCCGCTTCGTTGGACGAGATCAGAAAGG
 BoTT4-1 (1) -----ATGGTGATGTGTACACCGTCTTCGTTGGATGAGATCAGAAAGG
 BoTT4-2 (1) -----ATGGTGATGGTGGGTACAACCTCTTCGTTGGATGAGATCAGAAAGG
 BoTT4-3 (1) -----ATGGTCATGAGTAGGCCGTCATCATCGTTGGATGAGATCAGAAAGG
 BoTT4-4 (1) -----ATGGTGATGTGTACACCGTCTTCGTTGGATGAGATCAGAAAGG
 BjTT4 (1) -----ATGGTGATGTGTACACCGTCTTCGTTGGATGAGATCAGAAAGG

AtTT4 (44) CTCAGAGAGCTGATGGACCTGCAGGCATCTTGGCTATTGGCACTGCTAACCCTGAGAACC
 BnTT4A1 (1) -----GCAGGTATCTTGGCGATAGGCACGGCTAACCCTGCCAACC
 BnTT4A2 (64) CGCAGAGAGCAGATGGCCCAGCAGGTATATTGGCGATCGGCACGGCTAACCCTGCCAACC
 BnTT4B1 (115) CACAGAGAGCAGACGGTCTCTGCAGGCATCTTAGCGATAGGTACGGCCAACCCTGCGAACC
 BnTT4B2 (118) CACAGAGAGCAGACGGCCCTGCAGGCATCTTGGCGATAGGTACGGCCAACCCTGCGAACC
 BrTT4-1 (44) CGCAAAGAGCAGATGGCCCAGCAGGTATCTTGGCGATAGGCACGGCTAACCCTGCCAACC
 BrTT4-2 (47) CACAAAGAGCTGATGGTCCCAGGTATCTTGGCTATAGGCACGGCCAACCCTGCGAACC
 BrTT4-3 (44) CGCAAAGAGCAGATGGCCCAGCAGGTATCTTGGCGATAGGCACGGCTAACCCTGCCAACC
 BrTT4-4 (41) CACAAAGAGGTGATGGACCAGCAAGCATCTTGGCCATAGGCACTGCCAACCCCTCCAAACC
 BrTT4-5 (41) CACAGAGAGCAGACGGTCTCTGCAGGCATCTTAGCGATAGGTACGGCCAACCCTGCGAACC
 BrTT4-6 (38) CACAGAGAGCAGATGGCCCTGCAGGTATCTTGGCGATAGGCACGGCCAACCCTGCGAACC
 BoTT4-1 (44) CACAGAGAGCAGATGGCCCAGCAGGTATCTTGGCGATAGGCACGGCTAACCCTGCCAACC
 BoTT4-2 (47) CACAGAGAGCAGACGGCCCTGCAGGCATCTTGGCGATAGGTACGGCCAACCCTGCGAACC
 BoTT4-3 (47) CACAAAGAGCTGATGGTCCCAGGTATCTTGGCTATAGGCACGGCCAACCCTGCGAACC
 BoTT4-4 (44) CGCAGAGAGCAGATGGCCCAGCAGGTATATTGGCGATCGGCACGGCTAACCCTGCCAACC
 BjTT4 (44) CGCAAAGAGCAGATGGCCCAGCAGGTATCTTGGCGATAGGCACGGCTAACCCTGCCAACC

AtTT4 (104) ATGTGCTTCCAGGCGGAGTATCCTGACTACTACTTCCGCATCACCAACAGTGAACACATGA
 BnTT4A1 (41) ATGTGATCCAAGCGGAGTATCCTGACTACTACTTCCGCATCACCAACAGCGAACACATGA
 BnTT4A2 (124) ATGTGATCCAAGCTGAGTATCCTGACTACTACTTCCGCATCACCAACAGCGAACACATGA
 BnTT4B1 (175) ATGTGCTCCAAGCTGAGTATCCAGACTACTACTTCCGCATCACCAACAGTGAACACATGA
 BnTT4B2 (178) ATGTGCTCCAAGCGGAGTATCCAGACTACTACTTCCGCATCACCAACAGTGAACACATGA
 BrTT4-1 (104) ATGTGATCCAAGCGGAGTATCCTGACTACTACTTCCGCATCACCAACAGCGAACACATGA
 BrTT4-2 (107) ATGTGATCCAAGCGGAGTATCCAGACTACTACTTCCGCATCACCAACAGTGAACACATGA
 BrTT4-3 (104) ATGTGATCCAAGCGGAGTATCCTGACTACTACTTCCGCATCACCAACAGCGAACACATGA
 BrTT4-4 (101) AAGTGATCCAAGCAGAGTATCCAGACTACTACTTCCGCATCACCAACAGTGAACACATGA
 BrTT4-5 (101) ATGTGCTCCAAGCTGAGTATCCAGACTACTACTTCCGCATCACCAACAGTGAACACATGA

BrTT4-6 (98) ATGTGATCCAAGCGGAGTATCCC GACTACTACTTCCGCATCACCAACAGCGAACACATGA
 BoTT4-1 (104) ATGTGATCCAAGCGGAGTATCCTGACTACTACTTCCGCATCACCAACAGCGAACACATGA
 BoTT4-2 (107) ATGTGCTCCAAGCGGAGTATCCAGACTACTACTTCCGCATCACCAACAGTGAACACATGA
 BoTT4-3 (107) ATGTGATCCAAGCGGAGTATCCTGACTACTACTTCCGCATCACCAACAGTGAACACATGA
 BoTT4-4 (104) ATGTGATCCAAGCTGAGTATCCTGACTACTACTTCCGCATCACCAACAGCGAACACATGA
 BjTT4 (104) ATGTGATCCAAGCGGAGTATCCTGACTACTACTTCCGCATCACCAACAGCGAACACATGA

AtTT4 (164) CCGACCTCAAGGAGAAGTTCAAGCGCATGTGCGACAAGTCGACAATTCGGAAACGTCACA
 BnTT4A1 (101) CTGACCTTAAAGGAGAAGTTCAAGCGCATGTGCGACAAGTCGACTATAAGAAAACGCCACA
 BnTT4A2 (184) CTGACCTTAAAGGAGAAGTTCAAGCGCATGTGCGACAAGTCGACTATAAGGAAACGCCACA
 BnTT4B1 (235) CCGACCTTAAAGGAGAAGTTCAAGCGCATGTGCGATAAGTCGACCATAAGGAAACGCCACA
 BnTT4B2 (238) CCGACCTTAAAGGAGAAGTTCAAGCGCATGTGCGATAAGTCGACCATAAGGAAACGCCACA
 BrTT4-1 (164) CTGACCTTAAAGGAGAAGTTCAAGCGCATGTGCGACAAGTCGACTATAAGGAAACGCCACA
 BrTT4-2 (167) CTGACCTCAAGGAGAAGTTCAAGCGCATGTGTGACAAGTCGATGATAAGGAAACGACACA
 BrTT4-3 (164) CTGACCTTAAAGGAGAAGTTCAAGCGCATGTGCGACAAGTCGACGATAAGGAAACGCCACA
 BrTT4-4 (161) CCGACCTCAAGGAGAAGTTCAAGCGCATGTGCGACAAATCAATGATAAGGAAACGTTACA
 BrTT4-5 (161) CCGCCTTAAAGGAGAAGTTCAAGCGCATGTGCGATAAGTCGACCATAAGGAAACGCCACA
 BrTT4-6 (158) TCGACCTTAAAGGAGAAGTTCAAGCGCATGTGCGACAAATCGGGGATAAGGAAACGCCACA
 BoTT4-1 (164) CTGACCTTAAAGGAGAAGTTCAAGCGCATGTGCGACAAGTCGACTATAAGGAAACGCCACA
 BoTT4-2 (167) CCGACCTTAAAGGAGAAGTTCAAGCGCATGTGCGATAAGTCGACCATAAGGAAACGCCACA
 BoTT4-3 (167) CTGACCTCAAGGAGAAGTTCAAGCGCATGTGTGACAAGTCGATGATAAGGAAACGACACA
 BoTT4-4 (164) CTGACCTTAAAGGAGAAGTTCAAGCGCATGTGCGACAAGTCGACTATAAGGAAACGCCACA
 BjTT4 (164) CTGACCTTAAAGGAGAAGTTCAAGCGCATGTGCGACAAGTCGACTATAAGGAAACGCCACA

AtTT4 (224) TGCATCTGACGGAGGAATTCTCAAGGAAAACCCACACATGTGTGCTTACATGGCTCCTT
 BnTT4A1 (161) TGCACCTAACC GAAGAGTTTCT **AAAGGAGAACCAGACATGTG**CGCCTACATGGCTCCTT
 BnTT4A2 (244) TGCACCTAACC GAAGAGTTTCT **AAAGGAGAACCAGACATGTG**CGCCTACATGTCTCCTT
 BnTT4B1 (295) TGCACCTGACCGAGGAGTTCTTGAAGAGAAACCCTAACATGTGCGCTACATGGCCCTT
 BnTT4B2 (298) TGCACCTGACCGAGGAGTTCTTGAAGAGAAACCCTAAATATGTGTGCTACATGGCTCCTT
 BrTT4-1 (224) TGCACCTAACC GAAGAGTTTCTAAAGGAGAACCAGACATGTGCGCTACATGGCTCCTT
 BrTT4-2 (227) TGCACCTAACC GAAGAGTTCTTGAAGGAGAATCCCAACATGTGCGCTACATGGCTCCTT
 BrTT4-3 (224) TGCACCTAACC GAAGAGTTCTAAAGGAGAACCAGACATGTGCGCTACATGGCTCCTT
 BrTT4-4 (221) TGCACCTGACTGAAGAGTTTCTCAAGGACAACCCCAACGTATGCGCTTACATGGCTCCTT
 BrTT4-5 (221) TGCACCTGACCGAGGAGTTCTTGAAGAGAAACCCTAACATGTGTGCTACATGGCTCCTT
 BrTT4-6 (218) TGCACCTGACGGAAGAGTTTCTGAAGGACAATCCAAACATGTGCGCTACATGGCTCCTT
 BoTT4-1 (224) TGCACCTAACC GAAGAGTTTCTAAAGGAGAACCAGACATGTGCGCTACATGGCTCCTT
 BoTT4-2 (227) TGCACCTAACC GAAGAGTTCTTGAAGGAGAATCCGAACATGTGCGCTACATGGCTCCTT
 BoTT4-3 (227) TGCACCTAACC GAAGAGTTCTTGAAGGAGAATCCGAACATGTGCGCTACATGGCTCCTT
 BoTT4-4 (224) TGCACCTAACC GAAGAGTTTCTAAAGGAGAACCAGACATGTGCGCTACATGTCTCCTT
 BjTT4 (224) TGCACCTAACC GAAGAGTTTCTAAAGGAGAACCAGACATGTGCGCTACATGGCTCCTT

AtTT4 (284) CTCTGGACACCAGACAGGACATCGTGGTGGTTCGAAGTCCCTAAGCTAGGCAAAGAGGCGG
 BnTT4A1 (221) CTCTCGACGCTCGACAGGACATCGTGGTGGTTCGAGGTCCCTAAGCTAGGCAAAGAGGCGG
 BnTT4A2 (304) CTCTCGACGCTCGACAGGACATCGTGGTGGTTCGAAGTCCCTAAGCTAGGCAAAGAGGCGG
 BnTT4B1 (355) CTCTCGACGCTAGACAAGACCTCGTGGTGGTTGAAGTCCCTAAGCTAGGCAAAGATGCAG
 BnTT4B2 (358) CGCTCGATGCTAGACAAGACCTCGTGGTGGTTGAAGTCCCTAAGCTAGGCAAAGATGCAG
 BrTT4-1 (284) CTCTCGACGCTCGACAGGATATCGTGGTGGTTCGAAGTCCCTAAGCTAGGCAAAGAGGCGG
 BrTT4-2 (287) CTCTCGACGCTAGACAAGACATCGTGGTGGTTGAAGTCCCTAAGCTAGGCAAAGAGGCGG
 BrTT4-3 (284) CTCTCGACGCTCGACAGGACATCGTGGTGGTTCGAAGTCCCTAAGCTAGGCAAAGAGGCTG
 BrTT4-4 (281) CCTTGGACGTTAGGACAGGACATCTGGTGGCCGAGTCCCTAAGCTAGGCAAAGAGGCTG
 BrTT4-5 (281) CGCTCGATGCTAGACAAGACCTCGTGGTGGTTGAAGTCCCTAAGCTAGGCAAAGATGCAG
 BrTT4-6 (278) CTCTCGACGTTTCGACAGGACCTAGTGGTGGTTGAAGTCCCTAAGCTAGGCAAAGAGGCGG
 BoTT4-1 (284) CTCTCGACGCTCGACAGGACATCGTGGTGGTTCGAAGTCCCTAAGCTAGGCAAAGAGGCGG
 BoTT4-2 (287) CTCTCGACGCTAGACAAGACCTCGTGGTGGTTGAAGTCCCTAAGCTAGGCAAAGATGCAG
 BoTT4-3 (287) CTCTCGACGCTAGACAAGACATCGTGGTGGTTGAAGTCCCTAAGCTAGGCAAAGAGGCTG
 BoTT4-4 (284) CTCTCGACGCTCGACAGGACATCGTGGTGGTTCGAAGTCCCTAAGCTAGGCAAAGAGGCGG
 BjTT4 (284) CTCTCGACGCTCGACAGGACATCGTGGTGGTTCGAGGTCCCTAAGCTAGGCAAAGAGGCGG

AtTT4 (344) CAGTGAAGGCCATCAAGGAGTGGGGCCAGCCCAAGTCAAAGATCACTCATGTCTTCTTCT
 BnTT4A1 (281) CAGTGAAGGCCATCAAGGAATGG **GGCCAGCCCAAGTCCAAG**GTTACACACGTTGTCTTCT
 BnTT4A2 (364) CAGTGAAGGCCATCAAGGAATGG **GGCCAGCCCAAGTCCAAG**AATACCCACGTTGTCTTCT
 BnTT4B1 (415) CAGTGAAGGCCATCAAGGAGTGGGGTTCAGCCTAAGTCAAAGATCACACACGTTGTCTTCT
 BnTT4B2 (418) CAGTGAAGGCCATCAAGGAGTGGGGTTCAGCCTAAGTCAAAGATCACACACGTTGTCTTCT

BrTT4-1 (344) CAGTGAAGGCCATCAAGGAATGGGGCCAGCCCAGTCCAAGATTACACACGTTGTCTTCT
BrTT4-2 (347) CAGTGAAGGCCATTAAAGGAGTGGGGTCAGCCTAAGTCCAAGATCACACACGTTGCTTCT
BrTT4-3 (344) CCGTGAAGGCCATCAAGGAGTGGGGCCAGCCCAGTCCAAGATTACACACGTTGTCTTCT
BrTT4-4 (341) CAGTGAAGGCCATCACGGAGTGGGGCCAGCCCAGTCCAAGATCACTCATCTAGTCTTCT
BrTT4-5 (341) CAGTGAAGGCCATCAAGGAGTGGGGTCAGCCTAAGTCCAAGATCAAACACGTTGTCTTCT
BrTT4-6 (338) CAGTGAAGGCCATCAACGAATGGGGTCAGCCCAGTCCAGGATTACCCACCTTGTCTTCT
BoTT4-1 (344) CAGTGAAGGCCATCAAGGAATGGGGCCAGCCCAGTCCAAGATTACCCACGTTGTCTTCT
BoTT4-2 (347) CAGTGAAGGCCATCAAGGAATGGGGTCAGCCTAAGTCCAAGATCACACACGTTGTCTTCT
BoTT4-3 (347) CAGTGAAGGCCATCAAGGAGTGGGGCCAGCCCAGTCCAAGATCACACACGTTGTCTTCT
BoTT4-4 (344) CAGTGAAGGCCATCAAAGAATGGGGCCAGCCCAGTCCAAGATTACCCACGTTGTCTTCT
BjTT4 (344) CAGTGAAGGCCATCAAGGAATGGGGCCAGCCCAGTCCAAGATTACACACGTTGTCTTCT

AtTT4 (404) GCACTACCTCCGGCGTCGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTTCTTGGTC
BnTT4A1 (341) GCACTACCTCAGGAGTCGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTCGGTC
BnTT4A2 (424) GCACTACCTCAGGAGTCGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTCGGTC
BnTT4B1 (475) GCACCACCTCTGGAGTTGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTTGGCC
BnTT4B2 (478) GCACCACCTCAGGAGTTGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTTGGCC
BrTT4-1 (404) GCACTACCTCAGGAGTCGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTCGGTC
BrTT4-2 (407) GCACCACCTCAGGAGTCGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTTGGTC
BrTT4-3 (404) GCACTACCTCTGGAGTCGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTCGGTC
BrTT4-4 (401) GCACCACCTCTGGTGTGGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTTGGTC
BrTT4-5 (401) GCACCACCTCTGGAGTTGACATGCCTGGTGCTTACTACCAGTCAACCAAGCTCCTTGGTC
BrTT4-6 (398) GTACTACCTCAGGAGTTGACATGCCTGGTGCCGACTACCAGTCAACCAAGCTCCTTGGTC
BoTT4-1 (404) GCACTACCTCAGGAGTCGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTCGGTC
BoTT4-2 (407) GCACCACCTCAGGAGTTGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTTGGCC
BoTT4-3 (407) GTACAACCTCAGGAGTCGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTTGGTC
BoTT4-4 (404) GCACTACCTCAGGAGTCGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTCGGTC
BjTT4 (404) GCACTACCTCAGGAGTCGACATGCCTGGTGCTGACTACCAGTCAACCAAGCTCCTCGGTC

AtTT4 (464) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAGCAAGGTTGCTTCGCCGGCGGTA CTG
BnTT4A1 (401) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAGCAAGGCTGCTTCGCCGGCGGTA CTG
BnTT4A2 (484) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAGCAAGGTTGCTTCGCCGGCAGCACCG
BnTT4B1 (535) TTCGCCCTTCCGTGAAGCGTCTCATGATGTACCAGCAAGGTTGCTTCGCCGGCGGCACTG
BnTT4B2 (538) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAACAAGGTTGCTTCGCCGGCGGCACTG
BrTT4-1 (464) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAGCAAGGCTGCTTCGCCGGCGGTA CTG
BrTT4-2 (467) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAGCGGGGTTGCTTCGCAGGCGGCACTG
BrTT4-3 (464) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAGCAAGGCTGCTTCGCCGGCGGTA CTG
BrTT4-4 (461) TGTGTCTTCTGTAAAGCGTGTGATGATGTACCATCAAGGCTGTACGCTGGTGGCACTG
BrTT4-5 (461) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAGCAATGTTGCTTCGCCGGCGGCACTG
BrTT4-6 (458) TTTGTCTTCTGTCAAGCGTCTCATGATGTACCAGCAAGGTTGCTTCGCCGGGGGCACTG
BoTT4-1 (464) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAGCAAGGTTGCTTCGCCGGCGGCACTG
BoTT4-2 (467) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAACAAGGTTGCTTCGCTGGCGGCACTG
BoTT4-3 (467) TTCGTCTTCCGTAAAGCGTCTCATGATGTACCAGCAAGGCTGCTTCGCCGGCGGCACTG
BoTT4-4 (464) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAGCAAGGTTGCTTCGCCGGCGGCACTG
BjTT4 (464) TTCGTCTTCCGTCAAGCGTCTCATGATGTACCAGCAAGGCTGCTTCGCCGGCGGTA CTG

AtTT4 (524) TCCTCCGTATCGCTAAGGATCTCGCCGAGAACAACCGTGGAGCACGTGTCCTCGTTGTCT
BnTT4A1 (461) TCCTCCGTCTCGCTAAGGATCTCGCTGAGAACAACCGTGGCGCGCTGTTCTCGTTGTCT
BnTT4A2 (544) TCCTCCGTCTCGCCAAGGATCTCGCTGAGAACAACCGTGGCGCGCTGTTCTCGTTGTCT
BnTT4B1 (595) TCCTCCGTCTCGCCAAGGACCTCGCTGAGAACAACCGTGGCGCACGTGTCCTCGTTGTCT
BnTT4B2 (598) TCCTCCGTCTCGCCAAGGACCTCGCTGAGAACAACCGTGGCGCACGTGTCCTCGTTGTCT
BrTT4-1 (524) TCCTCCGTCTCGCCAAGGATCTCGCTGAGAACAACCGTGGCGCGCTGTTCTCGTTGTCT
BrTT4-2 (527) TCCTCCGTCTCGCCAAGGACCTCGCTGAGAACAACCGTGGCGCACGTGTCCTCGTTGTCT
BrTT4-3 (524) TCCTCCGTCTCGCTAAGGATCTCGCTGAGAACAACCGTGGCGCGCTGTTCTCGTTGTCT
BrTT4-4 (521) TCCTCCGTGTGGCTAAGGACATAGCTGAGAACAACCGTGGCGCGCTAGAGTACTTATTGTCT
BrTT4-5 (521) TCCTCCGTCTCGCCAAGGACCTCGCTGAGAACAACCGTGGCGCACGTGTCCTGGTGGTCT
BoTT4-1 (518) TCCTCCGTCTCGCCAAGGACCTCGCCGAGAACAACCGTGGCGCACGTGTTCTCGTGTCT
BoTT4-2 (524) TCCTCCGTCTCGCCAAGGATCTCGCTGAGAACAACCGTGGCGCGCTGTTCTCGTTGTCT
BoTT4-2 (527) TCCTCCGTCTCGCCAAGGACCTCGCTGAGAACAACCGTGGCGCACGTGTCCTCGTTGTCT
BoTT4-3 (527) TCCTCCGTCTCGCCAAGGACCTCGCTGAGAACAACCGTGGCGCACGTGTCCTCGTTGTCT
BoTT4-4 (524) TCCTCCGTCTCGCCAAGGATCTCGCTGAGAACAACCGTGGCGCGCTGTTCTCGTTGTCT
BjTT4 (524) TCCTCCGTCTCGCTAAGGATCTCGCTGAGAACAACCGTGGCGCGCTGTTCTCGTTGTCT

AtTT4 (584) GCTCTGAGATCACAGCCGTACCTTCCGTGGTCCCTCTGACACCACCTTGACTCCCTCG
BnTT4A1 (521) GCTCCGAGATCACAGCCGTACGTTCCGTGGCCCATCTGACACCACCTTGACTCCCTCG
BnTT4A2 (604) GCTCCGAGATCACAGCCGTACGTTCCGTGGCCCTCTGACACCACCTTGACTCCCTCG
BnTT4B1 (655) GCTCTGAGATCACAGCCGTACCTTCCGTGGCCCTTCTGACACCACCTTGTCTCACTCG
BnTT4B2 (658) GCTCCGAGATCACAGCCGTACCTTCCGTGGCCCTCTGACACTCACCTTGACTCACTCG
BrTT4-1 (584) GCTCCGAGATCACAGCCGTACGTTCCGTGGCCCATCTGACACCACCTTGACTCCCTCG
BrTT4-2 (587) GCTCCGAGATCACAGCCGTACCTTCCGTGGTCCCTCTGACACTCACCTTGACTCCCTCG
BrTT4-3 (584) GCTCCGAGATCACAGCCGTACGTTCCGTGGCCCATCTGACACCACCTTGACTCCCTCG
BrTT4-4 (581) GCTCTGAGATTACAGTAGTCACCTTCCGTGGGCCCTCTGAGACCACCTGGATTCCCTTG
BrTT4-5 (581) GCTCCGAGATCACAGCCGTACCTTCCGTGGCCCTTCTGACACCACCTTGACTCACTCG
BrTT4-6 (578) GCTCCGAGATCATAGCCCTTCTTCCGTGGCCCTCTGACACCACCTTGATTCCCTCC
BoTT4-1 (584) GCTCCGAGATCATAGCCGTACGTTCCGTGGCCCTCTGACACCACCTTGACTCCCTCG
BoTT4-2 (587) GCTCCGAGATCACAGCTGTACGTTCCGTGGCCCTTCTGACACTCACCTTGACTCGCTCG
BoTT4-3 (587) GCTCCGAGATCACAGCCGTACGTTCCGTGGCCCTCTGACACTCATCTTGACTCCCTCG
BoTT4-4 (584) GCTCCGAGATCACAGCCGTACGTTCCGTGGCCCTCTGACACCACCTTGACTCCCTCG
BjTT4 (584) GCTCCGAGATCACAGCCGTACGTTCCGTGGCCCATCTGACACCACCTTGACTCCCTCG

AtTT4 (644) TCGGTACGGCTCTTTTTCAGTGATGGCGCCGCCGCACTCATTGTGGGGTTCGGACCTGACA
BnTT4A1 (581) TTGGACAGGCTCTCTTTCAGTGACGGCGCCGCCGCGCTCATTGTCCGTTTCGGACCTGACA
BnTT4A2 (664) TTGGACAGGCTCTCTTTCAGTGACGGCGCCGCCGCGCTCATTGTCCGTTTCGGACCCGGATA
BnTT4B1 (715) TGGGTCAAGCTCTCTTTCAGCGACGGTGCAGCCGCGCTCATTGTCCGTTTCGGACCTGATG
BnTT4B2 (718) TGGGACAAGCTCTCTTTCAGTGACGGTGCAGCCGCACTCATTGTCCGTTTCAGACCTGATG
BrTT4-1 (644) TTGGACAGGCTCTCTTTCAGTGACGGCGCCGCCGCGCTCATTGTCCGTTTCGGACCTGACA
BrTT4-2 (647) TTGGACAGGCTCTCTTTCAGTGATGGAGCCGCTGCGCTTATCGTTGGTTTCGGATCTGATG
BrTT4-3 (644) TTGGACAGGCTCTCTTTCAGTGACGGCGCCGCCGCGCTCATTGTCCGTTTCGGACCCGGACA
BrTT4-4 (641) TTGGACAGTCCCTTTTTCAGTGACGGCGCCGCCGCGCTCATTGTCCGTTTCAGACCTGACA
BrTT4-5 (641) TGGGACAGGCACTCTTTCAGTGACGGTGCAGCCGCGCTCATTGTCCGTTTCGGACCTGATG
BrTT4-6 (638) TCGGACAGGCCCTCTTTCAGTGACGGCGCCGCCGCACTCGTTGTCCGTTTCGGACCCGGACA
BoTT4-1 (644) TTGGACAGGCTCTCTTTCAGTGACGGCGCCGCCGCGCTCATTGTCCGTTTCGGACCCGGATA
BoTT4-2 (647) TGGGACAGGCCCTCTTTCAGCGACGGTGCAGCCGCGCTCGTTGTCCGTTTCGGACCTGATG
BoTT4-3 (647) TTGGACAGGCTCTCTTTCAGTGACGGCGCCGCCGCGCTTATTGTCCGTTTCGGATCTGATG
BoTT4-4 (644) TTGGACAGGCTCTCTTTCAGTGACGGCGCCGCCGCGCTCATTGTCCGTTTCGGACCCGGATA
BjTT4 (644) TTGGACAGGCTCTCTTTCAGTGACGGCGCCGCCGCGCTCATTGTCCGTTTCGGACCTGACA

AtTT4 (704) CATCTGCTGGAGAGAAACCATCTTTGAGATGGTGTCTGCGGCTCAGACCATCCTTCCAG
BnTT4A1 (641) TCTCTGCTGGAGAGAAGCCCATCTTTCGAGATGGTGTCTGCGGCCAGACCATCTTACCAG
BnTT4A2 (724) CCTCTGCTGGAGAGAAGCCCATCTTTCGAGATGGTGTCTGCGGCCAGACCATACTACCAG
BnTT4B1 (775) TCTCTGCTGGAGAGAAGCCCATCTTTCGAGATGGTGTCTGCTGCTCAGACCATCCTCCAG
BnTT4B2 (778) TTTCTGCTGGAGAGAAGCCCATCTTTCGAGATGATGTCTGCGGCCAGACCATCCTCCAG
BrTT4-1 (704) CCTCTGCTGGAGAGAAGCCCATCTTTCGAGATGGTGTCTGCGGCCAGACCATCTTACCAG
BrTT4-2 (707) CTTCCGTGGGGGAGAAGCCAAATCTTTGAGATGGTGTCTGCGGCTCAGACCATCTTCCCG
BrTT4-3 (704) CCTCTGCTGGAGAGAAGCCCATCTTTCGAGATGGTGTCTGCGGCCAGACCATCTTACCAG
BrTT4-4 (701) CCTCTGCTGGGAGAGAAACCAATCTTTGAGATGGTGTCTGCTGCACAGACCATCTTCCCTG
BrTT4-5 (701) TCTCTGCTGGAGAGAAGCCCATCTTTCGAGATGGTGTCTGCTGCTCAGACCATCCTCCAG
BrTT4-6 (698) TCTCTGCTGGGAGAGAAACCAATCTTTCGAGATGGTGTCTGCTGCGGCCAGACCATCCTCCAG
BoTT4-1 (704) CCTCTGCTGGAGAGAAGCCCATCTTTCGAGATGGTGTCTGCGGCCAGACCATACTACCAG
BoTT4-2 (707) TCTCTGCTGGAGAGAAGCCCATCTTTCGAGATGGTGTCTGCGGCCAAAACCATCCTCCAG
BoTT4-3 (707) CATCCGTAGGGGAGAAGCCAAATCTTTGAGATGGTGTCTGCGGCCAGACCATCTTCCCG
BoTT4-4 (704) CCTCTGCTGGAGAGAAGCCCATCTTTCGAGATGGTGTCTGCGGCCAGACCATACTACCAG
BjTT4 (704) TCTCTGCTGGAGAGAAGCCCATCTTTCGAGATGGTGTCTGCGGCCAGACCATCTTACCAG

AtTT4 (764) ACTCTGATGGTGCCATAGACGGACATTTGAGGGAAGTTGGTCTCACCTTCCATCTCCTCA
BnTT4A1 (701) ACTCTGACGGTGCCATAGATGGACACTTTGAGGGAAGTGGGACTCACCTTCCATCTCCTCA
BnTT4A2 (784) ACTCTGACGGTGCCATAGATGGACACTTTGAGGGAAGTGGGACTCACCTTCCATCTCCTCA
BnTT4B1 (835) ACTCGACGGTGCCATAGATGGACACTTAAAGGGAAGTGGGACTCACCTTCCATCTCCTCA
BnTT4B2 (838) ACTCGACGGTGCCATCGATGGACACTTTGAGGGAAGTGGGACTCACCTTCCATCTCCTCA
BrTT4-1 (764) ACTCTGACGGTGCCATAGATGGACACTTTGAGGGAAGTGGGACTCACCTTCCATCTCCTCA
BrTT4-2 (767) ACTCGATGGAGCCATAGATGGACACTTTGAGGGAAGTGGGACTCACCTTCCATCTCCTCA
BrTT4-3 (764) ACTCTGACGGTGCCATAGATGGACACTTTGAGGGAAGTGGGACTCACCTTCCATCTCCTCA
BrTT4-4 (761) ACTCTCAAGGAGCCATAGAAGGACATCTGAAGGAGTGGGACTCACCTTCCATCTCTTAA
BrTT4-5 (761) ACTCGACGGTGCCATAGATGGACACTTTGAGGGAAGTGGGACTCACCTTCCATCTCCTCA
BrTT4-6 (758) ACTCGACGGCGTTATAAATTTACAGTTGAGGGAAGCGGGACTCACCTTCCATCTCCTGA
BoTT4-1 (764) ACTCTGACGGTGCCATAGATGGACACTTTGAGGGAAGTGGGACTCACCTTCCATCTCCTCA

BoTT4-2 (767) ACTCGACGGTGCCATAGATGGACACTTAAAGAGAAGTTGGACTCACCTTCCATCTCCTCA
 BoTT4-3 (767) ACTCGATGGAGCCATAGATGGACACTTGAGGGAAAGTGGGACTCACCTTCCATCTCCTCA
 BoTT4-4 (764) ACTCTGACGGTGCCATAGATGGACACTTGAGGGAAAGTGGGACTCACCTTCCATCTCCTCA
 BjTT4 (764) ACTCTGACGGTGCCATAGATGGACACTTGAGGGAAAGTGGGACTCACCTTCCATCTCCTCA

 AtTT4 (824) AGGATGTTCCCGGCCTCATCTCCAAGAACATTGTGAAGAGTCTAGACGAAGCGTTTAAAC
 BnTT4A1 (761) AGGACGTCCCTGGACTCATCTCCAAGAACATCGAGAAGAGTCTAGACGAAGCGTTTAAAC
 BnTT4A2 (844) AGGACGTCCCTGGGCTCATCTCCAAGAACATCGAGAAGAGTCTAGACGAAGCGTTTAAAC
 BnTT4B1 (895) AGGACGTCCCGGACTCATCTCCAAGAACATTGAGAAGAGTCTAGACGAAGCGTTTAAAC
 BnTT4B2 (898) AGGACGTCCCTGGACTCATCTCCAAGAACATTGAAAAGAGCCTAGACGAAGCGTTTAAAC
 BrTT4-1 (824) AGGACGTCCCTGGACTCATCTCCAAGAACATCGAGAAGAGTCTAGACGAAGCGTTTAAAC
 BrTT4-2 (827) AGGACGTCCCTGGGCTCATCTCCAAGAACATAGAGAAGAGTCTTGAAGAAGCGTTTAAAC
 BrTT4-3 (824) AGGACGTCCCTGGGCTCATCTCCAAGAACATCGAGAAGAGTCTAGACGAAGCGTTTAAAC
 BrTT4-4 (821) AGACTGTCCCGGTCTCATCTCCAAGAACATTGAGAAGTGTCTTGAAGAAGCGTTTAAAC
 BrTT4-5 (821) AGGACGTCCCGGACTCATCTCCAAGAACATTGAGAAGAGTCTAGACGAAGCGTTTAAAC
 BrTT4-6 (818) AGCACGTCCCTAGGCTCATCTCGAAGAACATTGAAAAGAGTCTACACGAAGCGTTTAAAC
 BoTT4-1 (824) AGGACGTCCCTGGGCTCATCTCCAAGAACATCGAGAAGAGTCTAGACGAAGCGTTTAAAC
 BoTT4-2 (827) AGGACGTCCCTGGGCTCATCTCCAAGAACATTGAAAAGAGCCTAGACGAAGCGTTTAAAC
 BoTT4-3 (827) AGGACGTCCCTGGGCTCATCTCCAAGAACATAGAGAAGAGTCTTGAAGAAGCGTTTAAAC
 BoTT4-4 (824) AGGACGTCCCTGGGCTCATCTCCAAGAACATCGAGAAGAGTCTAGACGAAGCGTTTAAAC
 BjTT4 (824) AGGACGTCCCTGGACTCATCTCCAAGAACATCGAGAAGAGTCTAGACGAAGCGTTTAAAC

 AtTT4 (884) CTTTGGGATAAAGTACTGGAACCTCCTCTTCTGGATAGCCACCTGGAGGTCAGCGA
 BnTT4A1 (821) CGTTAGGTATAAGCGACTGGAACCTCCTCTTCTGGATAGCTCACCTGGTGGTCCAGCGA
 BnTT4A2 (904) CTTAGGGATAAAGTACTGGAACCTCCTCTTCTGGATAGCTCACCTGGTGGTCCAGCGA
 BnTT4B1 (955) CTTAGGGATAAAGTACTGGAACCTCCTCTTCTGGATAGCTCACCTGGTGGTCCAGCGA
 BnTT4B2 (958) CGTTGGGATAAAGTATTGGAACCTCCTCTTCTGGATAGCTCACCTGGTGGTCCAGCGA
 BrTT4-1 (884) CGTTAGGTATAAGCGACTGGAACCTCCTCTTCTGGATAGCTCACCTGGTGGTCCAGCGA
 BrTT4-2 (887) CGCTAGGGATAAAGTACTGGAACCTCCTCTTCTGGATAGCTCACCTGGTGGTCCAGCGA
 BrTT4-3 (884) CGTTAGGTATAAGCGACTGGAACCTCCTCTTCTGGCTAGCTCACCTGGTGGTCCAGCGA
 BrTT4-4 (881) CGCTGGGATAAAGTACTGGAACCTCTCTTCTGGATAGCTCACCTGGAGGCTCCGCA
 BrTT4-5 (881) CTTAGGGATAAAGTACTGGAACCTCCTCTTCTGGATAGCTCACCTGGTGGTCCAGCGA
 BrTT4-6 (878) CGCTGGGATAAAGCGACTGGAACCTCCTCTTCTGGATAGCCATCCTGGTGGTCCAGCGA
 BoTT4-1 (884) CTTAGGGATAAAGCGACTGGAACCTCCTCTTCTGGATAGCTCACCTGGTGGTCCAGCGA
 BoTT4-2 (887) CGTTGGGATAAAGTACTGGAACCTCCTCTTCTGGATAGCCACCTGGTGGTCCAGCGA
 BoTT4-3 (887) CGCTAGGGATAAAGTACTGGAACCTCCTCTTCTGGATCGCTCACCTGGTGGTCCAGCGA
 BoTT4-4 (884) CTTAGGGATAAAGCGACTGGAACCTCCTCTTCTGGATAGCTCACCTGGTGGTCCAGCGA
 BjTT4 (884) CGTTAGGTATAAGCGACTGGAACCTCCTCTTCTGGATAGCTCACCTGGTGGTCCAGCGA

 AtTT4 (944) TCCTAGACCAGGTGGAGATAAAGCTAGGACTAAAGGAAGAGAAGATGAGGGCCACACGTC
 BnTT4A1 (881) TCCTTGACGAGGTTGAGAAGAAGCTAGGGCTCAAGGCGGAGAAGATGAGAGCCACGCGCC
 BnTT4A2 (964) TCCTTGACGACGTTGAGAAGAAGCTAGGGCTCAAGGCTGAGAAGATGAGAGCCACGCGTC
 BnTT4B1 (1015) TCCTTGACGACGTTGAGAAGAAGCTAGGACTCAAGGCAGAGAAGATGAGAGCCACGCGTC
 BnTT4B2 (1018) TCCTTGACGACGTTGAGAAGAAGCTAGGACTCAAGGCAGAGAAGATGAGAGCCACGCGTC
 BrTT4-1 (944) TCCTTGACGAGGTTGAGAAGAAGCTAGGGCTCAAGGCGGAGAAGATGAGAGCCACGCGTC
 BrTT4-2 (947) TACTTGACGAGGTTGAGAAGAAGCTAGGACTCAAGGCAGAGAAGATGAGAGCCACGCGTC
 BrTT4-3 (944) TCCTTGACGAGGTTGAGAAGAAGCTAGGGCTCAAGGCGGAGAAGATGAGAGCCACGCGCC
 BrTT4-4 (941) TCTTGACCAAGTTGAGATAAAGCTAGGACTGAAGCCAGAGAAGATGAAGGCCACTCGTC
 BrTT4-5 (941) TCCTTGACGACGTTGAGAAGAAGCTAGGACTCAAGGCAGAGAAGATGAGAGCCACGCGTC
 BrTT4-6 (938) TCCTTGATGAGGTTGAGAAAAGCTAGGACTCAAGGCAGAGAAGCTGAGGGCCACACGTC
 BoTT4-1 (944) TCCTTGACGAGGTTGAGAAAAGCTAGGGCTCAAGGCTGAGAAGATGAGAGCCACGCGTC
 BoTT4-2 (947) TCCTTGACGACGTTGAGAAGAAGCTAGGACTCAAGGCAGAGAAGATGAGAGCCACGCGTC
 BoTT4-3 (947) TCCTTGACGAGGTTGAGAAGAAGCTTGGACTCAAGGCAGAGAAGATGAGAGCCACGCGTC
 BoTT4-4 (944) TCCTTGACGAGGTTGAGAAAAGCTAGGGCTCAAGGCTGAGAAGATGAGAGCCACGCGTC
 BjTT4 (944) TCCTTGACGAGGTTGAGAAGAAGCTAGGGCTCAAGGCGGAGAAGATGAGAGCCACGCGCC

 AtTT4 (1004) ACGTGTGAGCGAGTATGGAACATGTGAGCGCGTGCCTTCTCTTACTACTAGACGAGA
 BnTT4A1 (941) ACGTGTGAGCGAGTACGGTAACATGTCTAGCGCGTGTGTTCTCTTACTATTGGACGAGA
 BnTT4A2 (1024) ACGTGTGAGCGAGTACGGAACATGTCTAGCGCCTGTGTCTCTTACTATTGGATGAGA
 BnTT4B1 (1075) ACGTGTGAGCGAGTATGGAACATGTCTAGCGCCTGTGTCTCTTACTATTGGATGAGA
 BnTT4B2 (1078) ACGTGTGAGCGAGTATGGTAACATGTCTAGCGCCTGCCTCTTACTACTGGATGAGA
 BrTT4-1 (1004) ACGTGTGAGCGAGTACGGTAACATGTCTAGCGCCTGTGTTCTCTTACTATTGGACGAGA
 BrTT4-2 (1007) ACGTGTGAGTGTGAGTACGGAACATGTGAGCGCGTGCCTTCTCTTACTATTGGATGAGA

BrTT4-3 (1004) ACGTGTGAGCGAGTACGGTAACATGTCTAGCGCGTGTGTTCTCTTCATATTGGACGAGA
 BrTT4-4 (1001) ATGTCCTCAGCGAGTATGGAAACATGTCTAGTGCCTGTGTCTTCTTCATACTTGACGAGA
 BrTT4-5 (1001) ACGTGTGAGCGAGTATGGAAACATGTCTAGCGCCTGTGTCTTCTTATATTGGATGAGA
 BrTT4-6 (998) ACGTGTGAGCGAGTACGGAAACATGACGAGCGCGTGCCTCTTCATATTGGACGAGA
 BoTT4-1 (1004) ACGTGTGAGCGAGTACGGTAACATGTCTAGCGCGTGTGTTCTCTTCATATTGGACGAGA
 BoTT4-2 (1007) ACGTGTGAGCGAGTATGGTAACATGTCTAGCGCCTGCGTCTTCTTATATTGGATGAGA
 BoTT4-3 (1007) AGGTCTGAGCGAGTACGGAAACATGTCTAGCGCGTGCCTCTCTTATATTGGACGAGA
 BoTT4-4 (1004) ACGTGTGAGCGAGTACGGTAACATGTCTAGCGCGTGTGTTCTCTTCATATTGGACGAGA
 BjTT4 (1004) ACGTGTGAGCGAGTACGGTAACATGTCTAGCGCGTGTGTTCTCTTCATATTGGACGAGA

 AtTT4 (1064) TGAGGAGGAAGTCTAGCTAAGGATGGTGTGGCCACGACAGGAGAAGGTTGGAGTGGGGTG
 BnTT4A1 (1001) TGAGGAGGAAGTCTGCGGAAGATGGTGTGGCCACGACAGGAGAAGGTTGGAGTGGGGTG
 BnTT4A2 (1084) TGAGGAGGAAGTCTACGGAAGATGGTGTGGCCACGACAGGAGAAGGTTAGAATGGGGTG
 BnTT4B1 (1135) TGAGGAGGAAGTCTAAGGAAGATGGTGTGGCCACGACAGGTGAAGGTTAGAATGGGGTG
 BnTT4B2 (1138) TGAGGAGGAAGTCTGTGGAAGATGGCTAGCCACGACAGGTGAAGGTTGGAGTGGGGTG
 BrTT4-1 (1064) TGAGGAGGAAGTCTGCGGAGGATGGTGTGGCCACGACAGGAGAAGGTTGGAGTGGGGTG
 BrTT4-2 (1067) TGAGGAGGAAGTCTAGCGAAAGATGGTGTGGCCACGACGGGAGAAGGTTGGAGTGGGGTG
 BrTT4-3 (1064) TGAGGAGGAAGTCTGCGGAAGATGGTGTGGCCACGACAGGAGAAGGTTGGAGTGGGGTG
 BrTT4-4 (1061) TGAGGAGGAAGCGGTAGAGGATGGTGCAGAGACACAGGAGAAGGTTGGAGTGGGGTG
 BrTT4-5 (1061) TGAGGAGGAAGTCTAAGGAAGATGGTGTGGCCACGACAGGTGAAGGTTAGAATGGGGTG
 BrTT4-6 (1058) TGAGGAGGAAGTCCGCCAAGATGGTGTGGCCACGACAGGAGAAGGTTGGAGTGGGGTG
 BoTT4-1 (1064) TGAGGAGGAAGTCTAGCGGAAGATGGTGTGGCTACGACAGGAGAAGGTTGGAGTGGGGTG
 BoTT4-2 (1067) TGAGGAGGAAGTCTGTGGAAGATGGTGTGGCCACGACAGGTGAAGGTTGGAGTGGGGTG
 BoTT4-3 (1067) TGAGGAGGAAGTCTGCGAAAGATGGTGTGGCTACGACGGGAGAAGGTTGGAGTGGGGTG
 BoTT4-4 (1064) TGAGGAGGAAGTCTAGCGGAAGATGGTGTGGCCACGACAGGAGAAGGTTGGAGTGGGGTG
 BjTT4 (1064) TGAGGAGGAAGTCTGCGGAAGATGGTGTGGCCACGACAGGAGAAGGTTGGAGTGGGGTG

 AtTT4 (1124) TCTTGTGTTGGTTTCGGACCAGGTCTCACTGTTGAGACAGTCTGTTGCACAGCGTTCCTC
 BnTT4A1 (1061) TCTTGTGTTGGTTTCGGACCAGGTCTTACCGTAGAGACAGTGGTCTTGCACAGCGTTCCTC
 BnTT4A2 (1144) TCTTGTGTTGGTTTCGGACCAGGTCTTACTGTAGAGACAGTGGTCTTGCACAGCGTTCCTC
 BnTT4B1 (1195) TCTTGTGTTGGTTTCGGACCAGGTCTCACCGTGGAGACAGTGTCTTGCACAGCGTTCCTC
 BnTT4B2 (1198) TCCTGTTTGGGTTTCGGACCAGGTCTCACCGTGGAGACAGTGTCTTGCACAGCGTTCCTC
 BrTT4-1 (1124) TCTTGTGTTGGTTTCGGACCAGGTCTTACCGTAGAGACAGTGGTCTTGCACAGCGTTCCTC
 BrTT4-2 (1127) TCTTGTGTTGGTTTCGGACCAGGTCTCACCGTAGAGACTGTTGTCTTGCACAGCGTTCCTG
 BrTT4-3 (1124) TCTTGTGTTGGTTCGGACCAGGTCTTACCGTAGAGACAGTGGTCTTGCACAGCGTTCCTG
 BrTT4-4 (1121) TCTTGTGTTGGTTTCGGACCTGGTCTCACTGTAGAGACAGTGGTCTTACACAGTGTTCCTC
 BrTT4-5 (1121) TCTTGTGTTGGGTTTCGGACCAGGTCTCACCGTGGAGACAGTGTCTTACACAGCGTTCCTG
 BrTT4-6 (1118) TCTTGTGTTGGTTTCGGACCAGGTCTCACTGTTGAGACACTAGTCTTGCACAGCGTTCCTC
 BoTT4-1 (1124) TCTTGTGTTGGTTTCGGACCAGGTCTTACTGTAGAGACAGTGGTCTTGCACAGCGTTCCTC
 BoTT4-2 (1127) TCCTGTTTGGGTTTCGGACCAGGTCTCACCGTGGAGACAGTGTCTTACACAGCGTTCCTG
 BoTT4-3 (1127) TCTTGTGTTGGTTTCGGACCTGGTCTCACCGTAGAGACTGTTGTCTTGCACAGCGTTCCTG
 BoTT4-4 (1124) TCTTGTGTTGGTTTCGGACCAGGTCTTACTGTAGAGACAGTGGTCTTGCACAGCGTTCATG
 BjTT4 (1124) TCTTGTGTTGGTTCGGACCAGGTCTTACCGTAGAGACAGTGGTCTTGCACAGCGTTCCTC

AtTT4 (1184) TCTAA
 BnTT4A1 (1121) TCTAA
 BnTT4A2 (1204) TCTAA
 BnTT4B1 (1255) TCTAA
 BnTT4B2 (1258) TCTA-
 BrTT4-1 (1184) TCTAA
 BrTT4-2 (1187) TTTGA
 BrTT4-3 (1184) TTTGA
 BrTT4-4 (1181) TCTGA
 BrTT4-5 (1181) TCTAA
 BrTT4-6 (1178) TTTGA
 BoTT4-1 (1184) TCTAA
 BoTT4-2 (1187) TCTAA
 BoTT4-3 (1187) TTTGA
 BoTT4-4 (1184) TTTGA
 BjTT4 (1184) TCTAA

4. BnTT5

AtTT5 (1) -----ATGTCTTCATCCAACGCCTGCGCCTCTCCGTACCGTTCCCGCC

BnTT5 (1) -----G
 BrTT5-1 (1) -----ATGTCTTCATCC-----AACTGTCCGTCACCGTTACCCACC
 BrTT5-2 (1) -----ATGTCTTCATCC-----AACTGTCCGTCACCGTTACCCACC
 BrTT5-3 (1) -----ATGTCTTCTCC-----CACTGTCCAACACCGTTACCCCTCC
 BrTT5-4 (1) -----ATGTCTTCTCC-----AACTGTCCGTCACCGTTACCCACC
 BrTT5-5 (1) -----ATGTTTTCTTCC-----GGCATTACAGACACCGTTACCCCTCC
 BrTT5-6 (1) -----ATGTTTTCTTCC-----GGCTCTCAGTTACCGTTACCCCTCC
 BoTT5-1 (1) -----ATGTCTTCTTCC-----CACTGTCCAACACCGTTACCCCTCC
 BoTT5-2 (1) -----ATGTTTTCTTCC-----GGCTCTCAGTTACCGTTACCCCTAT
 BoTT5-3 (1) -----ATGTCTTCTTCC-----AACTGTCCGTCACCGTTACCCACC
 BoTT5-4 (1) ATGTTTGATCAAATCATATTTCTTCC-----GGCGTTACGTCACCGTTACCCCTCC
 BjTT5 (1) -----ATGTCTTCATCC-----AACTGTCCGTCACCGTTACCCCTCC

AtTT5 (46) GTCACGAAGCTTTCATGTAGACTCCGTCACGTTTGTACCGTCCGTC AAGTCACCGGCTCC
 BnTT5 (2) GTGGCGCAGGTTTCGACTACGCTTGCCCTTCTTTTTTTCTTTTTCTTTTAAATCTATGATGT
 BrTT5-1 (37) GTCACGAAACTTCAAGTTGATTCCGTTACTTTTCCACCGTCCGTCATCTCACC GGCTTCC
 BrTT5-2 (37) GTCACGAAACTTCAAGTTGATTCCGTTACTTTTCCACCGTCCGTCATCTCACC GGCTTCC
 BrTT5-3 (37) GTCACCAAACCTTCAAGTAGACTCCGTTACTTTTCAACCCTCAGTCATCTCACC GGCTTCC
 BrTT5-4 (37) GTCACGAAACTTCAAGTTGATTCCGTTACTTTTCCACCGTCTGTTCATCTCACC GGCTTCC
 BrTT5-5 (37) GTCACGAATCTTCAAGTTGAATCCGTTAACTTTTCCACCGTCCGTCATCTCACC GGCTTCC
 BrTT5-6 (37) GTCACGAATCTTCAAGTTGATTCCGTTAACTTTTCCACCGTCCGTCATCTCACC GGCTTCC
 BoTT5-1 (37) GTCACCAAACCTTCAAGTAGACTCCGTTACTTTTCCACCGTCCGTCATCTCACC GGCTTCC
 BoTT5-2 (37) GTCACGAATCTTCAAGTTGATTCCGTTAACTTTTCCACCGTCCGTCATCTCACC GGCTTCC
 BoTT5-3 (37) GTCACGAATCTTCAAGTTGATTCCGTTAACTTTTCCACCGTCCGTCATCTCACC GGCTTCC
 BoTT5-4 (52) GTCACGAATCTTCAAGTTGATTCCGTTAACTTTTCCACCGTCCGTCATCTCACC GGCTTCC
 BjTT5 (37) GTCACCAAACCTTCAAGTAGACTGCGTTACTTTTCCACCGTCCGTCATCTCACC GGCTTCC

AtTT5 (106) TCCAATCCATTATTCCTCGGCGGCGCGGTTGTCCGAGGCCTTGATATCCAAGGTA---AA
 BnTT5 (62) TTATTTTATTTTTATTTTTTCTACGCA**GGTGTGCGAGGTTTGGATAT**CCACGGAA---AA
 BrTT5-1 (97) TCCAACCTCTCTTCTCGGTGGCGCAGGTGTGCGAGGTTTGGATATCCAAGGAA---AG
 BrTT5-2 (97) TCCAACCTCTCTTCTCGGTGGCGCAGGTGTGCGAGGTTTGGATATCCAAGGAA---AG
 BrTT5-3 (97) TCCAATCCCCTCTTCTCGGTGGCGCAGGTGTGCGAGGTTTGGATATCCAAGGAA---AG
 BrTT5-4 (97) TCCAACCTCTCTTCTCGGTGGCGCAGGTGTGCGAGGTTTGGATATCCAAGGAA---AG
 BrTT5-5 (97) TCCAACCGACTCTTCTCGCTGGCGCAGGTGTGCAAGGTTTGGATATCCAAGGAG---AT
 BrTT5-6 (97) TCCAACCTCTCTTCTCGGTGGCGCAGGTGTGCGAGGTTTGGATATCCAAGGAA---AA
 BoTT5-1 (97) TCCAATCCCCTCTTCTCGGTGGCGCAGGTGTGCGAGGTTTGGATATCCAAGGAA---AA
 BoTT5-2 (97) TCCAACCTCTCTTCTCGGTGGCGCAGGTGTGCGAGGTTTGGATATCCAAGGAA---AA
 BoTT5-3 (97) TCCAACCTCTCTTCTCGGTGGCGCAGGTGTGCGAGGTTTGGATATCCAAGGAA---AA
 BoTT5-4 (112) TCCAATCGACTCTTCTCGCTGGCGCAGGTGTGCAAGGTTTGGATATCCAAGGAG---AG
 BjTT5 (97) TCCAATCCCCTCTTCTCGGTGGCGCAGGTGTGCGAGGTTTGGATATCCAAGGAA---AA

AtTT5 (163) TTCGTGATCTTACCCTCATTTGGAGTATACCTAGAGGGTAACGCCGTTCCCTTCTCTATCT
 BnTT5 (119) TTCGTGATCTTACCCTCATCGGTGTTTACCTAGATGCTGTCCCGTCCCCTCCTTTCC
 BrTT5-1 (154) TTTGTGATCTTACCCTCATCGGAGTTTACCTTGTATCCTGTCTCCGTCACGTCACCTCTCC
 BrTT5-2 (154) TTTGTGATCTTACCCTCATCGGAGTTTACCTTGTATCCTGTCTCCGTCACGTCACCTCTCC
 BrTT5-3 (154) TTCGTGATCTTACCCTCATCGGTGTTTACCTAGATGCTGTCCCGTCCCCTCCTTTCC
 BrTT5-4 (154) TTTGTGATCTTACCCTCATCGGAGTTTACCTTGTATCCTGTCTCCGTCACGTCACCTCTCC
 BrTT5-5 (154) TTTGTGATCTTACCCTCATCGGAGTTTACCTAGATCCTAACGCCCTTAGAGGGACTTCCC
 BrTT5-6 (157) TTTGTGATCATCACCTTCTTCCGCGTTTACCTAGATCCTGTGGCCGTCCCCTTACTCTCC
 BoTT5-1 (154) TTCGTGATCTTACCCTCATCGGTGTTTACCTAGATGCTGTCCCGTCCCCTCCTTTCC
 BoTT5-2 (157) TTTGTGATCATCACCTTCTTCCGAGTTTACCTAGATCCTGTGGCCGTCCCCTTACTCTCC
 BoTT5-3 (154) TTCGTGATCTTACCCTCATCGGAGTTTACCTAGATCCTGTCTCCGTCACGTCACCTCTCC
 BoTT5-4 (169) TTTGTGATCTTACCCTCATCGGAGTTTACCTAGATCCTAACGCCCTTAGGGAGCCTTACC
 BjTT5 (154) TTCGTGATCTTACCCTCATTTGGAGTCTACCTAGATGCTGTCTCCGTCACGTCACCTCTCC

AtTT5 (223) G--TCAAGT-GGAAGGGA AAAACTACGGAGGAGCTAACAGAATCTATCCCGTTCCTCCGT
 BnTT5 (179) G--TTAAGT-GGAAAGGCAA AACACACAGAGGAG**GCTAACAGAATCCGTCCTTTT**CCCGT
 BrTT5-1 (214) G--TTAAGT-GGAAAGGTA AAAACGACAGAGGAGTTAACGGAATCCGTCCTTTCTTCCGT
 BrTT5-2 (214) G--TTAAGT-GGAAAGGTA AAAACGACAGAGGAGTTAACGGAATCCGTCCTTTCTTCCGT
 BrTT5-3 (214) G--TTAAGT-GGAAAGGCAA AACACACAGAGGAGCTAACAGAATCCGTCCTTTCTTCCGT
 BrTT5-4 (214) G--TTAAGT-GGAAAGGTA AAAACGACAGAGGAGTTAACGGAATCCGTCCTTTCTTCCGT
 BrTT5-5 (214) TTTTGC GGT-----ACGACAGAGGAGTTAGCGGAATCCGTCCTTTCTTCCGT
 BrTT5-6 (217) G--TTAAGT-GGAAAGGTA AAAACGACGGAGGAGTTAATGGAATCCGTCCTTTCTTCCGT

BoTT5-1 (214) G--TTAAGT-GGAAAGGCAAAACCACAGAGGAGCTAACAGAATGCGTCCCTTTTTTCCGT
BoTT5-2 (217) G--TTAAGT-GGAAAGGTAAAACGACGGAGGAGTTAATGGAATCCGTCCCTTTCTCCGT
BoTT5-3 (214) G--TTAAGT-GGAAAGGTAAAACGACAGAGGAGTTAACGGAATCCGTCCCTTTCTCCGT
BoTT5-4 (229) TCTTTCGGTTGGGGATGCAAAACGACAGAGGAGTTAACGGAATCCGTCAATTTCTCCGT
BjTT5 (214) G--TTAAGT-GGAAAGGCAAAACCACAGAGGAGCTAACGGAGTCCGTCCCTTTTTTCCGT

AtTT5 (280) GAAATAGTCACCGGTGCGT--TTGAGAAGTTTATCAAGGTGACAATGAAACTGCCGTAA
BnTT5 (236) GAAATCGTCACGGGTACTTCTTACACCCTTACTTAAGACACACGTCATATGACTTATA
BrTT5-1 (271) GAAATCGTCACAGGTTCGT--TTGAGAAATTCATCAAAGTGACGATGAAGCTGCCGTAA
BrTT5-2 (271) GAAATCGTCACAGGTTCGT--TTGAGAAATTCATCAAAGTGACGATGAAGCTGCCGTAA
BrTT5-3 (271) GAAATCGTCACGGGTTCGT--TTGAGAAGTTTATTAAGGTGACGATGAAGCTACCCTAA
BrTT5-4 (271) GAAATCGTCACAGGTTCGT--TTGAGAAATTCATCAAAGTGACGATGAAGCTGCCGTAA
BrTT5-5 (262) CAAATCGTCACAGGTTCCTT--TTGAGAAATTCATTAAGGTGACGATGAAACTCCCCTAA
BrTT5-6 (274) GAAGTCGTACAGGTACTT--TTGAGAAACTCATTAAGGTGATGATGAGAGTGCCTTAC
BoTT5-1 (271) GAAATCGTCACGGGTTCGT--TTGAGAAGTTTATTAAGGTGACGATGAAGCTACCCTAA
BoTT5-2 (274) GAAGTCGTACAGGTACTT--TTGAGAAATTCATCAAAGTGACGATGAGAGTGCCTTAC
BoTT5-3 (271) GAAATCGTCACAGGTTCGT--TTGAGAAATTCATCAAAGTGACGATGAAGCTGCCGTAA
BoTT5-4 (289) CATAICGTACAGGTTCCTT--TTGAGAAATTCATTAAGGTGACGATGAAACTGCCGTAA
BjTT5 (271) GAAATCGTTACAGGTTCGT--TTGAGAAGTTTATCAAGGTACGATGAAACTGCCGTAA

AtTT5 (338) CGGGACAACAATATTCGGAGAAAGTGACGGAGAATTGTGTGGCTATATGGAACAATTAG
BnTT5 (296) TCAAAGTGTTCCTTTTGTAGAAAGCTAC---GTCATATCAAAGTGTTTTAAAGTAATAAG
BrTT5-1 (329) CGGGACAACAATATTCGGAGAAAGTAACGGAGAACTGTGTGGCGATATGGAATCGTTAG
BrTT5-2 (329) CGGGACAACAATATTCGGAGAAAGTAACGGAGAACTGTGTGGCGATATGGAATCGTTAG
BrTT5-3 (329) CAGGACAGCAGTATTCAGAGAAAGTAACGGAGAACTGTGTGGCGATATGGAATCGTTAG
BrTT5-4 (329) CGGGACAACAATATTCAGAGAAAGTAACGGAGAACTGTGTGGCGATATGGAATCGTTAG
BrTT5-5 (320) CGGGACAGCAATATTCGGAGAAAGTAACAGAGAATTGTGAGGCAATTTGGGAATCGTTAG
BrTT5-6 (332) CGGGACAACTATATTCACAGATAATAACGGGGACCTCTGTGAAGATATGGAATCGTTAG
BoTT5-1 (329) CAGGACAGCAGTATTCAGAGAAAGTAACGGAGAACTGTGTGCGCATCTGGAATCGTTAG
BoTT5-2 (332) CGGGACAACTATATTCACAGACAGTAACGGGGACCTTTGTGGAGATATGGAATCGTTAG
BoTT5-3 (329) CGGGACAACAATATTCAGAGAAAGTAACGGAGAACTGTGTGGCGATATGGAATCGTTAG
BoTT5-4 (347) CGGGACAGCAATATTCGGAGAAAGTAACAGAGAACTGTGAGGCAATTTGGGAATCGTTAG
BjTT5 (329) CGGGACAGCAATATTCGGAGAAAGTAACAGAGAACTGTGTGGCGATTTGGAATCGTTAG

AtTT5 (398) GG--CTTTATACGGACTGTGAA-----
BnTT5 (353) GGCCATTTGTATTGACCGTCATTA-----
BrTT5-1 (389) GG--ATTTACACAGACTCTGAG-----
BrTT5-2 (389) GG--ATTTACACAGACTCTGAG-----
BrTT5-3 (389) GT--ATTTACACAGACTCTGAA-----
BrTT5-4 (389) GG--ATTTACACAGACTCTGAG-----
BrTT5-5 (380) GG--ATAAACGCGTACTCTGACTCTCACATCTGTGAAGACTGTGATCCTCCTCCCGTGC
BrTT5-6 (392) GG--ATTTACACATACTCTGAG-----G-----
BoTT5-1 (389) GT--ATTTACACAGATTCTGAA-----
BoTT5-2 (392) GG--ATTTACACAGACTCTGAG-----G-----
BoTT5-3 (389) GG--ATTTACACAGACTCTGAG-----
BoTT5-4 (407) GG--ATAAATCAAATCTCTGAC-----AT-----AAG-CTGTGGTCTCCTCCAGTGC
BjTT5 (389) GT--ATCTACACAGACGCTGAA-----

AtTT5 (418) -----GC
BnTT5 (377) -----ATTAA
BrTT5-1 (409) -----GC
BrTT5-2 (409) -----GC
BrTT5-3 (409) -----GC
BrTT5-4 (409) -----GC
BrTT5-5 (438) AAAACTTCGTTTTTAAACAAGATCACTAAAACATTTGGTCCATATCGGCACTACTCTAGGGG
BrTT5-6 (413) -----C
BoTT5-1 (409) -----GC
BoTT5-2 (413) -----C
BoTT5-3 (409) -----GC
BoTT5-4 (453) AAAACTTCGTTTTTAAACAAGATCACTAAAACATTTGGTCCATCTCGGCACTATTCTAGGGG
BjTT5 (409) -----GC

AtTT5 (420) TAAAGCTGTGGAGAAGTTCTTGGAGATCTTCAAGGAAGAAACATTCCTCCCGGTTTCATC

BnTT5 (382) TAACCTTTTCGTTTAACTCTTAATTAGGTTCC--GTTTGAGAAGTTTATTAAGGTGACGAT
BrTT5-1 (411) TAAAGCTGTGGAGAGGTTTCAAGGACGAAACGTTCCCTCCTGGTGCTTC
BrTT5-2 (411) TAAAGCTGTGGAGAGGTTTCAAGGACGAAACGTTCCCTCCTGGTGCTTC
BrTT5-3 (411) TAAAGCTGTGAAGAAGTTTGGAGGTTTCAAGGACCAAACGTTCCCTCCTGGTGCTTC
BrTT5-4 (411) TAAAGCTGTGGAGAGGTTTGGAAAGTCTTCAAGGACGAAACGTTCCCTCCTGGTGCTTC
BrTT5-5 (498) TCATGCTGTGGTGAAGTTTCTGGAATCTTCAAGCACAAAAAGTTCCCTCCTGGTGCTTC
BrTT5-6 (414) TAAAGCAGTGGAGAGGTTTGGAAAGTCTTCAAGGACGAAACGTTCCCTCCTGGTGCTTC
BoTT5-1 (411) TAAAGCTGTGAAGAAGTTTGGAGGTTTCAAGGACCAAACGTTCCCTCCTGGTGCTTC
BoTT5-2 (414) TAAAGCAGTGGAGAGGTTTGGAAAGTCTTCAAGGACGAAACGTTCCCTCCTGGTGCTTC
BoTT5-3 (411) TAAAGCTGTGGAGAGATTGGAAAGTCTTCAAGGACGAAACGTTCCCTCCTGGTGCTTC
BoTT5-4 (513) TCAAGCTGTGAAGAAGTTTCTGGAATCTTCAAGCCAAAAAGTTCCCTCCTGGTGCTTC
BjTT5 (411) TAAAGCTGTGGAGAGGTTTGGAGGTTTCAAGGACCAAACGTTCCCTCCTGGTGCTTC

AtTT5 (480) GATCCTCTTCGCTCTCTCCCTACCAGGCTCTCTTACGTTGCGTTTTTCGAAAGATGATAG
BnTT5 (440) GAAGCTAC-CGTTAACAGGACAGCAGTAT-TCAGAG-----
BrTT5-1 (471) CATCCTCTTCGCTCTCTCCCTGAAGGCTCTCTTACGTTGCGTTTTTCGAAAGATGATAG
BrTT5-2 (471) CATCCTCTTCGCTCTCTCCCTGAAGGCTCTCTTACGTTGCGTTTTTCGAAAGATGATAG
BrTT5-3 (471) GATTCTCTTGGCTCTCTCCCTAACGGCTCTCTCAGATTGCGTTTTTCGAAAGACGATAG
BrTT5-4 (471) CATCCTCTTCGCTCTCTCCCTGAAGGCTCTCTTACGTTGCGTTTTTCGAAAGATGATAG
BrTT5-5 (558) CATCCTCTTCGCTTTCTCCCTAAAGGCTCTCTTACGTTGCGTTTTTCGAGTGATGATGG
BrTT5-6 (474) CATCCTCTTCGCTCTCTCCCTGAAGGCTCTCTTACGATTGCGTTTTTCGAAAGACGATAG
BoTT5-1 (471) GATTCTCTTGGCTCTCTCCCTAACGGCTCTCTCAGATTGCGTTTTTCGAAAGACGATAG
BoTT5-2 (474) AATCCTCTTCGCTCTCTCCCTGAAGGCTCTCTTACGATTGCGTTTTTCGAAAGACGATAA
BoTT5-3 (471) CATCCTCTTCGCTCTCTCCCTAACGGCTCTCTTACGTTGCGTTTTTCGAAAGATGATAG
BoTT5-4 (573) CATCCTCTTCGCTATCTCCCTAAAGGCTCTCTTACGTTGCGTTTTTCGAATGATGATGG
BjTT5 (471) GATCCTCTTGGCTCTCTCCCTAACGGCTCTCTCAGATTGCGTTTTTCGAAAGACGATAG

AtTT5 (540) TATCCCTGAAACCGGATCGCTGTGATCGAGAACAATGTTGGCGGAGGC-GGTTCTGG
BnTT5 (474) -----
BrTT5-1 (531) CATTCTGAAACGGGAAAAGTGGTTATTGAAAACAAGTTGTTGGCAGAGGC-AGTTCTTG
BrTT5-2 (531) CATTCTGAAACGGGAAAAGTGGTTATTGAAAACAAGTTGTTGGCAGAGGC-AGTTCTTG
BrTT5-3 (531) TATTCTAAAACCGGAAAAGCCGTAATCGAGAATAAATTGTTGGCAGAGGC-A-----
BrTT5-4 (531) CATTCTGAAACGGGAAAAGTGGTTATTGAAAACAAGTTGTTGGCAGAGGC-AGTTCTTG
BrTT5-5 (618) CATTCTAAAAGAGGAAAACACAGCGATCGAGAATAAAGTTTTTGGCAGAGGC-AATTCTTG
BrTT5-6 (534) CATTCCGAAACGGGAAAAGCGGTGATCGAAAACAAGTTGTTGACAGAGGCCAGTTCTTG
BoTT5-1 (531) TATTCTAAAACCGGAAAAGCCGTAATCGAGAATAAATTGTTGGCAGAGGC-AGTTCTTG
BoTT5-2 (534) CATTCTGAAACGGGAAAAGCGGTGATCGAAAACAAGTTGTTGGCAGAGGC-AGTTCTTG
BoTT5-3 (531) CATTCTGAAACGGGAAAAGCGGTGATCGAAAACAAGTTGTTGGCAGAGGC-AGTTCTTG
BoTT5-4 (633) CATTCTAAAAGAGGAAAACACAGCGATCGAGAATAAAGTTTTTGGCAGAGGC-AGTTCTTG
BjTT5 (531) TATTCTAAAACCGGAAAAGCCGGTGATCGAGAATAAATTGTTGGCAGAGGC-AGTTCTTG

AtTT5 (599) AATCTATCATCGGAAGAACGGTGTGTCACCTGGCACTAGGTTAAGTGTTCAGAAAAGAT
BnTT5 (474) -----
BrTT5-1 (590) AATCGATCATTGGAAGAACGGTGTGTCTCCTGGGGCTAGGTTGAGTGTTCGCGAGAGAT
BrTT5-2 (590) AATCGATCATTGGAAGAACGGTGTGTCTCCTGGGGCTAGGTTGAGTGTTCGCGAGAGAT
BrTT5-3 (583) -----
BrTT5-4 (590) AATCGATCATTGGAAGAACGGTGTGTCTCCTGGGGCTAGGTTGAGTGTTCGCGAGAGAT
BrTT5-5 (677) AATCAATCATTGGAAGAACGGTGTGTCTCCTGGGGCTAGGCTGAGTGTAGCTGAGAGAT
BrTT5-6 (594) A-----
BoTT5-1 (590) AATCGATCATAGGAAGAAGGTTGTGTCTCCTGGGGCTAGGTTGAGTGTTCGCGAGAGAT
BoTT5-2 (593) AGTTTATCATTGGAACGGAAGCTGCGTCTCCTAGGACTAGGTTGAGTGTTCGCGAGAGAT
BoTT5-3 (590) AATCGATCATTGGAAGAACGGTGTGTCTCCTGGGGCTAGGTTGAGTGTTCGCGAGAGAT
BoTT5-4 (692) AATCAATCATTGGAAGAACGGTGTGTCTCCTGGGGCTAGGCTGAGTGTAGCTGAGAGAT
BjTT5 (590) AATCGATCATAGGAAGAAGGTTGTGTCTCCTGGGGCTAGGTTGAGTGTTCGCGAGAGAT

AtTT5 (659) TATCTCAGCTAATGATGAAGAACAAGGACGAAAAGGAAGTTAGTGATCACTCTGTTGAGG
BnTT5 (474) -----
BrTT5-1 (650) TAGCTCAGCTGATGAATAGTGACAAGATCGAAGAAGATGCAACAAAGACTGATCAAGAGG
BrTT5-2 (650) TAGCTCAGCTGATGAATAGTGACAAGATCGAAGAAGATGCAACAAAGACTGATCAAGAGG
BrTT5-3 (583) -----CTGATGAAGGAGAACAAGGTCGAAAAGATGCAACAAAGACTGATAATCAAG
BrTT5-4 (650) TAGCTCAGCTGATGAATAGTGACAAGGTCGAAGAAGATGCAACAAAGACTGATCAAGAGG
BrTT5-5 (737) TAGCTCAGCTGATGAAGCTTGAACGCCGGGCTGAGACATTAATATTGGCCGACAAAAA
BrTT5-6 (595) -----

BoTT5-1 (650) TATCTCAGCTGATGAAGGAGAACAAGGTCGAAAAAGATGCAACAAAGACTGATAATCAAG
 BoTT5-2 (653) TATCTCAGCTGATGAATAGTGACAAGGTCGAAGAAGATGCAACAAAGACATGA-----
 BoTT5-3 (650) TAGCTCAGCTGATGAATAGTGACAAGGTCGAAGAAGATGCAACAAAGACTGATCAAGAGG
 BoTT5-4 (752) TAGCTCAGGTGATGAAGAATGAAGGCCGGGCTGAGACATTAATATTGGGCGACAAAAAAT
 BjtT5 (650) TATCTCACCTGATGAAGGAGAACAAGGTCAAAGAAGATGCAACAAAGACTGATAATCAAG

 AtTT5 (719) A-----AAAAGTAGCCAAAGAGAACTGA-----
 BnTT5 (474) -----
 BrTT5-1 (710) A---AGCTAACGATCTCCCCCTCGGAGATCAACTGGCCAAAGAGAACTGA-----
 BrTT5-2 (710) A---AGCTAACGATCTCCCCCTCGGAGATAAACTGGCCAAAGAGAACTGA-----
 BrTT5-3 (635) ATG-AAGCTAACGATGTCTCCCTTGGAGATAAAGTTGGCCAAAGAGAACTGA-----
 BrTT5-4 (710) A---AGCTAACGATCTCCCCCTCGGAGATAAACTGGCCAAAGAGAACTGA-----
 BrTT5-5 (797) T-----TAT---GAAAAATAACGAGGTCAAAGAAGATGCAACAAAGACAAAGACTGAT
 BrTT5-6 (595) -----
 BoTT5-1 (710) ATG-AAGCTAACGATGTTTCCCTTGGAGATAAAGTTGGCCAAAGAGAACTGA-----
 BoTT5-2 (706) -----
 BoTT5-3 (710) A---AGCTAACAACTCTCCCCCTAGGAGATAAACTGGCCAAAGAGAACTGA-----
 BoTT5-4 (812) TCGTAAGTTTTTTTTATATATATAGGCCCAAACGTGGGTAAAAAATATAAA-AGTTTT
 BjtT5 (710) ATG-AAGCTAACGATCTCTCCCTTGGAGATAAAGTTGGCCAAAGAGAACTGATCGTGTGGG

 AtTT5 (742) -----
 BnTT5 (474) -----
 BrTT5-1 (757) -----
 BrTT5-2 (757) -----
 BrTT5-3 (685) -----
 BrTT5-4 (757) -----
 BrTT5-5 (847) CAAGAGGAAGCTAACGATCTCTCCCTCGGAGATAAAATTTGGCTGAAGAAAAGCTGA-----
 BrTT5-6 (595) -----
 BoTT5-1 (760) -----
 BoTT5-2 (706) -----
 BoTT5-3 (757) -----
 BoTT5-4 (871) TAA-----
 BjtT5 (769) AGGTTTTTCTAGCTTGGTCTGCTCTTTGAGGGCTTTATGTTTCTATATCTAATCATGTTGTT

 AtTT5 (742) -----
 BnTT5 (474) -----
 BrTT5-1 (757) -----
 BrTT5-2 (757) -----
 BrTT5-3 (685) -----
 BrTT5-4 (757) -----
 BrTT5-5 (901) -----
 BrTT5-6 (595) -----
 BoTT5-1 (760) -----
 BoTT5-2 (706) -----
 BoTT5-3 (757) -----
 BoTT5-4 (874) -----
 BjtT5 (829) TAGTTCACCTTTGAGGGCTTTATGTTTCTATATCTAATCATGTTGTTTAGTTTCACATCAGC

 AtTT5 (742) -----
 BnTT5 (474) -----
 BrTT5-1 (757) -----
 BrTT5-2 (757) -----
 BrTT5-3 (685) -----
 BrTT5-4 (757) -----
 BrTT5-5 (901) -----
 BrTT5-6 (595) -----
 BoTT5-1 (760) -----
 BoTT5-2 (706) -----
 BoTT5-3 (757) -----
 BoTT5-4 (874) -----
 BjtT5 (889) TGTTTTTATTCCTTCTACCCAAAAAATAAAAAA

5. BnTT6

AtTT6-1 (1) -----ATGGCTCCAGGAACTTTGA
 AtTT6-2 (1) -----
 BnTT6-1 (1) ----G TTCATGCATTATTTTTACATTCTTGATAATTATAAATGGCTCCAGGAACTCTAA
 BnTT6-2 (1) TTCTTGTTTCATGCATTCCTTTTACATTCTTGATAATTATAAATGGCTCCAGGAACTCTAA
 BrTT6-2 (1) -----ATGGCTCCAGCAACTCTAA
 BrTT6-1 (1) -----GATTGTAATTACA-ATGGCTCCAGGAACTCTAA
 BoTT6-1 (1) -----ATGGCTCCAGCAACTCTAA
 BoTT6-2 (1) -----ATGGCTCCAGGAACTCTAA

AtTT6-1 (20) CTGAGCTAGCCGGAGAGTCTAAGCTCAACTCTAAATTTGTCAGGGACGAGATGAACGGC
 AtTT6-2 (1) -----
 BnTT6-1 (56) CTGAGCTTGCCGGGAGAGACTAAGCTCAACTCTAAGTTCGTCCGGGACGAGGATGAACGTC
 BnTT6-2 (61) ATGAGCTTGCCGGGAGAGACTAAGCTCAACTCCAAGTTTGTCCGGGACGAGGACGAACGTC
 BrTT6-2 (20) CCGAGCTTGCCGGGAGAGTCTAAGCTCAACTCCAAGTTCGTCCGGGACGTGGACGAACGTC
 BrTT6-1 (33) CTGAGCTTGCCGGGAGAGACTAAGCTCAACTCTAAGTTCGTCCGGGACGAGGATGAACGTC
 BoTT6-1 (20) CTGAGCTTGCCGGGAGAGTCTAAGCTCAACTCCAAGTTCGTCCGGGACGAGGACGAACGTC
 BoTT6-2 (20) CTGAGCTTGCCGGGAGAGACTAAGCTCAACTCTAAGTTTGTCCGGGACGAGGACGAACGTC

AtTT6-1 (80) CCAAAGTCGTTACAATGTGTTTAGCGACGAAATCCCGTGATCTCTCTCGCCGGTATCG
 AtTT6-2 (1) -----
 BnTT6-1 (116) CCAAGTTGCTTACAATGAGTTTAGCAGGAGATCCCGTGATCTCTCTCGCCGGAAATCG
 BnTT6-2 (121) CCAAGTTGCTTACAATGAGTTTAGCAGGAGATCCCGTGATCTCTCTCGCCGGAAATCG
 BrTT6-2 (80) CCAAGTTGCTTACAATGAGTTTAGCAGGAGATCCCGTGATCTCTCTCGCAGGAAATCG
 BrTT6-1 (93) CCAAGTTGCTTACAATGAGTTTAGCAGGAGATCCCGTGATCTCTCTCGCCGGAAATCG
 BoTT6-1 (80) CCAAGTTGCTTACAATGAGTTTAGCAGGAGATCCCGTGATCTCTCTCGCCGGAAATCG
 BoTT6-2 (80) CCAAGTTGCTTACAATGAGTTTAGCAGGAGATCCCGTGATCTCTCTCGCCGGAAATCG

AtTT6-1 (140) ATGACGTCGATGGAAAAAGAGGAGAGATCTGCCGTCAGATCGTTGAGGCTTGTGAGAATT
 AtTT6-2 (1) -----
 BnTT6-1 (176) ACGATGTTGGTGGGAAAAGAGGAGAGATCTGTGACAGATCGTTGAGGCTTGTGAGAATT
 BnTT6-2 (181) ACGATGTTGGTGGGAAAAGAGGAGAGATCTGTGACAGATCGTTGAGGCTTGTGAGAATT
 BrTT6-2 (140) ATCATGTTGGTGGGAAAAGAGGAGACATATGTCGTCAGATCGTTGAGGCTTGTGAGAATT
 BrTT6-1 (153) ACGATGTTGGTGGGAAAAGAGGAGAGATCTGTGACAGATCGTTGAGGCTTGTGAGAATT
 BoTT6-1 (140) ACCATGTTGGTGGGAAAAGAGGAGATATATGTCGTCAGATCGTTGAGGCTTGTGAGAATT
 BoTT6-2 (140) ACGATGTTGGTGGGAAAAGAGGAGAGATCTGTGACAGATCGTTGAGGCTTGTGAGAATT

AtTT6-1 (200) GGGGCATCTTCCAAGTGGTCGATCACGGCGTCGATACTAACTTAGTGGCGGATATGACTC
 AtTT6-2 (1) -----ATGACTC
 BnTT6-1 (236) GGGGTGTTTTTTCAGGTGGTCGATCATGGGTGGATACTAGTTTGGTGGCCGATATGACTC
 BnTT6-2 (241) GGGGTGTTTTTTCAGGTGGTCGATCATGGAGTGGATACTAGTTTGGTGGCCGATATGACTC
 BrTT6-2 (200) GGGGAGTTTTTTCAGGTGGTCGATCATGGGTGGATACTAGTTTGGTGGCCGATATGACTC
 BrTT6-1 (213) GGGGTGTTTTTTCAGGTGGTCGATCATGGGTGGATACTAGTTTGGTGGCCGATATGACTC
 BoTT6-1 (200) GGGGAGTTTTTTCAGGTGGTCGATCATGGGTGGATACTAGTTTGGTGGCTGATATGACTC
 BoTT6-2 (200) GGGGTGTTTTTTCAGGTGGTCGATCATGGAATGGATACTAGTTTGGTGGCCGATATGACTC

AtTT6-1 (260) GTCTCGCTCGTGACTTCTTTGCTTTACCTCCGGAAGACAAGCTCCGTTTCGACATGTCCG
 AtTT6-2 (8) GTCTCGCTCGTGACTTCTTTGCTTTACCTCCGGAAGACAAGCTCCGTTTCGACATGTCCG
 BnTT6-1 (296) GTCTCGCTCGAGACTTCTTCGCCTTACCTCCTGAGGAGAAACTCAAGTTCGACATGTCTG
 BnTT6-2 (301) GTCTCGCTCGAGACTTCTTCGCCTTACCTCCTGAGGAGAAACTCAAGTTCGACATGTCTG
 BrTT6-2 (260) GTCTCGCTAGCGACTTCTTCTTTACCACCTGAGGATAAACTCAAGTTCGATATGTCCG
 BrTT6-1 (273) GTCTCGCTCGAGACTTCTTCGCCTTACCTCCTGAGGAGAAACTCAAGTTCGACATGTCTG
 BoTT6-1 (260) GTCTCGCTAGCGACTTCTTCTTTGCCACCTGAGGATAAAATTAAGTTCGACATGTCCG
 BoTT6-2 (260) GTCTCGCTCGAGACTTCTTCGCCTTACCTCCTGAGGAGAAACTCAAGTTCGACATGTCTG

AtTT6-1 (320) GTGGTAAAAAAGGAGGATTTCATCGTCTCTAGTCACTCCAGGGAGAGGCTGTGCAAGATT
 AtTT6-2 (68) GTGGTAAAAAAGGAGGATTTCATCGTCTCTAGTCACTCCAGGGAGAGGCTGTGCAAGATT
 BnTT6-1 (356) GTGGTAAAAAAGGAGGATTTCATGTCCTCTAGTCACTTCCAGGGAGAGTCTGTTCAAGACT
 BnTT6-2 (361) GTGGTAAAAAAGGAGGATTTCATGTCCTCTAGTCACTTCCAGGGAGAGTCTGTTCAAGACT
 BrTT6-2 (320) GTGGTAAAAAAGGAGGATTTCATCGTCTCAAGTCACTTCCAGGGAGAGGTTGTTCAAGATT
 BrTT6-1 (333) GTGGTAAAAAAGGAGGATTTCATGTCCTCTAGTCACTTCCAGGGAGAGTCTGTTCAAGACT
 BoTT6-1 (320) GTGGTAAAAAAGGAGGATTTCATCGTCTCAAGTCACTTCCAGGGAGAGGTTGTTCAAGATT
 BoTT6-2 (320) GTGGTAAAAAAGGAGGATTTCATGTCCTCTAGTCACTTCCAGGGAGAGTCTGTTCAAGATT

AtTT6-1 (380) GGAGAGAGATTGTAACGTATTTCTCGTACCCGGTGAGAAACAGAGACTACTCACGGTGGC
 AtTT6-2 (128) GGAGAGAGATTGTAACGTATTTCTCGTACCCGGTGAGAAACAGAGACTACTCACGGTGGC
 BnTT6-1 (416) GGAGAGAGATCGTGACGTATTTCTCGTACCCGGTGAGAAACAGAGACTACTCACGGTGGC
 BnTT6-2 (421) GGAGAGAGATCGTGACGTATTTCTCGTACCCGGTGAGAAACAGAGACTACTCACGGTGGC
 BrTT6-2 (380) GGAGAGAGATCGTGACGTATTTCTCGTACCCGGTGAGAAACAGAGACTACTCACGGTGGC
 BrTT6-1 (393) GGAGAGAGATCGTGACGTATTTCTCGTACCCGGTGAGAAACAGAGACTACTCACGGTGGC
 BoTT6-1 (380) GGAGAGAGATCGTGACGTATTTCTCGTACCCGGTGAGAAACAGAGACTACTCACGGTGGC
 BoTT6-2 (380) GGAGAGAGATCGTGACGTATTTCTCGTACCCGGTGAGAAACAGAGACTACTCACGGTGGC

AtTT6-1 (440) CAGATAAGCCGGAAGGTTGGGTGAAAGTGACGGAGGAGTATAGTGAGAGGCTTATGAGTT
 AtTT6-2 (188) CAGATAAGCCGGAAGGTTGGGTGAAAGTGACGGAGGAGTATAGTGAGAGGCTTATGAGTT
 BnTT6-1 (476) CGACTAAGCCGGAAGGATGGGTGAAAGTGACGGAGGAGTACAGCGAGAGGCTGATGGGTT
 BnTT6-2 (481) CGACTAAGCCGGAAGGATGGGTGAAAGTGACGGAGGAGTACAGCGAGAGGCTGATGGGTT
 BrTT6-2 (440) CGAATAAGCCGGAAGGTTGGGTGAAAGTGACGGAGGAGTACAGCGAGAAGCTCATCGAGT
 BrTT6-1 (453) CGACTAAGCCGGAAGGATGGGTGAAAGTGACGGAGGAGTACAGCGAGAGGCTGATGGGTT
 BoTT6-1 (440) CGGGTAAGCCGGAAGGTTGGGTGAAAGTGACTGAGGAGTACAGCGAGAAGCTGATGGAGT
 BoTT6-2 (440) CGACTAAGCCGGAAGGATGGGTGAAAGTGACGGAGGAGTACAGCGAGAGGCTGATGGGTT

AtTT6-1 (500) TGGCTTGTAAGCTTCTTGAGGTTTTGTCTGAAGCTATGGGCTTTGAGAAAGAGTCTCTTA
 AtTT6-2 (248) TGGCTTGTAAGCTTCTTGAGGTTTTGTCTGAAGCTATGGGCTTTGAGAAAGAGTCTCTTA
 BnTT6-1 (536) TGGCTTGTAAGCTTCTTGAGGTTTTGTCTGAAGCTATGGGGCTTTGAGAAAGAGGCACTTA
 BnTT6-2 (541) TGGCTTGTAAGCTTCTTGAGGTTTTGTCTGAAGCTATGGGGCTTCGAGAAAGAGGCACTCA
 BrTT6-2 (500) TGGCTTGTAAGCTTCTTGAGATTTTGTCTGAAGCTATGGGACTTTGAGAAAGAAGCCCTTA
 BrTT6-1 (513) TGGCTTGTAAGCTTCTTGAGGTTTTGTCTGAAGCCATGGGGCTTCGAGAAAGAGGCACTCA
 BoTT6-1 (500) TGGCTTGTAAGCTTCTTGAGATTTTGTCTGAAGCTATGGGGACTTGAGAAAGAAGCACTTA
 BoTT6-2 (500) TGGCTTGTAAGCTTCTTGAGGTTTTGTCTGAAGCTATGGGGCTTCGAGAAAGAGGCACTCA

AtTT6-1 (560) CCAATGCATGCGTCGATATGGACCAAAGATTGTTGTTAATTATTACCCAAAATGCCCTC
 AtTT6-2 (308) CCAATGCATGCGTCGATATGGACCAAAGATTGTTGTTAATTATTACCCAAAATGCCCTC
 BnTT6-1 (596) CCAATGCATGCGTCGATATGGACCAAAGATTGTTGTTAACTATTACCCAAAATGCCCTC
 BnTT6-2 (601) CCAATGCATGCGTCGATATGGACCAAAGATTGTTGTTAACTATTACCCAAAATGCCCTC
 BrTT6-2 (560) CCAATGCATGCGTCGATATGGACCAAAGATTGTTGTTAACTATTACCCAAAATGCCCTC
 BrTT6-1 (573) CCAATGCATGCGTCGATATGGACCAAAGATTGTTGTTAACTATTACCCAAAATGCCCTC
 BoTT6-1 (560) CTAATGCATGCGTCGATATGGACCAAAGATTGTTGTTAACTATTACCCAAAATGCCCTC
 BoTT6-2 (560) CCAATGCATGCGTCGATATGGACCAAAGATTGTTGTTAACTATTACCCAAAATGCCCTC

AtTT6-1 (620) AGCCTGATCTCACCTCGGACTCAAGCGTCACACTGACCCTGGAACCATTACCTTGCTGC
 AtTT6-2 (368) AGCCTGATCTCACCTCGGACTCAAGCGTCACACTGACCCTGGAACCATTACCTTGCTGC
 BnTT6-1 (656) AGCCTGATCTAACCCTCGGACTCAAGCGTCACACTGACCCTGGAACCATTACCTTGCTGC
 BnTT6-2 (661) AGCCTGATCTAACCCTCGGGCTCAAGCGTCACACTGACCCTGGAACCATTACCTTGCTGC
 BrTT6-2 (620) AGCCTGATCTCACACTCGGACTCAAGCGTCACACTGACCCTGGAACCATTACCTTGCTGC
 BrTT6-1 (633) AGCCTGATCTTACCCTCGGACTCAAGCGTCACACTGACCCTGGAACCATTACCTTGCTGC
 BoTT6-1 (620) AGCCTGATCTCACACTCGGACTCAAGCGTCACACTGACCCTGGAACCATTACCTTGCTGC
 BoTT6-2 (620) AGCCTGATCTAACCCTCGGGCTCAAGCGTCACACTGACCCTGGAACCATTACCTTGCTGC

AtTT6-1 (680) TACAAGACCAAGTCGGTGGATTACAAGCCACACGTGACAATGGCAAGACATGGATTACGG
 AtTT6-2 (428) TACAAGACCAAGTCGGTGGATTACAAGCCACACGTGACAATGGCAAGACATGGATTACGG
 BnTT6-1 (716) TCCAAGACCAAGTCGGTGGTTTACAAGCCACACGATGGCAAGACATGGATTACGG
 BnTT6-2 (721) TCCAAGACCAAGTGGTGGTTTACAAGCCACACGATGGCAAGACATGGATTACAG
 BrTT6-2 (680) TCCAAGACCAAGTCGGTGGTTTACAAGCCACACGATGGGAGACATGGATTACGG
 BrTT6-1 (693) TCCAAGACCAAGTCGGTGGTTTACAAGCCACACGATGGGAGACATGGATTACGG
 BoTT6-1 (680) TCCAAGACCAAGTCGGTGGTTTACAAGCCACCCGAGACATGGGAGACATGGATTACGG
 BoTT6-2 (680) TCCAAGACCAAGTGGTGGTTTACAAGCCACACGAGACGGTGGGAGACATGGATTACAG

AtTT6-1 (740) TTCAGCCTGTTGAAGGAGCGTTTGTGCTCAATCTCGGCGACCACGGCCATTTTTTGAGCA
 AtTT6-2 (488) TTCAGCCTGTTGAAGGAGCGTTTGTGCTCAATCTCGGCGACCACGGCCATTTTTTGAGCA
 BnTT6-1 (776) TTCAGCCTGTTGAAGGAGCTTTTGTGTTAATCTTGGCGACCATGGTCACTATCTGAGCA
 BnTT6-2 (781) TTCAGCCTGTTGAAGGAGCTTTTGTGTTAATCTTGGCGACCATGGTCACTATCTGAGCA
 BrTT6-2 (740) TTCAGCCTGTTGAAGGAGCTTTTGTGCTCAATCTTGGCGACCATGGTCACTATCTGAGCA
 BrTT6-1 (753) TTCAGCCTGTTGAAGGAGCTTTTGTGCTCAATCTTGGCGACCATGGTCACTATCTGAGCA
 BoTT6-1 (740) TTCAGCCTGTTGAAGGAGCTTTTGTGCTCAATCTTGGCGACCATGGTCACTATCTGAGCA
 BoTT6-2 (740) TTCAGCCTGTTGAAGGAGCTTTTGTGTTAATCTTGGCGACCATGGTCACTATCTGAGCA

AtTT6-1 (800) ATGGGAGGTTCAAGAAATGCTGATCATCAGGCCGTGGTGAACCTCTAACTCGAGCAGATTAT
 AtTT6-2 (548) ATGGGAGGTTCAAGAAATGCTGATCATCAGGCCGTGGTGAACCTCTAACTCGAGCAGATTAT
 BnTT6-1 (836) ACGGGAGGTTCAAGAACGCTGACCACCAGGCCGTGGTGAACCTCAACTCGAGCAGACTAT
 BnTT6-2 (841) ACGGGAGGTTCAAGAACGCTGACCACCAGGCCGTGGTGAACCTCAACTCGAGCAGACTAT
 BrTT6-2 (800) ACGGGAGGTTCAAGAACGCTGACCACCAGGCCGTGGTGAACCTCAACTCGAGCAGATTAT
 BrTT6-1 (813) ACGGGAGGTTCAAGAACGCTGACCACCAGGCCGTGGTGAACCTCAACTCGAGCAGACTAT
 BoTT6-1 (800) ACGGGAGGTTCAAGAACGCTGACCACCAGGCCGTGGTGAACCTCAACTCGAGCAGATTTT
 BoTT6-2 (800) ACGGGAGGTTCAAGAACGCTGACCACCAGGCCGTGGTGAACCTCAACTCGAGCAGACTAT

 AtTT6-1 (860) CCATAGCCACGTTCCAGAACCCCGGCCGGATGCCACAGTGTATCCACTGAAAGTAAAGAG
 AtTT6-2 (608) CCATAGCCACGTTCCAGAACCCCGGCCGGATGCCACAGTGTATCCACTGAAAGTAAAGAG
 BnTT6-1 (896) CAATAGCCACGTTCCAGAATCCCGGCCCGGAAGCAACTGTGTATCCGCTTAAAGTGAGAG
 BnTT6-2 (901) CAATAGCCACGTTCCAGAATCCCGGCCCGGAAGCAACCGTGTATCCGCTTAAAGTGAGAG
 BrTT6-2 (860) CCATAGCCACGTTCCAGAATCCAGCGCCGAAGCAACCGTGTATCCGCTTAAAGTAAAG
 BrTT6-1 (873) CAATAGCCACGTTCCAGAATCCCGGCCCGGAAGCAACCGTGTATCCGCTTAAAGTGAGAG
 BoTT6-1 (860) CTATAGCCACGTTCCAGAATCCGGCTCCGGAAGCAACCGTGTATCCGCTTAAAGTAAAG
 BoTT6-2 (860) CAATAGCCACGTTCCAGAATCCCGGCCCGGAAGCAACCGTGTATCCGCTTAAAGTGAGAG

 AtTT6-1 (920) AAGGAGAGAAGGCAATATTGGAGGAGCCAATCAGCTTTGCCGAGATGTATAAGAGAAAAGA
 AtTT6-2 (668) AAGGAGAGAAGGCAATATTGGAGGAGCCAATCAGCTTTGCCGAGATGTATAAGAGAAAAGA
 BnTT6-1 (956) AAGGAGAGAAGCCGATCTTGGAGGAGCCAATTACGTTTGCAGGATGTATAGGAGAAAAGA
 BnTT6-2 (961) AAGGAGAGAAGCCGATCTTGGAGGAGCCAATTACGTTTGCAGGATGTATAAGAGAAAAGA
 BrTT6-2 (920) AAGGAGAGAAGCCGATCTTGGAGGAGCCGATTGCGTTTGCAGGATGTATAAGATAAAGA
 BrTT6-1 (933) AAGGAGAGAAGCCGATCTTGGAGGAGCCAATTACGTTTGCAGGATGTATAGGAGAAAAGA
 BoTT6-1 (920) AAGGAGAGAAGCCAATCTTGGAGGAGCCGATTGCGTTTGCAGGATGTACAAGAGAAAAGA
 BoTT6-2 (920) AAGGAGAGAAGCCGATCTTGGAGGAGCCAATTACGTTTGCAGGATGTATAAGAGAAAAGA

 AtTT6-1 (980) TGGGAAGAGATTTGGAGCTTGCTCGCCTCAAGAAGCTGGCTAAAGAGGAGCGTGACCACA
 AtTT6-2 (728) TGGGAAGAGATTTGGAGCTTGCTCGCCTCAAGAAGCTGGCTAAAGAGGAGCGTGACCACA
 BnTT6-1 (1016) TGAGTAGAGATATCGAGCTGGCTCGCCTCAAGAAGCTGGCGAAAGAAGACATGACCACA
 BnTT6-2 (1021) TGAGTAGAGATCTCGAGCTGGCTCGCCTCAAGAAGCTGGCGAAAGAAGACATGACCACA
 BrTT6-2 (980) TGGGTCGAGATCTCGAGCTGGCTCGCCTCAAGAAGCTGGCTAAAGAA-AA-----ACA
 BrTT6-1 (993) TGAGTAGAGATATCGAGCTGGCTCGCCTCAAGAAGCTGGCGAAAGAAGACATGACCACA
 BoTT6-1 (980) TGGGTCGAGATCTCGAGCTGGCTCGCCTCAAGAAGCTGACTAAAGAG-AA-----ACA
 BoTT6-2 (980) TGAGTAGAGATCTCGAGCTGGCTCGCCTCAAGAAGCTGGCGAAAGAAGAGCATGACCACA

 AtTT6-1 (1040) AAGAAGTTGACAAGCCTGTGACCAAATCTTCGCTTAG-----
 AtTT6-2 (788) AAGAAGTTGACAAGCCTGTGACCAAATCTTCGCTTAG-----
 BnTT6-1 (1076) AGGAAGCTGCCAAGCCTCTAGACCAAATCATCGCTTAGACTCCTTGTGTTGGCCCTTAC
 BnTT6-2 (1081) AGGAAGCTGCCAAGCCTCTAGACCAAATCATCGCTTAGACTCCTTGTGTTGGCCCTTAC
 BrTT6-2 (1032) AGGAGCTGCGGAGCCTCTTGA-----
 BrTT6-1 (1053) AGGAAGCTGCCAAGCCTCTAGACCAAATCATCGCTTAGACTCCTTGTGTTGGCCCTTAC
 BoTT6-1 (1032) AGGAGCTGCGAAGCCTCTTGA-----
 BoTT6-2 (1040) AGGAAGCTGCCAAGCCTCTAGACCAAATCATCGCTTAG-----

 AtTT6-1 (1078) -----
 AtTT6-2 (826) -----
 BnTT6-1 (1136) TATTGTGTTGGTTTCGTTGTGTAAAGTCGGTACTGAAATTAAGTTATGTCATGTTGGGTGA
 BnTT6-2 (1141) TATTGTGTTGGTTTCGTTGTGTAAAGTCGGTACTGAAATTAAGTTATGTCATGTTGGGTGA
 BrTT6-2 (1054) -----
 BrTT6-1 (1113) TATTGTGTTGGTTTCGTTGTGTAAAGTCGGTACTGAAATTAAGTTATGTCATGT-GGGTGA
 BoTT6-1 (1054) -----
 BoTT6-2 (1078) -----

1201 1236

 AtTT6-1 (1078) -----
 AtTT6-2 (826) -----
 BnTT6-1 (1196) AAAAAAAAAAAAAAAAAAAAAA-----
 BnTT6-2 (1201) ATTTGAGTTTTAAAAAAAAAAAAAAAAAAAAAAAAA
 BrTT6-2 (1054) -----
 BrTT6-1 (1172) ATTAATC-----
 BoTT6-1 (1054) -----
 BoTT6-2 (1078) -----

6. BnTT7

AtTT7	(1)	-----ATGGCAACTCTATTTCTCACAATCCTCCTAGCCA
BnTT7	(1)	CTCACTTACCATTCAAACCCACCCTATGACTAATCTTTACCTCACAATCCTTCTCCCTA
BrTT7-1	(1)	-----ATGACTAATCTTTACCTCACAATCCTTCTCCCTA
BrTT7-2	(1)	-----ATGACTAATCTTTACCTCACAATCCTTCTCCCTA
BrTT7-3	(1)	-----ATGACTAATCTTTACCTCACAATCCTTCTCCCTA
BoTT7	(1)	-----ATGACTAATCTTTACCTCACAATCCTTCTCCCTA
AtTT7	(35)	CTGTCTCTTCCTCATCCTCCGTATCTTCTCTCACCGTCGCAACCGCAGCCACAACAACC
BnTT7	(61)	CTTTCATATTCCTTATCGTTCTCGTCTTATCTCGCCGCCGCAAT-----AACC
BrTT7-1	(35)	CTTTCATATTCCTTATCGTTCTCGTCTTATCTCGCCGCCGCAAT-----AACC
BrTT7-2	(35)	CTTTCATATTCCTTATCGTTCTTGTCTTATCTCGCCGCCGCAAT-----AACC
BrTT7-3	(35)	CTTTCATATTCCTTATCGTTCTTGTCTTATCTCGCCGCCGCAAT-----AACC
BoTT7	(35)	CTTTCATATTCCTTATCGTTCTCGTCTTATCTCGCCGCCGCAAC-----AACC
AtTT7	(95)	GTCTTCCACCGGGGCCAAACCCATGGCCCATCATCGGAAACCTCCCTCACATGGGCACTA
BnTT7	(109)	GTCTCCCTCCAGGTCAAACCCATGGCCCATCATCGGAAACCTCCCTCACATGGGCCTA
BrTT7-1	(83)	GTCTCCCTCCAGGTCAAACCCATGGCCCATCATCGGAAACCTCCCTCACATGGGCCTA
BrTT7-2	(83)	GTCTCCCTCCAGGTCAAACCCATGGCCCATCATCGGAAACCTCCCTCACATGGGCCTA
BrTT7-3	(83)	GTCTCCCTCCAGGTCAAACCCATGGCCCATCATCGGAAACCTCCCTCACATGGGCCTA
BoTT7	(83)	GTCTCCCTCCAGGTCAAACCCATGGCCCATCATCGGAAACCTCCCTCACATGGGCCTA
AtTT7	(155)	AGCCTCATCGAACCTTTCCGCCATGGTTACTACTTACGGCCCTATCCTCCACCTCCGAC
BnTT7	(169)	AACCCCATCAAACACTAGCCGCCATGGTAACCACATACGGACCTATCCTCCACCTACGGC
BrTT7-1	(143)	AACCCCATCAAACACTAGCCGCCATGGTAACCACATACGGACCTATCCTCCACCTACGGC
BrTT7-2	(143)	AACCCCATCAAACACTAGCCGCCATGGTAACCACATACGGACCTATCCTCCACCTACGGC
BrTT7-3	(143)	AACCCCATCAAACACTAGCCGCCATGGTAACCACATACGGACCTATCCTCCACCTACGGC
BoTT7	(143)	AACCCCATCAAACACTAGCCGCCATGGTAACCACATACGGACCTATCCTCCACCTACGGC
AtTT7	(215)	TAGGGTTCGTAGACGTCGTGGTTCGCCCTTCTAAATCCGTGGCCGACAGTTCTTGAAAA
BnTT7	(229)	TAGGGTTCGCCGACGTTGTGGTTGCCGCTCTAAATCCGTGGCCGAAACAGTTCTTGAAAG
BrTT7-1	(203)	TAGGGTTCGCCGACGTTGTGGTTGCCGCTCTAAATCCGTGGCCGAAACAGTTCTTGAAAG
BrTT7-2	(203)	TAGGGTTCGCCGACGTTGTGGTTGCCGCTCTAAATCCGTGGCCGAAACAGTTCTTGAAAG
BrTT7-3	(203)	TAGGGTTCGCCGACGTTGTGGTTGCCGCTCTAAATCCGTGGCCGAAACAGTTCTTGAAAG
BoTT7	(203)	TAGGGTTCGCCGACGTTGTGGTTGCCGCTCTAAATCCGTGGCCGAAACAGTTCTTGAAAG
AtTT7	(275)	TACACGACGCCAATTTTCGCTAGCCGACCACCAAACCTCAGGAGCTAAACACATGGCATATA
BnTT7	(289)	TTCATGATGCCAATTTTCGCTAGCCGACCACCTAACTCCGGAGCCAAACACATGGCGTATA
BrTT7-1	(263)	TTCATGATGCCAATTTTCGCTAGCCGACCACCTAACTCCGGAGCCAAACACATGGCATATA
BrTT7-2	(263)	TTCATGATGCCAATTTTCGCTAGCCGACCACCTAACTCCGGAGCCAAACACATGGCATATA
BrTT7-3	(263)	TTCATGATGCCAATTTTCGCTAGCCGACCACCTAACTCCGGAGCCAAACACATGGCATATA
BoTT7	(263)	TTCATGATGCCAATTTTCGCTAGCCGACCACCTAACTCCGGAGCCAAACACATGGCATATA
AtTT7	(335)	ACTATCAAGATCTTGTCTTTGCGCCTTATGGACAACGATGGAGAAATGTTGAGGAAGATTA
BnTT7	(349)	ACTATCAAGATCTTGTCTTTGCGCCTTATGGACAACGATGGAGAAATGTTGAGGAAGATTA
BrTT7-1	(323)	ACTATCAAGATCTTGTCTTTGCGCCTTATGGACAACGATGGAGAAATGTTGAGGAAGATTA
BrTT7-2	(323)	ACTATCAAGATCTTGTCTTTGCGCCTTATGGACAACGATGGAGAAATGTTGAGGAAGATTA
BrTT7-3	(323)	ACTATCAAGATCTTGTCTTTGCGCCTTATGGACAACGATGGAGAAATGTTGAGGAAGATTA
BoTT7	(323)	ACTATCAAGATCTTGTCTTTGCGCCTTATGGACAACGATGGAGAAATGTTGAGGAAGATTA
AtTT7	(395)	GTTCTGTTTCATCTATTTTCAGCTAAAGCTCTCGAAGATTTCAAACATGTTTCGACAGGAAG
BnTT7	(409)	GTTCTGTTTCATTTATTTTCAGCTAAAGCTCTTGAAGATTTCAAACATGTTTCGACAGGAAG
BrTT7-1	(383)	GTTCTGTTTCATTTATTTTCAGCTAAAGCTCTTGAAGATTTCAAACATGTTTCGACAGGAAG
BrTT7-2	(383)	GTTCTGTTTCATTTATTTTCAGCTAAAGCTCTTGAAGATTTCAAACATGTTTCGACAGGAAG
BrTT7-3	(383)	GTTCTGTTTCATTTATTTTCAGCTAAAGCTCTTGAAGATTTCAAACATGTTTCGACAGGAAG
BoTT7	(383)	GTTCTGTTTCATTTATTTTCAGCTAAAGCTCTTGAAGATTTCAAACATGTTTCGACAGGAAG
AtTT7	(455)	AGGTTGGAACGCTAACCGGGAGCTAGTGCCTGTTGGCACGAAACCCGTGAATTTAGGCC
BnTT7	(469)	AGGTTGGAACACTCATGCGCGAGCTAGCGCGTGCAAACACGAAACCCAGTGAACCTTAGGCC
BrTT7-1	(443)	AGGTTGGAACACTCGTGC CGAGCTAGCGCGTGCAAACACGAAACCCAGTGAACCTTAGGCC
BrTT7-2	(443)	AGGTTGGAACACTCATGCGCGAGCTAGCGCGTGCAAACACGAAACCCAGTGAACCTTAGGCC
BrTT7-3	(443)	AGGTTGGAACACTCATGCGCGAGCTAGCGCGTGCAAACACGAAACCCAGTGAACCTTAGGCC

BoTT7 (443) **AGGTTGGAACACTCATGCGCGAGCTAGCGCGTGCAAACACGAAACCAGTGAACCTAGGCC**
 AtTT7 (515) **AGTTGGTGAACATGTGTGTAGTCAACGCTCTAGGACGAGAGATGATCGGACGGCGATTGT**
 BnTT7 (529) **AGTTGGTAAACATGTGCGTACTCAACGCCCTTGGACGAGAGATGATCGGACGGCGACTGT**
 BrTT7-1 (503) **AGTTGGTAAACATGTGCGTACTCAACGCCCTTGGACGAGAGATGATCGGACGGCGACTGT**
 BrTT7-2 (503) **AGTTGGTAAACATGTGCGTACTCAACGCCCTTGGACGAGAGATGATCGGACGGCGACTGT**
 BrTT7-3 (503) **AGTTGGTAAACATGTGCGTACTCAACGCCCTTGGACGAGAGATGATCGGACGGCGACTGT**
 BoTT7 (503) **AGTTGGTAAACATGTGCGTACTCAACGCCCTTGGACGAGAGATGATCGGACGGCGACTGT**

 AtTT7 (575) **TCGGCGCCGACGCCGATCATAAAGCTGACGAGTTTCGATCAATGGTGACGGAAATGATGG**
 BnTT7 (589) **TCGGCGCCGATGCCGATCACAAGCGGAGGAGTTTCGATCAATGGTTACAGAAATGATGG**
 BrTT7-1 (563) **TCGGCGCCGATGCCGATCACAAGCGGAGGAGTTTCGATCAATGGTTACAGAAATGATGG**
 BrTT7-2 (563) **TCGGCGCCGATGCCGATCACAAGCGGAGGAGTTTCGATCAATGGTTACAGAAATGATGG**
 BrTT7-3 (563) **TCGGCGCCGATGCCGATCACAAGCGGAGGAGTTTCGATCAATGGTTACAGAAATGATGG**
 BoTT7 (563) **TCGGCGCCGATGCCGATCACAAGCGGAGGAGTTTCGATCAATGGTTACAGAAATGATGG**

 AtTT7 (635) **CTCTCGCCGGAGTATTCAACATCGGAGACTTTCGTGCCGTCACCTTGATTGGTTAGATTTAC**
 BnTT7 (649) **CTCTCGCCGGAGTATTCAACATCGGAGACTTTCGTGCCGTCACCTTGATTGTTTAGATTTAC**
 BrTT7-1 (623) **CTCTCGCCGGAGTATTCAACATCGGAGACTTTCGTGCCGTCACCTTGATTGTTTAGATTTAC**
 BrTT7-2 (623) **CTCTCGCCGGAGTATTCAACATCGGAGACTTTCGTGCCGTCACCTTGATTGTTTAGATTTAC**
 BrTT7-3 (623) **CTCTCGCCGGAGTATTCAACATCGGAGACTTTCGTGCCGTCACCTTGATTGTTTAGATTTAC**
 BoTT7 (623) **CTCTCGCCGGAGTATTCAACATCGGAGACTTTCGTGCCGTCACCTTGATTGTTTAGATTTAC**

 AtTT7 (695) **AAGGCGTCGCTGGTAAAATGAAACGGCTTACACAAGAGATTTCGACGCTTTTCTATCGTCCA**
 BnTT7 (709) **AAGGCGTCGCTGGTAAAATGAAACGGCTTACACAAGAGATTTCGACGCTTTTCTATCGTCCA**
 BrTT7-1 (683) **AAGGCGTCGCTGGTAAAATGAAACGGCTTACACAAGAGATTTCGACGCTTTTCTATCGTCCA**
 BrTT7-2 (683) **AAGGCGTCGCTGGTAAAATGAAACGGCTTACACAAGAGATTTCGACGCTTTTCTATCGTCCA**
 BrTT7-3 (683) **AAGGCGTCGCTGGTAAAATGAAACGGCTTACACAAGAGATTTCGACGCTTTTCTATCGTCCA**
 BoTT7 (683) **AAGGCGTCGCTGGTAAAATGAAACGGCTTACACAAGAGATTTCGACGCTTTTCTATCGTCCA**

 AtTT7 (755) **TTTTGAAAGAGCACGA-A--ATGA---ACGGTCAAGATCAAAGCATAACAGATATGCTTA**
 BnTT7 (769) **TCTTGAAGAACACGAGGCGATGAAGAACGGCCAGGATCAAAGCACACGGACATGCTTA**
 BrTT7-1 (743) **TCTTGAAGAACACGAGGCGATGAAGAACGGCCAGGATCAAAGCACACGGACATGCTTA**
 BrTT7-2 (743) **TCTTGAAGAACACGAGGCGATGAAGAACGGCCAGGATCAAAGCACACGGACATGCTTA**
 BrTT7-3 (743) **TCTTGAAGAACACGAGGCGATGAAGAACGGCCAGGATCAAAGCACACGGACATGCTTA**
 BoTT7 (743) **TCTTGAAGAGACGAGACGATGAAGAACGGCCAGGATCAAAGCACACGGACATGCTTA**

 AtTT7 (809) **GCACCTTAATCTCCCTTAAAGGAAGTATCTTGACGGTGACGGAGGAACTTAACGGATA**
 BnTT7 (829) **GCACCTTAATCTCCCTTAAAGGAAGTATCTTGATGGTGAGGGTGGAACTCTAAGTATA**
 BrTT7-1 (803) **GCACCTTAATCTCCCTTAAAGGAAGTATCTTGATGGTGAGGGTGGAACTCTAAGTATA**
 BrTT7-2 (803) **GCACCTTAATCTCCCTTAAAGGAAGTATCTTGATGGTGAGGGTGGAACTCTAAGTATA**
 BrTT7-3 (803) **GCACCTTAATCTCCCTTAAAGGAAGTATCTTGATGGTGAGGGTGGAACTCTAAGTATA**
 BoTT7 (803) **GCACCTTAATCTCCCTTAAAGGAAGTATCTTGATGGTGAGGGTGGAACTCTAAGTATA**

 AtTT7 (869) **CTGAGATCAAAGCCTTGCTATTGAACATGTTTACAGCTGGAAGTACACGTCAGCAAGTA**
 BnTT7 (889) **CAGAGATCAAAGCCTTGCTATTGAACATGTTTACGGCTGGAAGTACACGTCAGCAAGTA**
 BrTT7-1 (863) **CAGAGATCAAAGCCTTGCTATTGAACATGTTTACGGCTGGAAGTACACGTCAGCAAGTA**
 BrTT7-2 (863) **CAGAGATCAAAGCCTTGCTATTGAACATGTTTACGGCTGGAAGTACACGTCAGCAAGTA**
 BrTT7-3 (863) **CAGAGATCAAAGCCTTGCTATTGAACATGTTTACGGCTGGAAGTACACGTCAGCAAGTA**
 BoTT7 (863) **CTGAGATCAAAGCCTTGCTATTGAACATGTTTACGGCTGGAAGTACACGTCAGCAAGTA**

 AtTT7 (929) **CGGTGGACTGGGCTATAGCTGAACCTATCCGTACCCGGATATAATGGTTAAAGCCCAAG**
 BnTT7 (949) **CGGTGGACTGGGCCATAGCTGAACCTATCCGTACCCGGAGATAATGAGAAAAGCCCAAG**
 BrTT7-1 (923) **CGGTGGACTGGGCCATAGCTGAATTAATCCGTACCCGGAGATAATGAGAAAAGCCCAAG**
 BrTT7-2 (923) **CGGTGGACTGGGCCATAGCTGAATTAATCCGTACCCGGAGATAATGAGAAAAGCCCAAG**
 BrTT7-3 (923) **CGGTGGACTGGGCCATAGCTGAATTAATCCGTACCCGGAGATAATGAGAAAAGCCCAAG**
 BoTT7 (923) **CGGTGGACTGGGCCATAGCTGAATTAATCCGTACCCGGAAATAATGAGAAAAGCCCAAG**

 AtTT7 (989) **AAGAAGCTTGATATTGTTGTGGGCCGTGACAGGCCGTTAATGAATCAGACATCGCTCAGC**
 BnTT7 (1009) **AAGAGCTTGACTCCGTCGTGGGACGTGGAAGGCCATTAACGAGTCGGACCTTTCTCAGC**
 BrTT7-1 (983) **AAGAGCTTGACTCCGTCGTGGGACGTGGAAGGCCATTAACGAGTCGGACCTTTCTCAGC**
 BrTT7-2 (983) **AAGAGCTTGACTCCGTCGTGGGACGTGGAAGGCCATTAACGAGTCGGACCTTTCTCAGC**
 BrTT7-3 (983) **AAGAGCTTGACTCCGTCGTGGGACGTGGAAGGCCATTAACGAGTCGGACCTTTCTCAGC**

BoTT7 (983) AAGAGCTTGATTCCGTCGTCGGACGTGGAAGGCCATTAACGAGTCGGACCTTTCTCAGC

 AtTT7 (1049) TTCCTTACCTTCAGGCGGTTATCAAAGAGAATTTTCAGGCTTCATCCACCAACACCACTCT
 BnTT7 (1069) TTCCTTACCTTCAGGCGGTTATCAAAGAGAATTTTCAGGCTTCATCCACCAACACCACTCT
 BrTT7-1 (1043) TTCCTTACCTTCAGGCGGTTATCAAAGAGAATTTTCAGGCTTCATCCACCAACACCACTCT
 BrTT7-2 (1043) TTCCTTACCTTCAGGCGGTTATCAAAGAGAATTTTCAGGCTTCATCCACCAACACCACTCT
 BrTT7-3 (1043) TTCCTTACCTTCAGGCGGTTATCAAAGAGAATTTTCAGGCTTCATCCACCAACACCACTCT
 BoTT7 (1043) TTCCTTACCTTCAGGCGGTTATCAAAGAGAATTTTCAGGCTTCATCCACCAACACCACTCT

 AtTT7 (1109) CGTTACCACACATCGCATCAGAGAGCTGTGAGATCAACGGCTACCATATCCCCGAAAGGAT
 BnTT7 (1129) CGTTACCACACATCGCATCAGAGAGCTGTGAGATCAACGGCTACCATATCCCCGAAAGGAT
 BrTT7-1 (1103) CGTTACCACACATCGCATCAGAGAGCTGTGAGATCAACGGCTATCATATCCCCGAAAGGAT
 BrTT7-2 (1103) CGTTACCACACATCGCATCAGAGAGCTGTGAGATCAACGGCTATCATATCCCCGAAAGGAT
 BrTT7-3 (1103) CGTTACCACACATCGCATCAGAGAGCTGTGAGATCAACGGCTATCATATCCCCGAAAGGAT
 BoTT7 (1103) CGTTACCACACATCGCATCAGAGAGCTGTGAGATCAACGGCTATCATATCCCCGAAAGGAT

 AtTT7 (1169) CGACTCTATTGACGAACATATGGGCCATAGCCCGTGACCCGGATCAATGGTCCGACCCGT
 BnTT7 (1189) CAACCTTTTGGACAAACATATGGGCCATAGCCCGTGACCCGGATCAATGGTCCGACCCGT
 BrTT7-1 (1163) CAACCTTTTGGACAAACATATGGGCCATAGCCCGTGACCCGGATCAATGGTCCGACCCGT
 BrTT7-2 (1163) CAACCTTTTGGACAAACATATGGGCCATAGCCCGTGACCCGGATCAATGGTCCGACCCGT
 BrTT7-3 (1163) CAACCTTTTGGACAAACATATGGGCCATAGCCCGTGACCCGGATCAATGGTCCGACCCGT
 BoTT7 (1163) CAACCTTTTGGACAAACATATGGGCCATAGCCCGTGACCCGGATCAATGGTCCGACCCGT

 AtTT7 (1229) TAGCATTTAAACCCGAGAGATTTACCCGGTGGTGAAAAATCCGGCGTTGATGTGAAAG
 BnTT7 (1249) TAACGTTTCGACCCGAGAGATTTTACCCGGTGGTGAAAAAGCTGGCGTTGATGTGAAAG
 BrTT7-1 (1223) TAACGTTTCGACCCGAGAGATTTTACCCGGTGGTGAAAAAGCCGGCGTTGATGTGAAAG
 BrTT7-2 (1223) TAACGTTTCGACCCGAGAGATTTTACCCGGTGGTGAAAAAGCCGGCGTTGATGTGAAAG
 BrTT7-3 (1223) TAACGTTTCGACCCGAGAGATTTTACCCGGTGGTGAAAAAGCCGGCGTTGATGTGAAAG
 BoTT7 (1223) TATCGTTTCGACCCGAGAGATTTTACCCGGTGGTGAAAAAGCCGGCGTTGATGTGAAAG

 AtTT7 (1289) GAAACGATTTTCGAGCTTATAACCGTTCGGAGCTGGGAGGAGAATCTGTCGCCGGTTTAAAGTT
 BnTT7 (1309) GAAACGATTTTCGAGCTTATAACCGTTCGGAGCTGGGAGGAGAATCTGTCGCCGGTTTAAAGTT
 BrTT7-1 (1283) GAAACGATTTTCGAGCTTATAACCGTTCGGAGCTGGGAGGAGAATCTGTCGCCGGTTTAAAGTT
 BrTT7-2 (1283) GAAACGATTTTCGAGCTTATAACCGTTCGGAGCTGGGAGGAGAATCTGTCGCCGGTTTAAAGTT
 BrTT7-3 (1283) GAAACGATTTTCGAGCTTATAACCGTTCGGAGCTGGGAGGAGAATCTGTCGCCGGTTTAAAGTT
 BoTT7 (1283) GAAACGATTTTCGAGCTTATAACCGTTCGGAGCTGGGAGGAGAATCTGTCGCCGGTTTAAAGTT

 AtTT7 (1349) TAGGGTTACGTACGATTCAGTTTCTTACGGCGACGTTGGTTCAAGGATTTGATTGGGAAT
 BnTT7 (1369) TAGGGTTACGTACGATTCAGTTTCTTACGGCGACGTTGGTTCAAGGATTTGATTGGGAAT
 BrTT7-1 (1343) TAGGGTTACGTACGATTCAGTTTCTTACGGCGACGTTGGTTCAAGGATTTGATTGGGAAT
 BrTT7-2 (1343) TAGGGTTACGTACGATTCAGTTTCTTACGGCGACGTTGGTTCAAGGATTTGATTGGGAAT
 BrTT7-3 (1343) TAGGGTTACGTACGATTCAGTTTCTTACGGCGACGTTGGTTCAAGGATTTGATTGGGAAT
 BoTT7 (1343) TAGGGTTACGTACGATTCAGTTTCTTACGGCGACGTTGGTTCAAGGATTTGATTGGGAAT

 AtTT7 (1409) TAGCTGGAGGAGTTACGCCGAGAAGCTGAATATGGAGGAGAGTTATGGGCTTACTCTAC
 BnTT7 (1429) TGGCCGGAGGAGTTACGCCGAGAAGCTGAATATGGAGGAGAGTTATGGGCTTACTCTAC
 BrTT7-1 (1403) TGGCCGGAGGAGTTACGCCGAGAAGCTGAATATGGAGGAGAGTTATGGGCTTACTCTAC
 BrTT7-2 (1403) TGGCCGGAGGAGTTACGCCGAGAAGCTGAATATGGAGGAGAGTTATGGGCTTACTCTAC
 BrTT7-3 (1403) TGGCCGGAGGAGTTACGCCGAGAAGCTGAATATGGAGGAGAGTTATGGGCTTACTCTAC
 BoTT7 (1403) TGGCCGGAGGAGTTACGCCGAGAAGCTGAATATGGAGGAGAGTTATGGGCTTACTCTAC

 AtTT7 (1469) AAAGAGCGGTTCCCTTTGGTTGTGCATCCTAAGCCAAGGTTGGCTCCGAACGTTTATGGAC
 BnTT7 (1489) AAAGAGCGGTTCCCTTTGGTTGTGCATCCTAAGCCAAGGTTGGATATGAGTGCTTATGGAC
 BrTT7-1 (1463) AAAGAGCGGTTCCCTTTGGTTGTGCATCCTAAGCCAAGGTTGGATATGAGTGCTTATGGAC
 BrTT7-2 (1463) AGAGAGCGGTTCCCTTTGGTTGTGCATCCTAAGCCAAGGTTGGATAGGAGTGCTTACGGAC
 BrTT7-3 (1463) AGAGAGCGGTTCCCTTTGGTTGTGCATCCTAAGCCAAGGTTGGATAGGAGTGCTTACGGAC
 BoTT7 (1463) AAAGAGCGGTTCCCTTTGGTTGTGCATCCTAAGCCAAGGTTGGATATGAGTGCTTACGGAC

 AtTT7 (1529) TCGGGTCGGCTTAA-----
 BnTT7 (1549) TCGGGTCGGCTTAAACCTAACTTAGCTTGCATGACAAGCTAGGTCTTGACGGTGGAAAGT
 BrTT7-1 (1523) TCGGGTCGGCTTAA-----
 BrTT7-2 (1523) TCGGGTCGGCTTAA-----
 BrTT7-3 (1523) TCGGGTCGGCTTAA-----

BoTT7 (1523) **TCGGATCGGCTTAA**-----

AtTT7 (1543) -----

BnTT7 (1609) TAAAAATAAGTTTTTCGAACAGGTGTATGTTGGTCCGGAGTAAGCTGAATATAAGAGTA

BrTT7-1 (1537) -----

BrTT7-2 (1537) -----

BrTT7-3 (1537) -----

BoTT7 (1537) -----

AtTT7 (1543) -----

BnTT7 (1669) TATGTAACCTCTCAAATTAAGTAAATTAAGATGGTGTGATTTGTTGTATGTTGTCTGCATG

BrTT7-1 (1537) -----

BrTT7-2 (1537) -----

BrTT7-3 (1537) -----

BoTT7 (1537) -----

AtTT7 (1543) -----

BnTT7 (1729) GACAAGACGATGGCTGTCTGAAGCAAACCCGTTTCAATTATGTGTGTTTCATACCCACGAC

BrTT7-1 (1537) -----

BrTT7-2 (1537) -----

BrTT7-3 (1537) -----

BoTT7 (1537) -----

AtTT7 (1543) -----

BnTT7 (1789) GTTACATTTCATAATATGATGCCTTTAAAAATTCAAAAAAAAAAAAAAAA

BrTT7-1 (1537) -----

BrTT7-2 (1537) -----

BrTT7-3 (1537) -----

BoTT7 (1537) -----

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7. BnTT3

AtTT3 (1) -----ATGGTTAGTCA**GAAAGAGACCGTGTGTGTAACCGG**

BnTT3 (1) -----ATGGTAGTCA**CAAAGAGACCGTGTGCGTAACCGG**

BrTT3-1 (1) GCATCCTTCTAACACACACAAATTA**ATGGTAGTCA**C**AAAGAGACCGTGTGCGTAACCGG**

BrTT3-2 (1) -----ATGGTAGTCA**CAAAGAGACCGTGTGCGTAACCGG**

BoTT3-1 (1) GCATCCTTCTAACACACACAAATTA**ATGGTAGTCA**C**AAAGAGACCGTGTGCGTAACCGG**

BoTT3-2 (1) -----ATGGTAGTCA**CAAAGAGACCGTGTGCGTAACCGG**

BjTT3 (1) -----ATGGTAGTCA**GAAAGAGACCGTGTGCGTAACCGG**

AtTT3 (36) **CGCTTCGGGTTTCATCGGTTTCATGGCTAGTGATGCGATTACTAGAACGTGGTTACTTTGT**

BnTT3 (36) **CGCATCAGGATTCATTGGTTTCATGGCTCGTGATGCGGCTACTGGAACGTGGTTACTTTGT**

BrTT3-1 (61) **CGCATCAGGATTCATTGGTTTCATGGCTCGTGATGCGGCTACTGGAACGTGGTTACTTTGT**

BrTT3-2 (36) **CGCATCAGGATTCATTGGTTTCATGGCTCGTGATGCGGCTACTGGAACGTGGTTACTTTGT**

BoTT3-1 (61) **CGCATCAGGATTCATTGGTTTCATGGCTCGTGATGCGGCTACTGGAACGTGGTTACTTTGT**

BoTT3-2 (36) **CGCATCAGGATTCATTGGTTTCATGGCTCGTGATGCGGCTACTGGAACGTGGTTACTTTGT**

BjTT3 (36) **CGCATCAGGATTCATTGGTTTCATGGCTCGTGATGCGGCTACTGGAACGTGGTTACTTTGT**

AtTT3 (96) **TCGTGCCACCGTTCGAGATCCCGTAATTTGAAGAAAGTACAACATCTTCTTGATTTGCC**

BnTT3 (96) **CCGTGCCACTGTTTCGCGATCCTGGAAATTTGAAGAAAGTGCAACATCTTCTTGATTTGCC**

BrTT3-1 (121) **CCGTGCCACTGTTTCGCGATCCTGGAAATTTGAAGAAAGTGCAACATCTTCTTGATTTGCC**

BrTT3-2 (96) **CCGTGCCACTGTTTCGCGATCCTGGAAATTTGAAGAAAGTGCAACATCTTCTTGATTTGCC**

BoTT3-1 (121) **CCGTGCCACTGTTTCGCGATCCTGGAAATTTGAAGAAAGTGCAACATCTTCTTGATTTGCC**

BoTT3-2 (96) **CCGTGCCACTGTTTCGCGATCCTGGAAATTTGAAGAAAGTGCAACATCTTCTTGATTTGCC**

BjTT3 (96) **CCGTGCCACTGTTTCGCGATCCTGGAAATTTGAAGAAAGTGCAACATCTTCTTGATTTGCC**

AtTT3 (156) **AAACGCGAAGACGCTACTCACTTTATGGAAAGCGTATTATCTGAGGAAGGAAGCTACGA**

BnTT3 (156) **AAACGCGAAGACGCAACTCACTTTATGGAAAGCCGATTTATCTGACGAAGGAAGCCACGA**

BrTT3-1 (181) **AAACGCGAAGACGCAACTCACTTTATGGAAAGCCGATTTATCTGACGAAGGAAGCTACGA**

BrTT3-2 (156) **AAACGCGAAGACGCAACTCACTTTATGGAAAGCCGATTTATCTGACGAAGGAAGCTACGA**

BoTT3-1 (181) **AAACGCGAAGACGCAACTCACTTTATGGAAAGCCGATTTATCTGACGAAGGAAGCTACGA**

BoTT3-2 (156) **AAACGCGAAGACGCAACTCACTTTATGGAAAGCCGATTTATCTGACGAAGGAAGCTACGA**

BjTT3 (156) **AAACGCGAAGACGCAACTCACTTTATGGAAAGCCGATTTATCTGACGAAGGAAGCTACGA**

AtTT3 (216) TGATGCCATAAACGGATGTGACGGTGTTCACATAGCAACTCCCATGGATTTTGAATC
 BnTT3 (216) TGACGCCATAAACGGATGCGACGGCGTTTCCACATAGCAACTCCCATGGATTTTGAATC
 BrTT3-1 (241) TGACGCCATAAACGGATGCGACGGCGTTTTCACATAGCTACTCCCATGGATTTTGAATC
 BrTT3-2 (216) TGACGCCATAAACGGATGCGACGGCGTTTTCACATAGCAACTCCCATGGATTTTGAATC
 BoTT3-1 (241) TGACGCCATAAACGGATGCGACGGCGTTTTCACATAGCTACTCCCATGGATTTTGAATC
 BoTT3-2 (216) TGACGCCATAAACGGATGCGACGGCGTTTTCACATAGCTACTCCCATGGATTTTGAATC
 BjTT3 (216) TGACGCCATAAACGGATGCGACGGCGTTTTCACATAGCAACTCCCATGGATTTTGAATC

AtTT3 (276) AAAAGATCCTGAGAACGAAGTGATAAAGCCGACAGTGAATGGAATGTTGGGGATAATGAA
 BnTT3 (276) TAAGGACCCCGAGAACGAAGTGATAAAACCGACA GTGAATGGAGTGTGGGGATAATGAA
 BrTT3-1 (301) AAAGGATCCCAGAACGAAGTGATAAAACCAACAGTGAATGGAGTGTGGGGATAACGAA
 BrTT3-2 (276) TAAGGACCCCGAGAACGAAGTGATAAAACCGACAGTGAATGGAGTGTGGGGATAATGAA
 BoTT3-1 (301) AAAGGATCCCAGAACGAAGTGATAAAACCAACAGTGAATGGAGTGTGGGGATAACGAA
 BoTT3-2 (276) CAAGGATCCCAGAACGAAGTGATAAAACCAACAGTGAATGGAGTGTGGGGATAATGAA
 BjTT3 (276) TAAGGACCCCGAGAACGAAGTGATAAAACCGACAGTGAATGGAGTGTGGGGATAATGAA

AtTT3 (336) AGCATGTGTTAAGGCAAAGACCGTACGAAGATTCGTATTTACTTTCATCTGCGCGAACCGT
 BnTT3 (336) AGCATGTGATAAAGCAAAGACCGTACGAAGAATTGTGTTTACTTCTGCTGGAACCGT
 BrTT3-1 (361) AGCATGTGATAAAGCAAAGACCGTACGAAGAATTGTGTTTACTTCTGCTGGAACCGT
 BrTT3-2 (336) AGCATGTGATAAAGCAAAGACCGTACGAAGAATTGTGTTTACTTCTGCTGGAACCGT
 BoTT3-1 (361) AGCATGTGATAAAGCAAAGACCGTACGAAGAATTGTGTTTACTTCTGCTGGAACCGT
 BoTT3-2 (336) AGCATGTGATAAAGCAAAGACCGTACGAAGAATTGTGTTTACTTCTGCTGGAACCGT
 BjTT3 (336) AGCATGTGATAAAGCAAAGACCGTACGAAGAATTGTGTTTACTTCTGCTGGAACCGT

AtTT3 (396) TAATGTAGAAGAATCAGAAAGATGTCTATGATGAAAATGATTGGAGTGATCTTGACTT
 BnTT3 (396) TAATGTTGAGGAACACCAGAAAAATGTCTATGATGAAAACGATTGGAGTGATCTTGACTT
 BrTT3-1 (421) TAATGTTGAGGAACACCAGAAAAATGTCTATGATGAAAACGATTGGAGTGATCTTGACTT
 BrTT3-2 (396) TAATGTTGAGGAACACCAGAAAAATGTCTATGATGAAAACGATTGGAGTGATCTTGACTT
 BoTT3-1 (421) TAATGTTGAGGAACACCAGAAAAATGTCTATGATGAAAACGATTGGAGTGATCTTGACTT
 BoTT3-2 (396) TAATGTTGAGGAACACCAGAAAAATGTCTATGATGAAAACGATTGGAGTGATCTTGACTT
 BjTT3 (396) TAGTGTGAGGAACACCAGAAAAATGTCTATGATGAAAACGATTGGAGTGATCTTGACTT

AtTT3 (456) TATCATGTCCAAAAGATGACAGGATGGATGTATTTCTGTGCAAAAACGTTAGCCGAGAA
 BnTT3 (456) TATCATGTCCAAGAAGATGACAGGATGGATGTATTTCTGTGCAAAAACGTTAGCCGAGAA
 BrTT3-1 (481) TATCATGTCCAAGAAGATGACAGGATGGATGTATTTCTGTGCAAAAACGTTAGCCGAGAA
 BrTT3-2 (456) TATCATGTCCAAGAAGATGACAGGATGGATGTATTTCTGTGCAAAAACGTTAGCCGAGAA
 BoTT3-1 (481) TATCATGTCCAAGAAGATGACAGGATGGATGTATTTCTGTGCAAAAACGTTAGCCGAGAA
 BoTT3-2 (456) TATCATGTCCAAGAAGATGACAGGATGGATGTATTTCTGTGCAAAAACGTTAGCCGAGAA
 BjTT3 (456) TATCATGTCCAAGAAGATGACAGGATGGATGTATTTCTGTGCAAAAACGTTAGCCGAGAA

AtTT3 (516) AGCAGCGTGGGATTTGCGCGAAGGAAAAGGATTAGATTTTCATTAGTATTATCCCGACATT
 BnTT3 (516) AGCAGCTTGGGATTAACGCGAAGGAAAAGGATAGATTTTCATTAGTATTATCCCGACATT
 BrTT3-1 (541) AGCAGCTTGGGATTAACGCGAAGGAAAAGGATAGATTTTCATTAGTATTATCCCGACATT
 BrTT3-2 (516) AGCAGCTTGGGATTAACGCGAAGGAAAAGGATAGATTTTCATTAGTATTATCCCGACATT
 BoTT3-1 (541) AGCAGCTTGGGATTAACGCGAAGGAAAAGGATAGATTTTCATTAGTATTATCCCGACATT
 BoTT3-2 (516) AGCAGCTTGGGATTAACGCGAAGGAAAAGGATAGATTTTCATTAGTATTATCCCGACATT
 BjTT3 (516) AGCAGCTTGGGATTAACGCGAAGGAAAAGGATAGATTTTCATTAGTATTATCCCGACATT

AtTT3 (576) GGTGATCGGTCCATTTATAACAACATCTATGCCGCTAGCCTTATTACCGCGCTCTCTCC
 BnTT3 (576) GGTGATCGGTCCATTTATAACAACATCTATGCCGCTAGCCTTATTACCGCGCTCTCTCC
 BrTT3-1 (601) GGTGATCGGTCCATTTATAACAACATCTATGCCGCTAGCCTTATTACCGCGCTCTCTCC
 BrTT3-2 (576) GGTGATCGGTCCATTTATAACAACATCTATGCCGCTAGCCTTATTACCGCGCTCTCTCC
 BoTT3-1 (601) GGTGATCGGTCCATTTATAACAACATCTATGCCGCTAGCCTTATTACCGCGCTCTCTCC
 BoTT3-2 (576) GGTGATCGGTCCATTTATAACAACATCTATGCCGCTAGCCTTATTACCGCGCTCTCTCC
 BjTT3 (576) GGTGATCGGTCCATTTATAACAACATCTATGCCGCTAGCCTTATTACCGCGCTCTCTCC

AtTT3 (636) TATCACTCGGAACGAGGCGCATTACTCCATCATAAGACAAGGACAGTATGTGCCACTTGGAA
 BnTT3 (636) TATCACTCGTAACGAGGCACATTACTCCATCATAAGACAAGGACAGTATGTGCCACTTGGAA
 BrTT3-1 (661) TATCACTCGTAACGAGGCACATTACTCCATCATAAGACAAGGACAGTATGTGCCACTTGGAA
 BrTT3-2 (636) TATCACTCGTAACGAGGCACATTACTCCATCATAAGACAAGGACAGTATGTGCCACTTGGAA
 BoTT3-1 (661) TATCACTCGTAACGAGGCACATTACTCCATCATAAGACAAGGACAGTATGTGCCACTTGGAA
 BoTT3-2 (636) TATCACTCGTAACGAGGCACATTACTCCATCATAAGACAAGGACAGTATGTGCCACTTGGAA
 BjTT3 (636) TATCACTCGTAACGAGGCACATTACTCCATCATAAGACAAGGACAGTATGTGCCACTTGGAA

AtTT3 (696) CGACTTATGCAACGCTCATATCTTCTTATACGAACAAGCAGCCGCCAAGGGACGTTATAT
 BnTT3 (696) CGATTTATGCAATGCCCATATATTTCTTGTACGAACAAGCTGCTGCCAAGGGACGTTATGT
 BrTT3-1 (721) CGATTTATGCAATGCCCATATATTTCTTGTACGAACAAGCTGCTGCCAAGGGACGTTATGT
 BrTT3-2 (696) CGATTTATGCAATGCCCATATATTTCTTGTACGAACAAGCTGCTGCCAAGGGACGTTATGT
 BoTT3-1 (721) CGACTTATGCAATGCTCATATATTTCTTGTACGAACAAGCTGCTGCCAAGGGACGTTATAT
 BoTT3-2 (696) CGACTTATGCAATGCTCATATATTTCTTGTACGAACAAGCTGCTGCCAAGGGACGTTATGT
 BjTT3 (696) CGATTTATGCAATGCCCATATATTTCTTGTACGAACAAGCTGCTGCCAAGGGACGTTATGT

AtTT3 (756) TTGTTCCCTCTCATGATGCAACCATTCTTACTATCTCCAATTTCTCAGGCCAAAAATACCC
 BnTT3 (756) TTGTTCCCTCTCAGATGCAACGATTCTTACTATCTCCGAGTTTCTCAGGCCAAAAATATCC
 BrTT3-1 (781) TTGTTCCCTCTCAGATGCAACGATTCTTACTATCTCCGAGTTTCTCAGGCCAAAAATATCC
 BrTT3-2 (756) TTGTTCCCTCTCAGATGCAACGATTCTTACTATCTCCGAGTTTCTCAGGCCAAAAATATCC
 BoTT3-1 (781) TTGTTCCCTCTCAGATGCGACGATTCTTACTATCTCCGAGTTTCTCAGGCCAAAAATACCC
 BoTT3-2 (756) TTGTTCCCTCTCAGATGCAACGATTCTTACTATCTCCGAGTTTCTCAGGCCAAAAATATCC
 BjTT3 (756) TTGTTCCCTCTCAGATGCAACGATTCTTACTATCTCCGAGTTTCTCAGGCCAAAAATATCC

AtTT3 (816) CGAATATAACGTACCTTCAACGTTTGAAGGTGTTGATGAGAATCTAAAGAGCATTGAATT
 BnTT3 (816) AGAATATAACGTGCCTTCAACGTTTGAAGGAGTGGATGAGAATCTAAAGAGCATTATGTT
 BrTT3-1 (841) AGAATATAACGTGCCTTCAACGTTTGAAGGAGTGGATGAGAATCTAAAGAGCATTATGTT
 BrTT3-2 (816) AGAATATAACGTGCCTTCAACGTTTGAAGGAGTGGATGAGAATCTAAAGAGCATTATGTT
 BoTT3-1 (841) AGAATATAACGTGCCTTCAACGTTTGAAGGAGTGGATGAGAATCTAAAGAGCATTATGTT
 BoTT3-2 (816) AGAATATAACGTGCCTTCAACGTTTGAAGGAGTGGATGAGAATCTAAAGAGCATTATGTT
 BjTT3 (816) AGAATATAACGTGCCTTCAACGTTTGAAGGAGTGGATGAGAATCTAAAGAGCATTATGTT

AtTT3 (876) CAGTTCCAAGAAGCTGACGGACATGGGGTTTAACTTCAAGTATAGTCTCGAGGAAATGTT
 BnTT3 (876) CAGTTCCAAGAAGCTGATTGATATGGGATTTAACTTCAAGTATAGTCTCGAGGATATGTT
 BrTT3-1 (901) CAGTTCCAAGAAGCTGATTGATATGGGATTTAACTTCAAGTATAGTCTCGAGGATATGTT
 BrTT3-2 (876) CAGTTCCAAGAAGCTGATTGATATGGGATTTAACTTCAAGTATAGTCTCGAGGATATGTT
 BoTT3-1 (901) CAGTTCCAAGAAGCTGATTGATATGGGATTTAACTTCAAGTATAGTCTCGAGGATATGTT
 BoTT3-2 (876) CAGTTCCAAGAAGCTGATTGATATGGGATTTAACTTCAAGTATAGTCTCGAGGATATGTT
 BjTT3 (876) CAGTTCCAAGAAGCTGATTGATATGGGATTTAACTTCAAGTATAGTCTCGAGGATATGTT

AtTT3 (936) TATTGAATCTATTGAGACATGTCGTCAAAAGGGTTTTCTCCCGTTTTATTATCGTACCA
 BnTT3 (936) GGTGGAATCGATTGAGACATGTCGTCAAAAGGGTTTTCTCCCTGTCACTTTACCGGAACA
 BrTT3-1 (961) GGTGGAATCGATTGAGACATGTCGTCAAAAGGGTTTTCTCCCTGTCACTTTACCGGAACA
 BrTT3-2 (936) GGTGGAATCGATTGAGACATGTCGTCAAAAGGGTTTTCTCCCTGTCACTTTACCGGAACA
 BoTT3-1 (961) GGTGGAATCGATTGAGACATGTCGTCAAAAGGGTTTTCTCCCTGTCACTTTACCGGAACA
 BoTT3-2 (936) GGTGGAATCGATTGAGACATGTCGTCAAAAGGGTTTTCTCCCTGTCACTTTACCGGAACA
 BjTT3 (936) GGTGGAATCGATTGAGACATGTCGTCAAAAGGGTTTTCTCCCTGTCACTTTACCGGAACA

AtTT3 (996) ATCCATATCGGAGATCAAGACTAAGA-----ATGAAAACATTGACGTCAAAAACCGGAGA
 BnTT3 (996) TTTGAAATCTGAGGACAAAGTCCCGGCAGTGATGATAATAAGGAGATTAAAAACGGATC
 BrTT3-1 (1021) TTTGAAATCTGAGGACAAAGTCCCGGCAGTGATGATAATAAGGAGATTAAAAACGGATC
 BrTT3-2 (996) TTTGAAATCTGAGGACAAAGTCCCGGCAGTGATGATAATAAGGAGATTAAAAACGGATC
 BoTT3-1 (1021) TTTGAAATCTGAGGACAGAGTCCCGGCAGTGATGACAATAAGGAGATTAAAAACGGATC
 BoTT3-2 (996) TTTGAAATCTGAGGACAAAGTCCCGGCAGTGATGACAATAAGGAGATTAAAAACGGATC
 BjTT3 (996) TTTGAAATCTGAGGACAAAGTCCCGGCAGTGATGATAATAAGGAGATTAAAAACGGATC

AtTT3 (1050) T---GGTTTAAACCGATGGTATGAAGCCATGTAACAAGACAGAAAACGGGGATAACCGGCCA
 BnTT3 (1056) TGCAGGTTTAACTGATGGTATGGTAGCTTGTAAGAAGACCGAACAGGGATGGCCGGCGA
 BrTT3-1 (1081) TGCAGGTTTAACTGATGGTATGGTAGCTTGTAAGAAGACCGAACAGGGATGGCCGGCGA
 BrTT3-2 (1056) TGCAGGTTTAACTGATGGTATGGTAGCTTGTAAGAAGACCGAACAGGGATGGCCGGCGA
 BoTT3-1 (1081) TGCAGGTTTAACTGATGGTATGGTAGCTTGTAAGAAGACCGAACAGGGATGGTCCGGCGA
 BoTT3-2 (1056) TGCAGGTTTAACTGATGGTATGGTAGCTTGTAAGAAGACCGAACAGGGATGGCCGGCGA
 BjTT3 (1056) TGCAGGTTTAACTGATGGTATGGTAGCTTGTAAGAAGACCGAACAGAGATGGCCGGCGA

AtTT3 (1107) GAGAACCGATGCTCCATGCTAGCACAACAGATGTGTGCTAG-----
 BnTT3 (1116) GAAAGCCGATAGTCACATGTCGGCACAGCAGATCTGTGCTTAG-----
 BrTT3-1 (1141) GAAAGCCGATAGTCACATGTCGGCACAGCAGATCTGTGCTTAGAAAATTGAACCCGTATCT
 BrTT3-2 (1116) GAAAGCCGATAGTCACATGTCGGCACAGCAGATCTGTGCTTAG-----
 BoTT3-1 (1141) GAAAGCCGATAGTCACATGTCGGCACAGCAGATCTGTGCTTAGAAAATTGAACCCGTATCT
 BoTT3-2 (1116) GAAAGCCGATAGTCACATGTCGGCACAGCAGATCTGTGCTTAG-----

BjTT3 (1116) GAAAGCCGATAGTCACATGTCGGCACAGCAGATCTGTGCTTA-----
 AtTT3 (1150) -----
 BnTT3 (1159) -----
 BrTT3-1 (1201) AATATGGATCTATTGTCTTATGAATGTGTGATTGTGTTTTTTTTTTCTTTTAAAGTTTGT
 BrTT3-2 (1159) -----
 BoTT3-1 (1201) AATATGGATCTATTGTCTTATGAATGTGTGATT--T-----TTTTTTTTTAAAGTTTGT
 BoTT3-2 (1159) -----
 BjTT3 (1158) -----

AtTT3 (1150) -----
 BnTT3 (1159) -----
 BrTT3-1 (1261) ATGAAAGTGTTGTGGACTTATTTATGGTATATGATA---TCATGTGTGAGTGTGAAAAAA
 BrTT3-2 (1159) -----
 BoTT3-1 (1252) ATGAAAGTGTTGTGGACTTATTTATGGTATCTGATAGTATCATGTGTGAGTGTGAAAAAT
 BoTT3-2 (1159) -----
 BjTT3 (1158) -----

AtTT3 (1150) -----
 BnTT3 (1159) -----
 BrTT3-1 (1318) AAAAAAAAA-----
 BrTT3-2 (1159) -----
 BoTT3-1 (1312) TATGAATCAATATTATTAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
 BoTT3-2 (1159) -----
 BjTT3 (1158) -----

1381

AtTT3 (1150) --
 BnTT3 (1159) --
 BrTT3-1 (1328) --
 BrTT3-2 (1159) --
 BoTT3-1 (1372) AA
 BoTT3-2 (1159) --
 BjTT3 (1158) --

8. BnTT18

AtTT18 (1) -----
 BnTT18-1 (1) -----
 BnTT18-2 (1) -----
 BnTT18-3 (1) -----
 BnTT18-4 (1) -----
 BnTT18-5 (1) -----
 BnTT18-6 (1) -----
 BrTT18-1 (1) -----
 BrTT18-2 (1) -----
 BrTT18-3 (1) -----
 BoTT18 (1) -----
 BjTT18 (1) ATAAAAACCGAGACAGAGTAAGTAGTTATTTTGTATTGCATAACTCTGTTTTTCCCCTGT

AtTT18 (1) -----ATGGTTG
 BnTT18-1 (1) -----ATGGTGG
 BnTT18-2 (1) -----ATGGTGG
 BnTT18-3 (1) -----ATGGTGG
 BnTT18-4 (1) -----ATGGTTG
 BnTT18-5 (1) -----ATGGTTG
 BnTT18-6 (1) -----ATGGTTG
 BrTT18-1 (1) -----ATGGTGG
 BrTT18-2 (1) -----ACAAGAAGTACAAGAAGATGGTGG
 BrTT18-3 (1) -----ACAAGAAGTACAAGAAGATGGTGG
 BoTT18 (1) -----GGGCTTTACAAGAAGTACAAGAAGATGGTGG
 BjTT18 (61) TTTAAAAAGCTTCTTTACTTACTCTGTTTGTAGCTTTACAAGAAGTACAAGAAGATGGTTG

AtTT18 (8) CGGTTGAAAGAGTTGAGAGTCTAGCAAAAAGCGGAATCATATCGATTCCAAAAGAATATA
 BnTT18-1 (8) CAGTTGAAAGAGTTGAGAGCTTAGCGAAAAGCGGGATCAGCTCTATCCAAAAGAATACA

BnTT18-2 (8) CAGTTGAAAGAGTTGAGAGCTTAGCAAAAAGCGGAATCAACTCCATCCCAAAGAATACA
 BnTT18-3 (8) CAGTTGAAAGAGTTGAGAGCTTAGCAAAAAGCGGAATCAGCTCAATCCCAAAGAGAATACA
 BnTT18-4 (8) AAGTGAAAGAGTCGAGAGCTTAGCGAAAAGCGGGATCAGCTCTATCCCAAAGAATACA
 BnTT18-5 (8) AAGTGAAAGAGTCGAGAGCTTAGCGAAAAGCGGGATCAGCTCTATCCCAAAGAATACA
 BnTT18-6 (8) AAGTGAAAGAGTCGAGAGCTTAGCAAAAAGCGGAATCAGCTCAATCCCAAAGAGAATACA
 BrTT18-1 (8) CAGTTGAAAGAGTTGAGAGCTTAGCGAAAAGCGGGATCAGCTCTATCCCAAAGAATACA
 BrTT18-2 (25) CAGTTGAAAGAGTTGAGAGCTTAGCAAAAAGCGGGATCAGCTCTATCCCAAAGAATACA
 BrTT18-3 (25) CAGTTGAAAGAGTTGAGAGCTTAGCGAAAAGCGGGATCAGCTCTATCCCAAAGAATACA
 BoTT18 (32) CAGTTGAAAGAGTTGAGAGCTTAGCAAAAAGCGGAATCAACTCCATCCCAAAGAATACA
 BjTT18 (121) CAGTTGAAAGAGTTGAGAGCTTAGCAAAAAGCGGAATCAGCTCAATCCCAAAGAGAATACA

 AtTT18 (68) TTCGTCCAAAAGAAGAGCTCGAGAGCATCAACGATGTTTTCTAGAAAGAGAAGAAAGAAG
 BnTT18-1 (68) TCCGTCCAAAAGAAGAGCTCGAGAGCATCAACGACGTGTTCCAAGAAGAGAAAAAGAAG
 BnTT18-2 (68) TCCGTCCAAAAGAAGAGCTCGAGAGCATCAACGACGTGTTCCAAGAAGAGAAAGAAG
 BnTT18-3 (68) TCCGTCCAAAAGAAGAGCTCGAGAGCATCAACGACGTGTTCCAAGAAGAGAAAGAAG
 BnTT18-4 (68) TCCGTCCAAAAGAAGAGCTCGAGAGCATCAACGACGTGTTCCAAGAAGAGAAAAAGAAG
 BnTT18-5 (68) TCCGTCCAAAAGAAGAGCTCGAGAGCATCAACGACGTGTTCCAAGAAGAGAAAAAGAAG
 BnTT18-6 (68) TCCGTCCAAAAGAAGAGCTCGAGAGCATCAACGACGTGTTCCAAGAAGAGAAAAAGAAG
 BrTT18-1 (68) TCCGTCCAAAAGAAGAGCTCGAGAGCATCAACGACGTGTTCCAAGAAGAGAAAAAGAAG
 BrTT18-2 (85) TCCGTCCAAAAGAAGAGCTCGAGAGCATCAACGACGTGTTCCAAGAAGAGAAAAAGAAG
 BrTT18-3 (85) TCCGTCCAAAAGAAGAGCTCGAGAGCATCAACGACGTGTTCCAAGAAGAGAAAAAGAAG
 BoTT18 (92) TCCGTCCAAAAGAAGAGCTCGAGAGCATCAACGACGTGTTCCAAGAAGAGAAAGAAG
 BjTT18 (181) TCCGTCCAAAAGAAGAGCTCGAGAGCATCAACGACGTGTTCCAAGAAGAGAAAGAAG

 AtTT18 (128) ACGGTCCACAAGTCCCACCATCGATCTCAAAGACATCGAGTCAGAACGATGAAAAGATCC
 BnTT18-1 (128) ACGGTCCACAAGTCCCACCATCGATCTCAAAGACATCGAGTCAGAACGATGAAAAGATCC
 BnTT18-2 (128) ACGGTCCACAAGTCCCACCATCGATCTCAAAGACATCGAGTCAGAACGATGAAAAGATCC
 BnTT18-3 (128) ACGGTCCACAAGTCCCACCATCGATCTCAAAGACATCGAGTCAGAACGATGAAAAGATCC
 BnTT18-4 (128) ACGGTCCACAAGTCCCACCATCGACTCAAAGACATCGAGTCAGAACGATGAAAAGATCC
 BnTT18-5 (128) ACGGTCCACAAGTCCCACCATCGACTCAAAGACATCGAGTCAGAACGATGAAAAGATCC
 BnTT18-6 (128) ACGGTCCACAAGTCCCACCATCGATCTCAAAGACATCGAGTCAGAACGATGAAAAGATCC
 BrTT18-1 (128) ACGGTCCACAAGTCCCACCATCGACTCAAAGACATCGAGTCAGAACGATGAAAAGATCC
 BrTT18-2 (145) ACGGTCCACAAGTCCCACCATCGACTCAAAGACATCGAGTCAGAACGATGAAAAGATCC
 BrTT18-3 (145) ACGGTCCACAAGTCCCACCATCGACTCAAAGACATCGAGTCAGAACGATGAAAAGATCC
 BoTT18 (152) ACGGTCCACAAGTCCCACCATCGATCTCAAAGACATCGAGTCAGAACGATGAAAAGATCC
 BjTT18 (241) ACGGTCCACAAGTCCCACCATCGATCTCAAAGACATCGAGTCAGAACGATGAAAAGATCC

 AtTT18 (188) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA
 BnTT18-1 (188) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA
 BnTT18-2 (188) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA
 BnTT18-3 (188) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA
 BnTT18-4 (188) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA
 BnTT18-5 (188) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA
 BnTT18-6 (188) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA
 BrTT18-1 (188) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA
 BrTT18-2 (205) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA
 BrTT18-3 (205) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA
 BoTT18 (212) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA
 BjTT18 (301) GTGAGAAATGCATAGAGGAGCTCAAAAAGGCGGCTATGGACTGGGGAGTGATGCATTTGA

 AtTT18 (248) TCAACCATGGAATACCAGCTGATCTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT
 BnTT18-1 (248) TCAACCATGGTGTACCGGTTGAACTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT
 BnTT18-2 (248) TCAACCATGGTGTACCGGTTGAACTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT
 BnTT18-3 (248) TCAACCATGGTGTACCGGTTGAACTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT
 BnTT18-4 (248) TCAACCATGGTGTACCGGTTGAACTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT
 BnTT18-5 (248) TCAACCATGGTGTACCGGTTGAACTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT
 BnTT18-6 (248) TCAACCATGGTGTACCGGTTGAACTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT
 BrTT18-1 (248) TCAACCATGGTGTACCGGTTGAACTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT
 BrTT18-2 (265) TCAACCATGGTGTACCGGTTGAACTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT
 BrTT18-3 (265) TCAACCATGGTGTACCGGTTGAACTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT
 BoTT18 (272) TCAACCATGGTGTACCGGTTGAACTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT
 BjTT18 (361) TCAACCATGGTGTACCGGTTGAACTAATGGAGCGTGTGAAGAAGTCAGGAGAAGAGTTCT

AtTT18 (308) TCAGTTTGTCTGTGGAAGAGAAGGAGAAGTATGCAAACGATCAAGCCAAGGAAAGATTC
BnTT18-1 (308) TCGGTTTGCCCGTGGAAAGAGAAGGAGAAGTATGCAAACGATCAAGCCAGCGGAAAGATTC
BnTT18-2 (308) TCGGTTTGCCCGTGAAGAGAAGGAGAAGTATGCAAACGATCAAGCCAAGGAAAGATTC
BnTT18-3 (308) TCGGTTTGCCCGTGAAGAGAAGGAGAAGTATGCAAACGATCAAGCCAGCGGAAAGATTC
BnTT18-4 (308) TCGGTTTACCCGTGGAAAGAGAAGGAGAAGTATGCAAACGATCAAGCCAGCGGAAAGATTC
BnTT18-5 (308) TCGGTTTACCCGTGGAAAGAGAAGGAGAAGTATGCAAACGATCAAGCCAGCGGAAAGATTC
BnTT18-6 (308) TCGGTTTGCCCGTGGAAAGAGAAGGAGAAGTATGCAAACGATCAAGCCAGCGGAAAGATTC
BrTT18-1 (308) TCGGTTTACCCGTGGAAAGAGAAGGAGAAGTATGCAAACGATCAAGCCAGCGGAAAGATTC
BrTT18-2 (325) TCGGTTTACCCGTGGAAAGAGAAGGAGAAGTATGCAAACGATCAAGCCAGCGGAAAGATTC
BrTT18-3 (325) TCGGTTTACCCGTGGAAAGAGAAGGAGAAGTATGCAAACGATCAAGCCAGCGGAAAGATTC
BoTT18 (332) TCGGTTTGCCCGTGAAGAGAAGGAGAAGTATGCAAACGATCAAGCCAGGAAAGATTC
BjTT18 (421) TCGGTTTGCCCGTGGAGGAGAAGGAGAAGTATGCAAACGATCAAGCCAGCGGAAAGATTC

AtTT18 (368) AAGGCTATGGAAGTAAATTGGCTAACACGCGAGTGGACAATTGGAATGGGAAGATTACT
BnTT18-1 (368) AAGGTATGGAAGCAAGTTGGCTAACACGCGAGTGGACAGCTTGAGTGGGAAGATTACT
BnTT18-2 (368) AAGGTATGGAAGCAAGTTGGCTAACACGCGAGTGGACAGCTTGAGTGGGAAGATTACT
BnTT18-3 (368) AAGGTATGGAAGTAAATTGGCTAACACGCGAGTGGACAATTGAGTGGGAAGATTACT
BnTT18-4 (368) AAGGTATGGAAGCAAGTTGGCTAAACGCGAGTGGACAGCTTGAGTGGGAAGATTACT
BnTT18-5 (368) AAGGTATGGAAGCAAGTTGGCTAAACGCGAGTGGACAGCTTGAGTGGGAAGATTACT
BnTT18-6 (368) AAGGTATGGAAGTAAATTGGCTAACACGCGAGTGGACAATTGAGTGGGAAGATTACT
BrTT18-1 (368) AAGGTATGGAAGCAAGTTGGCTAAACGCGAGTGGACAGCTTGAGTGGGAAGATTACT
BrTT18-2 (385) AAGGTATGGAAGCAAGTTGGCTAAACGCGAGTGGACAGCTTGAGTGGGAAGATTACT
BrTT18-3 (385) AAGGTATGGAAGCAAGTTGGCTAAACGCGAGTGGACAGCTTGAGTGGGAAGATTACT
BoTT18 (392) AAGGTATGGAAGCAAGTTGGCTAACACGCGAGTGGACAGCTTGAGTGGGAAGATTACT
BjTT18 (481) AAGGTATGGAAGTAAATTGGCTAACACGCGAGTGGACAATTGAGTGGGAAGATTACT

AtTT18 (428) TCTTTCATCTTGTGTATCCTGAAGAGAAGAGAGATCTATCAATTTGGCCTAAGACACCAA
BnTT18-1 (428) TCTTTCATCTTGTGTATCCTGAAGACAAGAGAGATCTATCACTTTGGCCTAAGACACCAA
BnTT18-2 (428) TCTTTCATCTTGTGTATCCTGAAGACAAGAGAGATCTATCACTTTGGCCTAAGACACCAA
BnTT18-3 (428) TCTTTCATCTTGTGTATCCTGAAGACAAGAGAGATCTATCACTTTGGCCTAAGACACCAA
BnTT18-4 (428) TCTTTCATCTTGTGTATCCTGAAGACAAGAGAGATCTATCACTTTGGCCTAAGACACCAA
BnTT18-5 (428) TCTTTCATCTTGTGTATCCTGAAGACAAGAGAGATCTATCACTTTGGCCTAAGACACCAA
BnTT18-6 (428) TCTTTCATCTTGTGTATCCTGAAGACAAGAGAGATCTATCACTTTGGCCTAAGACACCAA
BrTT18-1 (428) TCTTTCATCTTGTGTATCCTGAAGACAAGAGAGATCTATCACTTTGGCCTAAGACACCAA
BrTT18-2 (445) TCTTTCATCTTGTGTATCCTGAAGACAAGAGAGATCTATCACTTTGGCCTAAGACACCAA
BrTT18-3 (445) TCTTTCATCTTGTGTATCCTGAAGACAAGAGAGATCTATCACTTTGGCCTAAGACACCAA
BoTT18 (452) TCTTTCATCTTGTGTATCCTGAAGACAAGAGAGATCTATCACTTTGGCCTAAGACACCAA
BjTT18 (541) TCTTTCATCTTGTGTATCCTGAAGACAAGAGAGATCTATCACTTTGGCCTAAGACACCAA

AtTT18 (488) GTGATTACATAGAAGCAACGAGTGAGTACGCGAAGTGTCTTCGTTTGTAGCGACTAAAG
BnTT18-1 (488) CTGATTACATTGAAGCTACGAGTGAGTACGCTAAGTGTCTTCGTTTGTAGCAACAAAAG
BnTT18-2 (488) CTGATTACATTGAAGCTACGAGTGAGTACGCTAAGTGTCTTCGTTTGTAGCAACAAAAG
BnTT18-3 (488) CTGATTACATTGAAGCAACGAGTGAGTACGCTAAGTGTCTTCGTTTGTAGCAACAAAAG
BnTT18-4 (488) CTGATTACATTGAAGCTACGAGTGAGTACGCTAAGTGTCTTCGTTTGTAGCAACAAAAG
BnTT18-5 (488) CTGATTACATTGAAGCTACGAGTGAGTACGCTAAGTGTCTTCGTTTGTAGCAACAAAAG
BnTT18-6 (488) CCGATTACATTGAAGCAACGAGTGAGTACGCTAAGTGTCTTCGTTTGTAGCAACAAAAG
BrTT18-1 (488) CTGATTACATTGAAGCTACGAGTGAGTACGCTAAGTGTCTTCGTTTGTAGCAACAAAAG
BrTT18-2 (505) CTGATTACATTGAAGCTACGAGTGAGTACGCTAAGTGTCTTCGTTTGTAGCAACAAAAG
BrTT18-3 (505) CTGATTACATTGAAGCTACGAGTGAGTACGCTAAGTGTCTTCGTTTGTAGCAACAAAAG
BoTT18 (512) CTGATTACATTGAAGCTACGAGTGAGTACGCTAAGTGTCTTCGTTTGTAGCAACAAAAG
BjTT18 (601) CTGATTACATTGAAGCAACGAGTGAGTACGCTAAGTGTCTTCGTTTGTAGCAACAAAAG

AtTT18 (548) TCTTCAAGGCTCTCTCTATCGCCCTAGGCTTAGAGCCTGACCGTCTAGAGAAAGAAGTTG
BnTT18-1 (548) TCTTCAAGGCTCTCTCTATCGCCCTAGGCTTAGAGCCTGACCGTCTAGAGAATGAAGTGG
BnTT18-2 (548) TCTTCAAGGCTCTCTCTATCGCCCTAGGCTTAGAGCCTGACCGTCTAGAGAATGAAGTGG
BnTT18-3 (548) TCTTCAAGGCTCTCTCTATCGCCCTAGGCTTAGAGCCTGACCGTCTAGAGAATGAAGTGG
BnTT18-4 (548) TCTTCAAGGCTCTCTCCATCGCCCTAGGCTTAGAGCCTGACCGTCTAGAGAAAGAAGTTG
BnTT18-5 (548) TCTTCAAGGCTCTCTCTATCGCCCTAGGCTTAGAGCCTGACCGTCTAGAGAAAGAAGTTG
BnTT18-6 (548) TCTTCAAGGCTCTCTCTATCGCCCTAGGCTTAGAGCCTGACCGTCTAGAGAATGAAGTGG
BrTT18-1 (548) TCTTCAAGGCTCTCTCTATCGCCCTAGGCTTAGAGCCTGACCGTCTAGAGAAAGAAGTTG
BrTT18-2 (565) TCTTCAAGGCTCTCTCTATCGCCCTAGGCTTAGAGCCTGACCGTCTAGAGAAAGAAGTTG
BrTT18-3 (565) TCTTCAAGGCTCTCTCTATCGCCCTAGGCTTAGAGCCTGACCGTCTAGAGAAAGAAGTTG
BoTT18 (572) TCTTCAAGGCTCTCTCTATCGCCCTAGGCTTAGAGCCTGACCGTCTAGAGAATGAAGTGG

BjTT18 (661) TCTTCAAGGCTCTCTATCGCCCTAGGCTTAGAGCTGACCGTCTAGAGAATGAAGTGG
 AtTT18 (608) GTGGTTTAGAAGAGCTTCTCTCAAATGAAGATAAACTACTATCCAAAATGTCCCTCAGC
 BnTT18-1 (608) GCGGTTTAGAAGAGCTTCTCTCAAATGAAGATCAATTACTACCCAAAATGCCCTCAGC
 BnTT18-2 (608) GCGGTTTAGAAGAGCTTCTCTCAAATGAAGATCAATTACTACCCAAAATGCCCTCAGC
 BnTT18-3 (608) GCGGTTTAGAAGAGCTTCTCTCAAATGAAGATAAACTACTACCCAAAATGCCCTCAGC
 BnTT18-4 (608) GTGGTTTAGAAGAGCTTCTCTCAAATGAAGATAAACTATTACCCGAAATGCCCTCAGC
 BnTT18-5 (608) GTGGTTTAGAAGAGCTTCTCTCAAATGAAGATAAACTATTACCCGAAATGCCCTCAGC
 BnTT18-6 (608) GCGGTTTAGAAGAGCTTCTCTCAAATGAAGATAAACTACTACCCAAAATGCCCTCAGC
 BrTT18-1 (608) GTGGTTTAGAAGAGCTTCTCTCAAATGAAGATAAACTATTACCCGAAATGCCCTCAGC
 BrTT18-2 (625) GTGGTTTAGAAGAGCTTCTCTCAAATGAAGATAAACTATTACCCGAAATGCCCTCAGC
 BrTT18-3 (625) GTGGTTTAGAAGAGCTTCTCTCAAATGAAGATAAACTATTACCCGAAATGCCCTCAGC
 BoTT18 (632) GCGGTATAGAAGAGCTTCTGCTCAAATGAAGATCAATTACTACCCAAAATGCCCTCAGC
 BjTT18 (721) GCGGTTTAGAAGAGCTTCTCTCAAATGAAGATAAACTACTACCCAAAATGCCCTCAGC

 AtTT18 (668) CTGAGCTAGCACTCGGTGTGGAAGCTCACACCGATGTAAGCGCTTTAACTTTCATTCTAC
 BnTT18-1 (668) **CTGAGCTAGCAC**TTGGCGTGAAGCTCACACCGATGTAAGCGCTTTGACCTTCATTCTAC
 BnTT18-2 (668) **CTGAGCTAGCAC**TTGGCGTGAAGCTCACACCGATGTAAGCGCTTTGACCTTCATTCTAC
 BnTT18-3 (668) **CTGAGCTAGCAC**TTGGGGTGAAGCTCACACCGATGTAAGCGCTCTGACCTTCATTCTAC
 BnTT18-4 (668) **CTGAGCTAGCAC**TTGGCGTGAAGCTCACACAGATGTAAGCGCTCTGACCTTCATTCTAC
 BnTT18-5 (668) **CTGAGCTAGCAC**TTGGCGTGAAGCTCACACAGATGTAAGCGCTCTGACCTTCATTCTAC
 BnTT18-6 (668) **CTGAGCTAGCAC**TTGGGGTGAAGCTCACACCGATGTAAGCGCTCTGACCTTCATTCTAC
 BrTT18-1 (668) CTGAGCTAGCACTTGGCGTGAAGCTCACACAGATGTAAGCGCTCTGACCTTCATTCTAC
 BrTT18-2 (685) CTGAGCTAGCACTTGGCGTGAAGCTCACACCGATGTAAGCGCTCTGACCTTCATTCTAC
 BrTT18-3 (685) CTGAGCTAGCACTTGGCGTGAAGCTCACACAGATGTAAGCGCTCTGACCTTCATTCTAC
 BoTT18 (692) CTGAGCTAGCACTTGGCGTGAAGCTCACACCGATGTAAGCGCTTTGACCTTCATTCTAC
 BjTT18 (781) CTGAGCTAGCACTTGGGGTGAAGCTCACACCGATGTAAGCGCTCTGACCTTCATTCTAC

 AtTT18 (728) ACAACATGGTTCCGGGTTTGCAGCTTTTCTACGAGGGCAAATGGGTCACTGCAAAAATGTG
 BnTT18-1 (728) ACAACATGGTTCCGGGTTTGCAGCTTTTCTACGAGGGTAAATGGGTCACTGCAAAAATGTG
 BnTT18-2 (728) ACAACATGGTTCCGGGTTTGCAGCTTTTCTACGAGGGTAAATGGGTCACTGCAAAAATGTG
 BnTT18-3 (728) ACAACATGGTTCCGGGTTTGCAGCTTTTCTACGAGGGTAAATGGATCACTGCAAAAATGTG
 BnTT18-4 (728) ACAACATGGTTCCGGGCTTGCAGCTGTTCTACGAGGGTAAATGGATCACTGCAAAAATGTG
 BnTT18-5 (728) ACAACATGGTTCCGGGCTTGCAGCTGTTCTACGAGGGTAAATGGATCACTGCAAAAATGTG
 BnTT18-6 (728) ACAACATGGTTCCGGGTTTGCAGCTGTTCTACGAGGGTAAATGGATCACTGCAAAAATGTG
 BrTT18-1 (728) ACAACATGGTTCCGGGCTTGCAGCTGTTCTACGAGGGTAAATGGATCACTGCAAAAATGTG
 BrTT18-2 (745) ACAACATGGTTCCGGGTTTGCAGCTGTTCTACGAGGGTAAATGGATCACTGCAAAAATGTG
 BrTT18-3 (745) ACAACATGGTTCCGGGCTTGCAGCTGTTCTACGAGGGTAAATGGATCACTGCAAAAATGTG
 BoTT18 (752) ACAACATGGTTCCGGGTTTGCAGCTTTTCTACGAGGGTAAATGGGTCACTGCAAAAATGTG
 BjTT18 (841) ACAACATGGTTCCGGGTTTGCAGCTGTTCTACGAGGGTAAATGGATCACTGCAAAAATGTG

 AtTT18 (788) TTCTGATTTCGATTGTGATGCACATTGGGATACTTTGGAGATTCTTAGTAATGGGAAGT
 BnTT18-1 (788) TTCTGATTTCGATTGTGATGCACATTGGGATACTTTGGAGATTCTTAGCAATGGGAAGT
 BnTT18-2 (788) TTCTGATTTCGATTGTGATGCACATTGGGATACTTTGGAGATTCTTAGCAATGGGAAGT
 BnTT18-3 (788) TTCTGATTTCGATTGTGATGCATATTGGAGATACTTTGGAGATTCTTAGTAACGGGAGGT
 BnTT18-4 (788) TTCTGATTTCGATTGTGATGCATATTGGAGATACTTTGGAGATTCTTAGTAACGGGAGGT
 BnTT18-5 (788) TTCTGATTTCGATTGTGATGCATATTGGAGATACTTTGGAGATTCTTAGTAACGGGAGGT
 BnTT18-6 (788) TTCTGATTTCGATTGTGATGCATATTGGAGATACTTTGGAGATTCTTAGTAACGGGAGGT
 BrTT18-1 (788) TTCTGATTTCGATTGTGATGCATATTGGAGATACTTTGGAGATTCTTAGTAACGGGAGGT
 BrTT18-2 (805) TTCTGATTTCGATTGTGATGCATATTGGAGATACTTTAGAGATTCTTAGTAACGGGAGGT
 BrTT18-3 (805) TTCTGATTTCGATTGTGATGCATATTGGAGATACTTTGGAGATTCTTAGTAACGGGAGGT
 BoTT18 (812) TTCTGATTTCGATTGTGATGCACATTGGAGATACTTTGGAGATTCTTAGCAATGGGAAGT
 BjTT18 (901) TTCTGATTTCGATTGTGATGCATATTGGAGATACTTTGGAGATTCTTAGTAACGGGAGGT

 AtTT18 (848) ATAAGAGTATACTTCACCGTGGGTTGGTGAATAAGGAGAAGGTTAGGATTCTTTGGGCTG
 BnTT18-1 (848) TTAAGAGTATACTTCACCGTGGATTGGTGAACAAGGAGAAGGTAAGGATTCTTTGGGCTG
 BnTT18-2 (848) TTAAGAGTATACTTCACCGTGGATTGGTGAACAAGGAGAAGGTAAGGATTCTTTGGGCTG
 BnTT18-3 (848) TTAAGAGTATACTTCACCGTGGGTTGGTGAACAAGGAGAAGGTAAGGATTCTTTGGGCTG
 BnTT18-4 (848) TTAAGAGTATACTTCACCGTGGGTTGGTGAATAAGGAGAAGGTAAGGATTCTTTGGGCTG
 BnTT18-5 (848) TTAAGAGTATACTTCACCGTGGGTTGGTGAATAAGGAGAAGGTAAGGATTCTTTGGGCTG
 BnTT18-6 (848) TTAAGAGTATACTTCACCGTGGGTTGGTGAACAAGGAGAAGGTAAGGATTCTTTGGGCTG
 BrTT18-1 (848) TTAAGAGTATACTTCACCGTGGGTTGGTGAATAAGGAGAAGGTAAGGATTCTTTGGGCTG
 BrTT18-2 (865) TTAAGAGTATACTTCACCGTGGATTGGTGAATAAGGAGAAGGTAAGGATTCTTTGGGCTG

BrTT18-3 (865) TTAAGAGTATACTTCACCGTGGGTTGGTGAATAAGGAGAAGGTAAGGATTTCTTGGGCTG
 BoTT18 (872) TTAAGAGTATACTTCACCGTGGATTGGTGAACAAGGAGAAGGTAAGGATTTCTTGGGCTG
 BjTT18 (961) TTAAGAGTATACTTCACCGTGGGTTGGTGAACAAGGAGAAGGTAAGGATTTCTTGGGCTG

 AtTT18 (908) TGTTTTGTGAACCCCAAAGGATAAGATTGTTCTTAAGCCGTTGCCGGAGATGGTGAGTG
 BnTT18-1 (908) TGTTTTGTGAACCCCAAAGGAAAAGATTGTGCTTAAGCCATTGCCGGAGATGGTGAGTG
 BnTT18-2 (908) TGTTTTGTGAACCCCAAAGGAAAAGATTGTGCTTAAGCCATTGCCGGAGATGGTGAGTG
 BnTT18-3 (908) TGTTTTGTGAACCCCAAAGGATAAGATTGTGCTTAAGCCGTTGCCGGAGATGGTGAGTG
 BnTT18-4 (908) TGTTTTGTGAACCCCAAAGGATAAGATTGTGCTTAAGCCGTTGCCGGAGATGGTGAGTG
 BnTT18-5 (908) TGTTTTGTGAACCCCAAAGGATAAGATTGTGCTTAAGCCGTTGCCGGAGATGGTGAGTG
 BnTT18-6 (908) TGTTTTGTGAACCCCAAAGGATAAGATTGTGCTTAAGCCGTTGCCGGAGATGGTGAGTG
 BrTT18-1 (908) TGTTTTGTGAACCCCAAAGGATAAGATTGTGCTTAAGCCGTTGCCGGAGATGGTGAGTG
 BrTT18-2 (925) TGTTTTGTGAACCCCAAAGGATAAGATTGTGCTTAAGCCGTTGCCGGAGATGGTGAGTG
 BrTT18-3 (925) TGTTTTGTGAACCCCAAAGGATAAGATTGTGCTTAAGCCGTTGCCGGAGATGGTGAGTG
 BoTT18 (932) TGTTTTGTGAACCCCAAAGGAAAAGATTGTGCTTAAGCCATTGCCGGAGATGGTGAGTG
 BjTT18 (1021) TGTTTTGTGAACCCCAAAGGATAAGATTGTGCTTAAGCCGTTGCCGGAGATGGTGAGTG

 AtTT18 (968) TTGAGTCTCCGGCTAAGTTTCCTCCAAGGACTTTTGCTCAACATATGAGCATAAGTTGT
 BnTT18-1 (968) TTGAGTCTCCGGCTAAGTTTCCTCCAAGGACGTTTGCTCAGCATATGAGCATAAGTTGT
 BnTT18-2 (968) TTGAGTCTCCGGCTAAGTTTCCTCCAAGGACGTTTGCTCAGCATATGAGCATAAGTTGT
 BnTT18-3 (968) TTGAGTCTCCGGCTAAGTTTCCTCCAAGGACGTTTGCTCAGCATATGAGCATAAGTTGT
 BnTT18-4 (968) TTGAGTCTCCGGCTAAGTTTCCTCCAAGGACGTTTGCTCAGCATATGAGCATAAGTTGT
 BnTT18-5 (968) TTGAGTCTCCGGCTAAGTTTCCTCCAAGGACGTTTGCTCAGCATATGAGCATAAGTTGT
 BnTT18-6 (968) TTGAGTCTCCGGCTAAGTTTCCTCCAAGGACGTTTGCTCAGCATATGAGCATAAGTTGT
 BrTT18-1 (968) TTGAGTCTCCGGCTAAGTTTCCTCCAAGGACGTTTGCTCAGCATATGAGCATAAGTTGT
 BrTT18-2 (985) TTGAGTCTCCGGCTAAGTTTCCTCCAAGGACGTTTGCTCAGCATATGAGCATAAGTTGT
 BrTT18-3 (985) TTGAGTCTCCGGCTAAGTTTCCTCCAAGGACGTTTGCTCAGCATATGAGCATAAGTTGT
 BoTT18 (992) TTGAGTCTCCGGCTAAGTTTCCTCCAAGGACGTTTGCTCAGCATATGAGCATAAGTTGT
 BjTT18 (1081) TTGAGTCTCCGGCCAAGTTTCCTCCAAGGACGTTTGCTCAGCATATGAGCATAAGTTGT

 AtTT18 (1028) TTGGAAGGAACAAGAGGAATTGGTATCCGAGAAAAATGATTAA-----
 BnTT18-1 (1028) TCAGGAATGAGCAAGAGGAGTTGGTAACTGAGAAAAAGGATGAAGTCTGA-----
 BnTT18-2 (1028) TCAGGAATGAGCAAGAGGAGTTGGTAACTGAGAAAAAGGATGAAGTCTGA-----
 BnTT18-3 (1028) TTAGGAACAAGCAAGAGGAGTTGGTAACTGAGAAAAAGGATGAAGTCTGA-----
 BnTT18-4 (1028) TTAGGAACAAGCAAGAGGAGTTGGTAACTGAGAAAAAGGATGAAGTCTGA-----
 BnTT18-5 (1028) TTAGGAACAAGCAAGAGGAGTTGGTAACTGAGAAAAAGGATGAAGTCTGA-----
 BnTT18-6 (1028) TTAGGAACAAGCAAGAGGAGTTGGTAACTGAGAAAAAGGATGAAGTCTAA-----
 BrTT18-1 (1028) TTAGGAACAAGCAAGAGGAGTTGGTAACTGAGAAAAAGGATGAAGTCTGA-----
 BrTT18-2 (1045) TTAGGAACAAGCAAGAGGAGTTGGTAACTGAGAAAAAGGATGAAGTCTGAGTCTGTGAAA
 BrTT18-3 (1045) TTAGGAACAAGCAAGAGGAGTTGGTAACTGAGAAAAAGGATGAAGTCTGAGTCTGTGAAA
 BoTT18 (1052) TCAGGAATGAGCAAGAGGAGTTGGTAACTGAGAAAAAGGATGAAGTCTGAGTCTATATAT
 BjTT18 (1141) TTAGGAACAAGCAAGAGGAGTTGGTAACTGAGAAAAAGGATGAAGTCTGAGTCTGAAACT

 AtTT18 (1072) -----
 BnTT18-1 (1078) -----
 BnTT18-2 (1078) -----
 BnTT18-3 (1078) -----
 BnTT18-4 (1078) -----
 BnTT18-5 (1078) -----
 BnTT18-6 (1078) -----
 BrTT18-1 (1078) -----
 BrTT18-2 (1105) CTCTATGTTTGAGC-----
 BrTT18-3 (1105) CTCTATGTTTGAGC-----
 BoTT18 (1112) GTCTGTGAAACTCTATGTTTGAGCTTCTCTTTTATCTTATGTTTGTGATTTTATCTGTCT
 BjTT18 (1201) CTATGTTTGAGTTTATCTTTTATCTAATGTTTGTGATTTTATCTTGTCTTTGATGTGTG

 AtTT18 (1072) -----
 BnTT18-1 (1078) -----
 BnTT18-2 (1078) -----
 BnTT18-3 (1078) -----
 BnTT18-4 (1078) -----
 BnTT18-5 (1078) -----
 BnTT18-6 (1078) -----

BrTT18-1 (1078) -----
 BrTT18-2 (1119) -----
 BrTT18-3 (1119) -----
 BoTT18 (1172) TTTGATGTGTGTCTTATTAAGATTGTGAAGACATATTTCTATGGATTGTGTCAATTGTGA
 BjTT18 (1261) CTTATTAAGATTGTGAAGACATATTTCTATGGATTGTGTCAATTGTGAATATGTTAAAAAA

 AtTT18 (1072) -----
 BnTT18-1 (1078) -----
 BnTT18-2 (1078) -----
 BnTT18-3 (1078) -----
 BnTT18-4 (1078) -----
 BnTT18-5 (1078) -----
 BnTT18-6 (1078) -----
 BrTT18-1 (1078) -----
 BrTT18-2 (1119) -----
 BrTT18-3 (1119) -----
 BoTT18 (1232) TACGTTAAAGAATTATATGATTTGTAACAAAGTAAGCGTTAGAAGAAATGAGTAGAACGA
 BjTT18 (1321) AATTGTATGATTTGTAACAAAGTAAGCGTTAGAAAAAAAAAAAAAAAAAAAAAAAAA---

 AtTT18 (1072) -----
 BnTT18-1 (1078) -----
 BnTT18-2 (1078) -----
 BnTT18-3 (1078) -----
 BnTT18-4 (1078) -----
 BnTT18-5 (1078) -----
 BnTT18-6 (1078) -----
 BrTT18-1 (1078) -----
 BrTT18-2 (1119) -----
 BrTT18-3 (1119) -----
 BoTT18 (1292) GATATGCTCTATGAACCACATGTGTATTAAGAAGTTGAGAGTGTTCAGATTTAAAAAAA
 BjTT18 (1378) -----

 AtTT18 (1072) -----
 BnTT18-1 (1078) -----
 BnTT18-2 (1078) -----
 BnTT18-3 (1078) -----
 BnTT18-4 (1078) -----
 BnTT18-5 (1078) -----
 BnTT18-6 (1078) -----
 BrTT18-1 (1078) -----
 BrTT18-2 (1119) -----
 BrTT18-3 (1119) -----
 BoTT18 (1352) AAAAAAAAAA
 BjTT18 (1378) -----

9. BnTT12

AtTT12 (1) -----
 BnTT12A (1) -----AATTCACGAATTGTCTATAACTAACAGAAGA
 BnTT12B (1) -----AATTCACGAATTGTCTATAACTAACAGAAGA
 BrTT12 (1) -----
 BoTT12-1 (1) AAATAAACCAAAACAAACGTTAGTAATATAATTCACGAATTGTCTATAACTAACAGAAGA
 BoTT12-2 (1) -----

 AtTT12 (1) -----ATGAGCTCCACAGAGACATACGAGCCGTTA
 BnTT12A (32) GAAAAAAAAAAAAAAAAAAGAGGACCATGAGCTCCACAGAGACATACGAGCCGCTA
 BnTT12B (32) GG-----AAAAAAAAGGAACCATGAGCTCCACGGAGACATACGAGCCGTTA
 BrTT12 (1) -----ATGAGCTCCACAGAGACATACGAGCCGCTA
 BoTT12-1 (61) G-----AAAAAAAAGGGACCATGAGCTCCACAGAGACATACGAGCCGTTA
 BoTT12-2 (1) -----ATGAGCTCCACAGAGACATACGAGCCGTTA

 AtTT12 (31) TTGACACGACTCCACTCGGATTCTCAGATAACTGAACGGTCTTCGCCAGAGATAGAGGAG
 BnTT12A (92) TTGACACGCTCCACTCAGACTCGCAGATCACCGAACGTTCTTCACCGGAGATAGAAGAG
 BnTT12B (80) TTGACACGCTCCACTCAGATTCTCAGATCACCGAACGTTCTTCACCGGAGATAGAAGAG

BrTT12 (31) TTGAGACGGCTCCACTCAGACTCGCAGATCACCGAACGTTCTTCACCGGAGATAGAAGAG
 BoTT12-1 (108) TTGAGACGGCTCCACTCAGAATCGCAGATCACCGAACGTTCTTCACCGGAGATAGAAGAG
 BoTT12-2 (31) TTGAGACGGCTCCACTCAGAATCGCAGATCACCGAACGTTCTTCACCGGAGATAGAAGAG

AtTT12 (91) TTTCTCGGCCGTGGTGGATCCACAGTGACACCACGGTGGTGGCTAAAGCTGGCAGTGTGG
 BnTT12A (152) TTTCTCGGCCGTGGTGGATCCACAGTGACACCACGGTGGTGGCTAAAGCTGTTTGTGTGG
 BnTT12B (140) TTTCTCGGCCGTGGTAGATCCACGGTGGTGGATCCACAGTGACACCACGGTGGTGGCTAAAGCTGTTTGTGTGG
 BrTT12 (91) TTTCTCGGCCGTGGTGGATCCACAGTGACACCACGGTGGTGGCTAAAGCTGTTTGTGTGG
 BoTT12-1 (168) TTTCTCGGCCGTGGTAGATCCACGGTGGTGGATCCACAGTGACACCACGGTGGTGGCTAAAGCTGTTTGTGTGG
 BoTT12-2 (91) TTTCTCGGCCGTGGTAGATCCACGGTGGTGGATCCACAGTGACACCACGGTGGTGGCTAAAGCTGTTTGTGTGG

AtTT12 (151) GAGTCAAAGCTTCTATGGACACTCTCTGGAGCCTCTATAGTGGTCTCTGTTCTGAATTAC
 BnTT12A (212) GAGTCAAAGCTTCTATGGAAAGCTCTCTGGAGCCTCTATTGTCTGTCTGTGCTGAACTAC
 BnTT12B (200) GAGTCAAAGCTTCTATGGAAAGCTCTCTGGAGCCTCTATTGTCTGTCTGTGCTGAACTAC
 BrTT12 (151) GAGTCAAAGCTTCTATGGAAAGCTCTCTGGAGCCTCTATTGTCTGTCTGTGCTGAACTAC
 BoTT12-1 (228) GAGTCAAAGCTTCTATGGAAAGCTCTCTGGAGCCTCTATTGTCTGTCTGTGCTGAACTAC
 BoTT12-2 (151) GAGTCAAAGCTTCTATGGAAAGCTCTCTGGAGCCTCTATTGTCTGTCTGTGCTGAACTAC

AtTT12 (211) ATGCTCAGCTTCGTACCCGTATGTTACCCGGTCACTCTCGGTTCTCTTTCAGCTCGCCGGC
 BnTT12A (272) ATGCTCAGCTTCGTACCCGTAATGTTACCCGGCCATCTTGGTTCTCTTTCAGCTCGCCGGC
 BnTT12B (260) ATGCTCAGCTTCGTACCCGTAATGTTACCCGGCCATCTTGGTTCTCTTTCAGCTCGCTGGC
 BrTT12 (211) ATGCTCAGCTTCGTACCCGTAATGTTACCCGGCCATCTTGGTTCTCTTTCAGCTCGCCGGC
 BoTT12-1 (288) ATGCTCAGCTTCGTACCCGTAATGTTACCCGGCCATCTTGGTTCTCTTTCAGCTCGCTGGC
 BoTT12-2 (211) ATGCTCAGCTTCGTACCCGTAATGTTACCCGGCCATCTTGGTTCTCTTTCAGCTCGCTGGC

AtTT12 (271) GCTTCCATCGCCACCGTCGGAATCCAAGGCCTAGCTTACGGTATCATGTTAGGAATGGCG
 BnTT12A (332) GCTTCCATTGCCACCGTCGGTATCCAAGGCCTCGCTTACGGTATCATGTTGGGAATGGCG
 BnTT12B (320) GCTTCCATCGCTACCGTCGGCATCCAAGGCCTCGCTTACGGTATCATGTTGGGAATGGCG
 BrTT12 (271) GCTTCCATTGCCACCGTCGGTATCCAAGGCCTCGCTTACGGTATCATGTTGGGAATGGCG
 BoTT12-1 (348) GCTTCCATCGCTACCGTCGGCATCCAAGGCCTCGCTTACGGTATCATGTTGGGAATGGCG
 BoTT12-2 (271) GCTTCCATCGCTACCGTCGGCATCCAAGGCCTCGCTTACGGTATCATGTTGGGAATGGCG

AtTT12 (331) AGCGCGGTCCAAACAGTGTGTGGTCAAGCGTACGGAGCGGAGACAGTACTCATCAATGGGA
 BnTT12A (392) AGCGCGGTACAGACAGTATGTGGTCAAGCGTACGGCGCAAGACAGTACTCATCAATGGGA
 BnTT12B (380) AGCGCGGTTCAGACAGTGTGTGGTCAAGCGTACGGCGCGGAGACAGTATTTCATCAATGGGA
 BrTT12 (331) AGCGCGGTACAGACAGTGTGTGGTCAAGCGTACGGCGCAAGACAGTACTCATCAATGGGA
 BoTT12-1 (408) AGCGCGGTCCAGACAGTGTGTGGTCAAGCGTACGGCGCGGAGACAGTATTTCATCAATGGGA
 BoTT12-2 (331) AGCGCGGTCCAGACAGTGTGTGGTCAAGCGTACGGCGCGGAGACAGTATTTCATCAATGGGA

AtTT12 (391) ATAATCTGCCAACGAGCCATGGTCTTGCACCTTGCAGCTGCAGTCTTCCTCACGTTCCCTC
 BnTT12A (452) ATAATCTGCCAACGAGCCATGGTCTTGCACCTCGCAGCTGCAGTCTTCCTCACGTTCCCTC
 BnTT12B (440) ATAATCTGCCAACGAGCCATGGTCTTGCACCTCGCAGCTGCAGTCTTCCTCACGTTCCCTC
 BrTT12 (391) ATAATCTGCCAACGAGCCATGGTCTTGCACCTCGCAGCTGCAGTCTTCCTCACGTTCCCTC
 BoTT12-1 (468) ATAATCTGCCAACGAGCCATGGTCTTGCACCTCGCAGCTGCAGTCTTCCTCACGTTCCCTC
 BoTT12-2 (391) ATAATCTGCCAACGAGCCATGGTCTTGCACCTCGCAGCTGCAGTCTTCCTCACGTTCCCTC

AtTT12 (451) TACTGGTACTCGGGTCCAATCCTTAAACAATGGGCAATCCGTAGCCATAGCACACGAG
 BnTT12A (512) TACTGGTACTCTGGTCCATTCTAAAGGCAATGGGCAAAACCGTAGCCATAGCACACGAG
 BnTT12B (500) TACTGGTACTCTGGTCCATTCTAAAGGCAATGGGCAAAACCGTAGCCATAGCACACGAG
 BrTT12 (451) TACTGGTACTCTGGTCCATTCTAAAGGCAATGGGCAAAACCGTAGCCATAGCACACGAG
 BoTT12-1 (528) TACTGGTACTCTGGTCCATTCTAAAGGCAATGGGCAAAACCGTAGCCATAGCACACGAG
 BoTT12-2 (451) TACTGGTACTCTGGTCCATTCTAAAGGCAATGGGCAAAACCGTAGCCATAGCACACGAG

AtTT12 (511) GGTCAGATCTTTGCACGTGGAATGATTCACAAATTTACGCATTTGCCCTCGCTTGCCCG
 BnTT12A (572) GGTCAGGTCTTTGCACGTGGGATGATTCCTCAGATATACGCCTTCGCTCTCGCTTGCCCT
 BnTT12B (560) GGTCAGGTCTTTGCACGTGGGATGATTCCTCAGATATACGCCTTCGCTCTCGCTTGCCCT
 BrTT12 (511) GGTCAGGTCTTTGCACGTGGGATGATTCCTCAGATATACGCCTTCGCTCTCGCTTGCCCT
 BoTT12-1 (588) GGTCAGGTCTTTGCACGTGGGATGATTCCTCAGATATACGCCTTCGCTCTCGCTTGCCCT
 BoTT12-2 (511) GGTCAGGTCTTTGCACGTGGGATGATTCCTCAGATATACGCCTTCGCTCTCGCTTGCCCT

AtTT12 (571) ATGCAGAGGTTTCTTACGGCTCAGAACATAGTGAACCCTTTGGCTTACATGTCTTAGGA
 BnTT12A (632) ATGCAGAGGTTTCTTACGGCTCAGAACATAGTGAACCCTTTGGCTTACATGTCTTAGGA
 BnTT12B (620) ATGCAGAGGTTTCTTACGGCTCAGAACATAGTGAACCCTTTGGCTTACATGTCTTAGGA

BrTT12 (571) ATGCAGAGGTTCCCTCCAGGCTCAGAACATAGTCAACCCTTTGGCTTACATGTCTTTAGGA
 BoTT12-1 (648) ATGCAGAGGTTCCCTCCAGGCTCAGAACATAGTAAACCCTTTGGCTTACATGTCTTTAGGA
 BoTT12-2 (571) ATGCAGAGGTTCCCTCCAGGCTCAGAACATAGTAAACCCTTTGGCTTACATGTCTTTAGGA

AtTT12 (631) GTTTTCTTGCTCCACACGTTACTCACGTGGCTGGTTACCAACGTGCTGGATTTCCGGCTTG
 BnTT12A (692) GTTTTCTTGCTCCACACGTTACTCACGTGGCTTGTAACAAACGTGTTGGATTTTGGCTTG
 BnTT12B (680) GTTTTCTTGCTCCACACGTTACTCACGTGGCTTGTAACCAACGTGTTGGATTTTGGCTTG
 BrTT12 (631) GTTTTCTTGCTCCACACGTTACTCACGTGGCTTGTAACCAACGTGTTGGATTTTGGCTTG
 BoTT12-1 (708) GTTTTCTTGCTCCACACGTTACTCACGTGGCTTGTAACCAACGTGTTGGATTTTGGCTTG
 BoTT12-2 (631) GTTTTCTTGCTCCACACGTTACTCACGTGGCTTGTAACCAACGTGTTGGATTTTGGCTTG

AtTT12 (691) CTTGGGCGGGCTCTGATTCTCAGTTTCTCATGGTGGCTGCTAGTAGCTGTGAATGGTATG
 BnTT12A (752) CTCGGTGCGGCTTTGATTCTGAGTCTCTCGTGGTGGCTGCTCGCTGCTGTGAACGGTTTG
 BnTT12B (740) CTGGGTGCGGCTTTGATTCTAAGTTTCTCGTGGTGGCTGCTCGCTGCTGTGAACGGTTTG
 BrTT12 (691) CTCGGTGCGGCTTTGATTCTGAGTTTCTCGTGGTGGCTGCTCGCTGCTGTGAACGGTTTG
 BoTT12-1 (768) CTCGGTGCGGCTTTGATTCTGAGCCTCTCGTGGTGGCTGCTTGGCGCTGTGAACGGTTTG
 BoTT12-2 (691) CTCGGTGCGGCTTTGATTCTGAGCCTCTCGTGGTGGCTGCTTGGCGCTGTGAACGGTTTG

AtTT12 (751) TATATCTTGATGAGCCCGAATTGTAGGGAGACTGGACAGGGTTTTCAACGAGGGCATT
 BnTT12A (812) TATATCTTGATGAGCCCGAGTTGTAGGGAGACTTGACCGGGTTTTCAAGTGGCTCTT
 BnTT12B (800) TATATCTTGATGAGCCCGAATTGTAGGGAGACTGGACCGGGTTTTCAAGTGGCTCTT
 BrTT12 (751) TATATCTTGATGAGCCCGAATTGTAGGGAGACTTGACCGGGTTTTCAAGTGGCTCTT
 BoTT12-1 (828) TATATCTTGATGAGCCCGAATTGTAGGGAGACTTGACCGGGTTTTCAAGTGGCTCTT
 BoTT12-2 (751) TATATCTTGATGAGCCCGAATTGTAGGGAGACTTGACCGGGTTTTCAAGTGGCTCTT

AtTT12 (811) AGAGGGATATGGCCTTACTTGAAGCTCACGGTAGCTTCAGCAGTATGCTATGTTTGGAG
 BnTT12A (872) ACAGGGATTTGGCCTTACTTGAAGCTCACGGTAGCTTCAGCAGTATGCTATGTTTGGAG
 BnTT12B (860) ACAGGGATTTGGCCTTACTTGAAGCTCACGGTAGCTTCAGCAGTATGCTATGTTTGGAG
 BrTT12 (811) ACAGGGATTTGGCCTTACTTGAAGCTCACGGTAGCTTCAGCAGTATGCTATGTTTGGAG
 BoTT12-1 (888) ACAGGGATTTGGCCTTACTTGAAGCTCACGGTAGCTTCAGCAGTATGCTATGTTTGGAG
 BoTT12-2 (811) ACAGGGATTTGGCCTTACTTGAAGCTCACGGTAGCTTCAGCAGTATGCTATGTTTGGAG

AtTT12 (871) ATATGGTACAACCAAGGGCTAGTGATATCTCTGGTTTACTCTCCAATCCGACAATTTCT
 BnTT12A (932) ATATGGTACAACCAAGGGCTAGTGATATCTCTGGTTTACTCACCATCCGACAATTTCC
 BnTT12B (920) ATATGGTACAACCAAGGGCTAGTGATATCTCTGGTTTACTCACCATCCGACAATTTCC
 BrTT12 (871) ATATGGTACAACCAAGGGCTAGTGATATCTCTGGTTTACTCACCATCCGACAATTTCC
 BoTT12-1 (948) ATATGGTACAACCAAGGGCTAGTGATATCTCTGGTTTACTCACCATCCGACAATTTCC
 BoTT12-2 (871) ATATGGTACAACCAAGGGCTAGTGATATCTCTGGTTTACTCACCATCCGACAATTTCC

AtTT12 (931) CTAGACGCTATTTTCGATTTGCATGTATTACTTGAATGGGATATGCAGTTCATGCTTGGT
 BnTT12A (992) **CTAGACGC**CATTTTCGATTTGTATGTATTACTTGAATGGGATATGCAGTTCATGCTTGGT
 BnTT12B (980) TTAGATGCAATTTTCGATTTGCATGTATTACTTGAATGGGATATGCAGTTCATGCTTGGT
 BrTT12 (931) TTAGATGCAATTTTCGATTTGCATGTATTACTTGAATGGGATATGCAGTTCATGCTTGGT
 BoTT12-1 (1008) TTAGATGCAATTTTCGATTTGCATGTATTACTTGAATGGGATATGCAGTTCATGCTTGGT
 BoTT12-2 (931) TTAGATGCAATTTTCGATTTGCATGTATTACTTGAATGGGATATGCAGTTCATGCTTGGT

AtTT12 (991) CTAAGTGCAGCAATCAGTGTGCGAGTGAGCAATGAGCTAGGAGCGGAAATCCACGAGTG
 BnTT12A (1052) CTAAGTGCAGCAATCAGTGTCCGTGTGAGCAACGAGCTAGGAGCTGGAAATCCACGAGTG
 BnTT12B (1040) TTAAGTGCAGCAATCAGTGTCCGTGTGAGCAACGAGCTAGGAGCTGGAAATCCACGAGTG
 BrTT12 (991) CTAAGTGCAGCAATCAGTGTCCGTGTGAGCAACGAGCTAGGAGCTGGAAATCCACGAGTG
 BoTT12-1 (1068) TTAAGTGCAGCAATCAGTGTCCGTGTGAGCAACGAGCTAGGAGCTGGAAATCCACGAGTG
 BoTT12-2 (991) TTAAGTGCAGCAATCAGTGTCCGTGTGAGCAACGAGCTAGGAGCTGGAAATCCACGAGTG

AtTT12 (1051) GCTATGTTATCAGTAGTGGTTGTCAACATCACGACTGTTCTCATCAGCTCAGTTCTCTGT
 BnTT12A (1112) **GCTAAGTTATCAGTGGT**GGTGGTGAACATCACGACTTCTCATTAGCTTACTCCTCTGT
 BnTT12B (1100) GCTAAGTTATCAGTGGTGGTGGTGAACATCACGACTTCTCATTAGCTTACTCCTCTGT
 BrTT12 (1051) GCTAAGTTATCAGTGGTGGTGGTGAACATCACGACTTCTCATTAGCTTACTCCTCTGT
 BoTT12-1 (1128) GCTAAGTTATCAGTGGTGGTGGTGAACATCACGACTTCTCATTAGCTTACTCCTCTGT
 BoTT12-2 (1051) GCTAAGTTATCAGTGGTGGTGGTGAACATCACGACTTCTCATTAGCTTACTCCTCTGT

AtTT12 (1111) GTCATCGTGCTTGTGTTCCGCTTGGCCTTAGCAAAGCCTTCCACGCGATGCAGAAGTT
 BnTT12A (1172) ATCGTGGTGCTTGTGTTCCGCTGTCGGTCTAAGCAAAGCCTTCCACGCGACAAAGAAGTT
 BnTT12B (1160) GTCGTTGGTGCTCGTGTCCGCTGTCGGCTAAGCAAAGCCTTCCACGCGACAAAGAAGTT

BrTT12 (1111) ATCGTGGTGCTTGTGTTCCGTGTCGGTCTAAGCAAAGCCTTCACCAGCGACAAAGAAGTT
 BoTT12-1 (1188) GTCGTGGTGCTCGTGTTCCTGTCGGCCTAAGCAAAGCCTTCACCAGCGACAAAGAAGTT
 BoTT12-2 (1111) GTCGTGGTGCTCGTGTTCCTGTCGGCCTAAGCAAAGCCTTCACCAGCGACAAAGAAGTT

AtTT12 (1171) ATAGCAGCCGTCCTGACCTCTTTCCCTCTCTCGCCGTTTCATTTTCTTAAACGGAATC
 BnTT12A (1232) ATAGTGGCAGTCTCTGACCTCTTTCCCTCTCCTCGCAGTTTCGATTTTTTTAAATGGAATC
 BnTT12B (1220) ATAGTGGCAGTCTCTGACCTCTTTCCCTCTCCTCGCAGTTTCGATTTTTTTAAATGGAATC
 BrTT12 (1171) ATAGTGGCAGTCTCTGACCTCTTTCCCTCTCCTCGCAGTTTCGATTTTTTTAAATGGAATC
 BoTT12-1 (1248) ATAGTGGCAGTCTCTGACCTATTTCCCTCTACTCGCAGTTTCATTTTTTTAAATGGAATC
 BoTT12-2 (1171) ATAGTGGCAGTCTCTGACCTATTTCCCTCTACTCGCAGTTTCATTTTTTTAAATGGAATC

AtTT12 (1231) CAGCAATTCTCTCTGGGGTTGCTATTGGGAGTGGGTGGCAAGCAGTGGTGGCTTATGTG
 BnTT12A (1292) CAACCTATTCTCTCTGGGGTTGCTATTGGAAGTGGGTGGCAAGCAGTGGTGGCTTATGTG
 BnTT12B (1280) CAACCTATTCTCTCTGGGGTTGCTATTGGAAGTGGATGGCAAGCAGTGGTGGCTTATGTG
 BrTT12 (1231) CAACCTATTCTCTCTGGGGTTGCTATTGGAAGTGGGTGGCAAGCAGTGGTGGCTTATGTG
 BoTT12-1 (1308) CAACCTATTCTCTCTGGGGTTGCTATTGGAAGTGGATGGCAAGCAGTGGTGGCTTATGTG
 BoTT12-2 (1231) CAACCTATTCTCTCTGGGGTTGCTATTGGAAGTGGATGGCAAGCAGTGGTGGCTTATGTG

AtTT12 (1291) AATCTTGTTACGTACTATATGTCATTGGTCTTCCCTATTGGCTGTGTCCTTGGCTTCAAACCC
 BnTT12A (1352) AATCTTGTTACTTACTATATGTCATTGGTCTTCCCTATTGGCTGTGTCCTTGGCTTCAAACCA
 BnTT12B (1340) AATCTTGTTACTTACTATATGTCATTGGTCTTCCCTATTGGCTGTGTCCTTGGCTTCAAACCA
 BrTT12 (1291) AATCTTGTTACTTACTATATGTCATTGGTCTTCCCTATTGGCTGTGTCCTTGGCTTCAAACCA
 BoTT12-1 (1368) AATCTTGTTACTTACTATATGTCATTGGTCTTCCCTATTGGCTGTGTCCTTGGCTTCAAACCA
 BoTT12-2 (1291) AATCTTGTTACTTACTATATGTCATTGGTCTTCCCTATTGGCTGTGTCCTTGGCTTCAAACCA

AtTT12 (1351) AGTCTTGGAGTTGCTGGGATCTGGTGGGGATGATTGCAGGAGTCATACTTCAAACCCTA
 BnTT12A (1412) AGTCTTGGAGTTGCTGGTATCTGGTGGGAATGATTGCAGGAGTTATACTTCAAGCATT
 BnTT12B (1400) AGTCTTGGAGTTGCTGGGATCTGGTGGGAATGATTGCAGGAGTCATACTTCAAACCATA
 BrTT12 (1351) AGTCTTGGAGTTGCTGGGATCTGGTGGGAATGATTGCAGGAGTCATACTTCAAACCATA
 BoTT12-1 (1428) AGTCTTGGAGTTGCTGGGATCTGGTGGGAATGATTGCAGGAGTCATACTTCAAACCATA
 BoTT12-2 (1351) AGTCTTGGAGTTGCTGGGATCTGGTGGGAATGATTGCAGGAGTCATACTTCAAACCATA

AtTT12 (1411) ACTTTGATTGTTCTTACACTTAAACTAAATGGACTTCCGAGGTAGAAAATGCAGCTCAT
 BnTT12A (1472) ACTTTGATTGTTCTTACACTTAGAACTAACTGGACTTCCGAGGTGAAAATGCAGCTCAT
 BnTT12B (1460) ACTTTGATTGTTCTTACACTTAGAACTAACTGGACTTCCGAGGTGAAAATGCAGCTCAT
 BrTT12 (1411) ACTTTGATTGTTCTTACACTTAGAACTAACTGGACTTCCGAGGTGAAAATGCAGCTCAT
 BoTT12-1 (1488) ACTTTGATTGTTCTTACACTTAGAACTAACTGGACTTCCGAGGTGAAAATGCAGCTCAT
 BoTT12-2 (1411) ACTTTGATTGTTCTTACACTTAGAACTAACTGGACTTCCGAGGTGAAAATGCAGCTCAT

AtTT12 (1471) AGAGTAAAGACTTCCGCAACTGAGAAATCAAGAGATGGCTAACCGAGGTGTTTAA-----
 BnTT12A (1532) AGGTGAAAGCTTCAGCAAATGAGAGTCAAGAGATGGCTACCGAAGGAGTCTAGAAATAA
 BnTT12B (1520) AGGTGAAAGCTTCCGCAAAATGAGAGTCAAGAGATGGCTACCGAAGGAGTCTA-AAATAA
 BrTT12 (1471) AGGTGAAAGCTTCAGCAAATGAGAGTCAAGAGATGGCCACCGAAGGAGTTTAA-----
 BoTT12-1 (1548) AGGTGAAAGCTTCCGCAAAATGAGAGTCAAGAGATGGCTACCGAAGGAGTCTA-AAATAA
 BoTT12-2 (1471) AGGTGAAAGCTTCCGCAAAATGAGAGTCAAGAGATGGCTACCGAAGGAGTCTA-A-----

AtTT12 (1525) -----
 BnTT12A (1592) CAGCAACATCAACTATGTTATTTTCTCCTCTGTTTTGGTGGCAAGAGCTATGAAATAAT
 BnTT12B (1579) CAGCAACATCAACTATGTTATTTTCTCCTCTGC-----AAAGCTATGAAATAAT
 BrTT12 (1525) -----
 BoTT12-1 (1607) CAGCAACATCAACTATGTTATTTTCTCCTCTGC-----AAAGCTATGAAATAAT
 BoTT12-2 (1525) -----

AtTT12 (1525) -----
 BnTT12A (1652) AATCTTTGTCCTTAGTATTTCAGTACAACATTTCTTTTGTTAATAATAATGGACAAAC
 BnTT12B (1629) AATCTTTCGTCTCTTAGTATTTCAGTACAACAATTTCTTTTGTTAATAATAATGGACAAAC
 BrTT12 (1525) -----
 BoTT12-1 (1657) AATCTTTCGTCTCTTAGTATTTCAGTACAACAATTTCTTTTGTTAATAATAATGGACAAAC
 BoTT12-2 (1525) -----

AtTT12 (1525) -----
 BnTT12A (1712) TACAATGTCCCTTCTACAAAATCTTATTTTCGGCTTTAAAAAAAAAAAAAAAAAAAAA
 BnTT12B (1689) TACAATAT-----AATATCTCTTCTACAAAAAAAAAAAAAAAAAAAAA-----

BrTT12 (1525) -----
BoTT12-1 (1717) TACAATAT-----AATATCCTCTTCTACAAAAAAAAAAAAAAAAAAAAAAAA-----
BoTT12-2 (1525) -----

10. BrTT10

AtTT10 (1) ATGTCACATTCCCTTCT-TCAATTTATTCTTAATCTCTCTTTTCCCTCTACAACAATTGCAT
BrTT10-1 (1) ATGTCACATCCCTTGT-TCATTTACTTTCTAATCTCTCTTTTCCCTCTACAGAAGTTGCAC
BrTT10-2 (1) ATGCCACATTCTTTCTCTCATT-CTTCTTAATCTCTCTTTTCCCTTTACACCAAATGTAT
BoTT10 (1) ATGTCACATCCTTTGT-TCATTTACTTTCTAATCTCTCTTTTCCCTCTACAGTAGTTGCAC

AtTT10 (60) TGCGCATCACTATACATTACCGGTTAGGGAAGTCCATATACGAAACTGTGTAGCACGAA
BrTT10-1 (60) TGCACATCGCCACACATTACCGGTTAAGGAAGTCCATATAAGAAACTGTGTAGCACGAA
BrTT10-2 (60) TGCGCATCGCTACACTTTACCGGTTAAGGAAGTCCATATAACAAATTTGTGTAGTACGAA
BoTT10 (60) TGCACATCGCTACACATTACCGGTTAAGGAAGTCCATATAAGAAACTGTGTAGCACGAA

AtTT10 (120) GCGGATTTAACCCTTAATAGTCAGTTTCTGGACCGATTATAAAGGTTACAAAAGGAGA
BrTT10-1 (120) GAAGATTTAACCAGTTAATGGTCGGTTTCTGGACAACTTTAAAGGTTTACAAAAGGAGA
BrTT10-2 (120) GAAGATTTCTGACCGTTAACTCTCAGTTTCTGGACCGATTTTAAAGGTTTACAAAAGGAGA
BoTT10 (120) GAAGATTTAACCAGTTAATGGTCAGTTTCTGGACAACTCTAAAGGTTTACAAAAGGAGA

AtTT10 (180) CACTATTTATGTTAACGTTCAAACCGAGCTAGTGAAAAATCACAATGCATTGGCATGG
BrTT10-1 (180) CACCATTTACGTTAACGTTCTGTAACCGAGCTAGTGAAAAATCACCATGCATTGGCATGG
BrTT10-2 (180) CACCATTTACGTTAACGTTCTGTAACCGAGCTAGTGAAAAATCACAATGCATTGGCATGG
BoTT10 (180) CACCATTTACGTTAACGTTCTGTAACCGAGCTAGTGAAAAATCACCATGCATTGGCATGG

AtTT10 (240) TGTAGAGCAGCCGAGAAATCCGTTGGTCAGATGGTCTGAATACATCACACAATGCCCGAT
BrTT10-1 (240) TGTAGAGCAGCCGAGAAACCCATGGTCAGATGGACCAGAATACATCACACAATGCCCAAT
BrTT10-2 (240) TGTAGAGCAGCCGGGAAACCCGTTGGTCAGATGGACCAGAATACATCACACAATGCCCGAT
BoTT10 (240) TGTAGAGCAGCCGAGAAACCCATGGTCAGATGGACCAGAATACATCACACAATGCCCAAT

AtTT10 (300) TCGACCCGGGTCAGATTTTGTGTAACAAGTCATATTTCCATCGAAGACACGACTGTTTG
BrTT10-1 (300) TCGACCTGGGTCGACTTTATTTATGAAGTCATATTTCCACCGAAGACGACTGTTTG
BrTT10-2 (300) TCGACCCGGAAGTGATTTTATGTATGAAGTCATCTTTCCATCGAAGACGCAACTGTTTG
BoTT10 (300) TCGACCTGGGTCGATTTTCATGTATGAAGTCATATTTCCACCGAAGACACGACTGTTTG

AtTT10 (360) GTGGCAGCGCATAGCTCTTGGACACGTGCAACTGTACACGGTCTTATTTTGTATATCC
BrTT10-1 (360) GTGGCATGCTCATAGCTCTTGGACCGGTGCCACTGTACACGGTCTTATTTTGTGTATCC
BrTT10-2 (360) GTGGCATGCGCATAGCTCTTGGACACGAGCCACTGTACATGGTCTTATATTCATATACCC
BoTT10 (360) GTGGCATGCTCATAGCTCTTGGACCGGTGCTACCGTACACGGTCTTATTTTGTGTATCC

AtTT10 (420) TCGCCCCCGCAAATCCTCCCTTTTCCAAAAGGCAGACCATGAAGTCCCATATAATTTGGG
BrTT10-1 (420) TCGCCCCCGAAATCCTCCCTTTTCCAAAATCGGATCACGAAGTCCCTTTGATTTTGG
BrTT10-2 (420) TCGCCCCGGGACATTCCTCCCTTTTCCAAAAGCCGACACGAAATCCCTTAGTCTTGG
BoTT10 (420) TCGCCCCCGAAATCCTCCCTTTTCCAAAAGCTGATCATGAAGTCCCTTTGATTTTGG

AtTT10 (480) TGAGTGGTGAAGAGGATGTGAGAGAGGTCTGTTGAGGAGTTCGTAAGGACAGGAGGGC
BrTT10-1 (480) AGAGTGGTGAAGAAGGATGTGAGAGAAAGTAGTGGAGCTGTTTCATGAGGACAGGAGGTGA
BrTT10-2 (480) AGAGTGGTGAAGGAAGATGTGAGAGAGGTAGTAGAGCAGTTCATAAGGACCGGAGCTGA
BoTT10 (480) AGAGTGGTGAAGAAGGATGTGAGGGAAGTAGTGGAACTGTTTCAGTGGACAGGAGGTGA

AtTT10 (540) TCCTAATGTGTCCGATGCTTTGACCATCAATGGACATCCTGGTTTCTTGTATCCTTGCTC
BrTT10-1 (540) CCCAAATGTGTCCGATGCTTTGACCATCAATGGACATCCTGGTTTCTTGTATCCTTGCTC
BrTT10-2 (540) TCCTAATGTGTCCGATGCTTTGACTATCAATGGACATCCTGGTTTCTTGTATCCTTGCTC
BoTT10 (540) CCCAAATGTGTCCGATGCTTTGACCATCAATGGACATCCTGGTTTCTTGTATCCTTGCTC

AtTT10 (600) TAAATCAGATACATTTTCATCTCACGGTAGAGAAGGGGAAAACCTACCGCATTCCGATGGT
BrTT10-1 (600) TAAATCAGATACATTTCAAGCTCATGGTGGAGAAAAGCAAACCTATCGCATTCCGATGGT
BrTT10-2 (600) TAAATCAGATACATTTTCGAGCTCACGGTAGAGAAGGGCAAACCTATCGCATTCCGATGGT
BoTT10 (600) TAAATCAGATACATTTTCGAGTTCATGGTGGAGAAAAGCAAACCTATCGCATTCCGATGGT

AtTT10 (660) AAATGCCGCAATGAACCTACCTCTCTTTTTCGCAATCGGAAACCACAGCCTCACCGTAGT
BrTT10-1 (660) AAACGCCGCACTGAACCTAATCTCTTCTTTCGCAATCGGAAACACAACTCACCGTAGT
BrTT10-2 (660) AAACGCCGCGATGAACCTAATCTCTTCTTCTCAATCGGAAACACAGCCTCACCGTAGT

BoTT10 (660) AAACGCCGAATGAACCTTAATCCTCTTCTTCGCAATCGCAAAACACAAT**CTCACCGTGGT**
 AtTT10 (720) CTCGGCCGATGGACACTACATCAAACCTATAAAAGGCTACTTATATCCTACTATATCCCCTGG
 BrTT10-1 (720) TTCCGCGATGGCCACTACACCAAACCAATAAACGCTACTTACATCACCATATCTCCAGG
 BrTT10-2 (720) **TGCCGCCGATGG**ACACTACACCAAACCTCTAAACGCTACTTACATCACCATATCTCCAGG
 BoTT10 (720) **TGCCGCCGATGG**CCACTACACCAAACCAATAAACGCTACTTACATCACCATCTCTCCAGG
 AtTT10 (780) CGAAAGACTAGACATGTTATTACACGCTGACCAAGACCCCGAACGCACTTATTACATGGC
 BrTT10-1 (780) CCAAACGCTAGACTTGTATTACACGCGGACCAAAACCCAAAAAGCACTTATTACATGGC
 BrTT10-2 (780) TCAAACGCTGGACGCTTATTACACGCGGACCAAAACCCAAAAAGCACTTATTACATGGC
 BoTT10 (780) CCAAACGCTAGACTTGTATTACACGCGGACCAAAATCCAAAAAGCACTTATTACATGGC
 AtTT10 (840) TGCCAGAGCTTACCAAAGCGG---AAATATCGATTTCAACAACCTCCACTACCATAGGAAT
 BrTT10-1 (840) CGCCAGAGCTTACCATAGCAACCCCTAACATCAACTTCAACAACCTCCACAACCTATAGGGAT
 BrTT10-2 (840) AGCCAGAGCTTACCAAGCAGCCCGGTCATCAGATTTCAACAACCTCCACAACCTATCGGGAT
 BoTT10 (840) CGCAAGAGCTTACCATAGCAACCTTAACATCAGCTTCAACAACCTCCACAACCTATCGGGAT
 AtTT10 (897) CTTAAGTTACACCTCTTCATGCAAAGCTAAAACATCATCGTTTTTTCAGGATATTACCCAAC
 BrTT10-1 (900) CTTACGTTACACCTCTTCAACT----TCA-----TCGTCTTCAAAACACTACCCAAA
 BrTT10-2 (900) CTTACGTTACATCTCTTCAAGCAACGCCAAA-----CGTCATC-----TTATCCAAG
 BoTT10 (900) CTTATGTTACAACCTCTCAAGTAAAACCAAACGTCGTCTGTCTTCAAAACGTTACCCAAA
 AtTT10 (957) CCTTCCTTTTTTACAATGACACCTCAGCAGCTTTTGGATTCTTTACCAAGATCAAATGCTT
 BrTT10-1 (948) CCTTCCTTATTACAAATGACACATCAGCAGCTTTAGATTCTTACCAGTATCAAATGCTT
 BrTT10-2 (948) CCTTCCTAATTATAATGACACGTCAGCAGCTTTCGGATTCTTTACGAACATCAAAGCTT
 BoTT10 (960) CCTTCCTTATTACAACGACAGCTCAGCAGCTTTCGCATTCTTTACCAACATCACAAGCTT
 AtTT10 (1017) ATTCCTCCGGTCAAGTTCCTGTCCAAATCTCTCGTAGGATAATCACGACGGTTTCAATAAA
 BrTT10-1 (1008) ATACTCCGGACAAGTTCCTCGTGAAGATCTCACGTAGAATAATCTCGACGGTTTCAATAAA
 BrTT10-2 (1008) ATACTCCGGACAAGTTCGAGTCAAATCTCACGTAGAATAATCTCAACGGTTTCACTAAA
 BoTT10 (1020) ATACTCCGGACAAGTTCCTCGTCAAGATCTCACGTAGAATAATCTCGACGGTTTCAATAAA
 AtTT10 (1077) TCTTCGCATGTGTCCCTCAAACCTCGTGCGAAGGTCCAAATGGGTCGAGATTAGCAGCG--
 BrTT10-1 (1068) CAACCTTATGTGTCCCAACACTTGTGTGAAGGTCCAAACGGGTCGAGACTAGCGGCG--
 BrTT10-2 (1068) TCTTCGATGTGTCCCTAAACACTCGTGCCAAAGGTCCAAACGGGTTGAGATCAGTGCGCGA
 BoTT10 (1080) CTTTCGATGTGTCCCTAAACACTCGTGGAAGGTCCAAACGGATCGAGACTAGCGGCG--
 AtTT10 (1135) -----AGTATGAACAACATATCGTTTTGTCACACCAAGTCACGTGGACATACT
 BrTT10-1 (1126) -----AGTATGAACAACATATCGTTTCGTTACACCAAGTCACGTGGACATACT
 BrTT10-2 (1128) GGTAGAGGCGGCTAGTATGAACAACATATCATTCTGTCACACCAAACCGTAGACATACT
 BoTT10 (1138) -----AGCATGAACAACATATCGTTTCGTTACACCGAGTCACGTGGACATACT
 AtTT10 (1182) AAAAGCTTATTACTATCACATTAAGGGCTTTATGGAACGCGGTTTCCGGAGTTTCCACC
 BrTT10-1 (1173) AAAAGCTTACTATATCACATTAAGGGCGTTTACGGAACGCGGTTTCCGGAGTTTCCACC
 BrTT10-2 (1188) AAAAGCTTATTACCTTACATTAAGGGCGTTTACGGAACGCGGTTTCCCTGCGTTTCCGCC
 BoTT10 (1185) AAAAGCTTACTATATCACATTAAGGGAGTTTACGGAACGCGGTTTCCAGAGTTTCCACC
 AtTT10 (1242) GTTGATTTTTAATTTACCGCAGAAAATCAGCCATTGTTTTTGGAAACTCCGAGACTCGC
 BrTT10-1 (1233) GCTGGTTTTCAACTTTACCGCGGATGATCAACCGTTGTTTTTGCAGACTCCAAGATTTGC
 BrTT10-2 (1248) TCTGGTTTTCAACTTTACCGCGGATGATCAACCGTTGATTTTTGCAGACTTCGAGACTTGC
 BoTT10 (1245) GCTCGTTTTCAACTTTACCGCGGATGATCAACCGTTGTTTTTGCAGACTCCAAGACTTGC
 AtTT10 (1302) AACCGAGGTAAAGGTGATTGAGTTCGGTCAAGTGGTTGAGCTTGTTATTCAAGGGACTAG
 BrTT10-1 (1293) TACGGAGGTGAAAATACTGAAGTTTGGGAAAGTGTGAGATTGTTCTCAAGGGACGAG
 BrTT10-2 (1308) TACGGAAGTAAAGATGATTAAGTACGGAGAAAGCGTTTGAACCGTTTTTCAAGGGACGAG
 BoTT10 (1305) TACGGAGGTGAAAATACTTAAGTTTGGGAAAGTGTGAGATTGTTCTCAAGGGACGAG
 AtTT10 (1362) TTTGGTTGGTGGTGGACTCGATCATCCTATGCATCTCCATGGTTTTAGCTTCTATGTGGT
 BrTT10-1 (1353) TTTAGTTGGTGGTGGAAATCGATCATCCCATGCATCTCCATGGTTTTAGTTTCTACGAGGT
 BrTT10-2 (1368) TTTAGTTGGTGGTGGAAATCGACCACCCATGCATTTGCATGGTTTTAGCTTCTATATTGT
 BoTT10 (1365) TTTAGTTGGTGGTGGAAATCGATCATCCCATGCATCTCCATGGTTTTAGTTTCTACATGGT
 AtTT10 (1422) TGGAGTAGGGTTCGGGAACATAACATAAGTGAAGAAGATCCGTCGTCGAGATATAATCT

BrTT10-1 (1413) TGGTGTTCGGGTTTGGTAACATAACGTAACGAAGA---TCCGTCG---AACTATAATCT
 BrTT10-2 (1428) TGGTTTTGGGTTTGGTAACATAACGTAACGAAAGA---TCCGTCGTCGAACATAATCT
 BoTT10 (1425) TGGTGTTCGGGTTTGGTAACATAACGTAACGAAGC---TCCGTCG---AACTATAACCT

 AtTT10 (1482) CTACGATCCACCGTATAAAAATACAATGACCGTGCCTAGGAATGGTTGGATCGCTATCAG
 BrTT10-1 (1467) CAAAGATCCTCCGTACATAAAACACTGCGACTGTGCCAAGAAACGGTTGGGTCGCTATCAG
 BrTT10-2 (1485) CAAAGATCCTCCGTATAGAAATACGGCGACTGTGCCAAGAAACGGTTGGATCGCTATCAG
 BoTT10 (1479) CAAAGATCCTCCGTACAAAATACTGCGACTGTGCCAAGAAACGGTTGGGTCGCTATCAG

 AtTT10 (1542) ATTCGTAGCTGATAATCCCGGGTTTGGTTCATGCACTGTCACTTGGATAGACATCAAAC
 BrTT10-1 (1527) ATTCATAGCTGATAATCCTCGGGTATGGTTCATGCACTGCCACTTTGATAGACATCTCAC
 BrTT10-2 (1545) ATTCATAGCTAACAATCCTCGGGTTTGGTTCATGCACTGTCACTTGGATAGACATCTCAC
 BoTT10 (1539) ATTCATAGCTGACAATCCTCGGGTATGGTTCATGCACTGCCACTTTGATAGACATCTCAC

 AtTT10 (1602) GTGGGGTATGAATGTTGTGTTTCATTGTTAAGAATGGTAGAGAGCCAAATCAGCAGATTCT
 BrTT10-1 (1587) GTGGGGAATGAAAGTTGTCTTCATTGTTCATGAATGGAAGAGGACTAAACCCAGCAGATTCT
 BrTT10-2 (1605) GTGGGGTATGAACGTTGTCTTCATTGTTCGAGAACGGCAGAGGAATAAACCCAGCAGATTCT
 BoTT10 (1599) GTGGGGAATGAAAGTTGTCTTCATTGTCAAGAATGGAAGAGGACTAAACCCAGCAGATTCT

 AtTT10 (1662) GCCTCCACCAGATGATTTGCCGCCTTGCTATGAATAA
 BrTT10-1 (1647) GCCTCCACCTCCTAACTTGCCCTCCTTGTTACTAA---
 BrTT10-2 (1665) GCCTCCACCGCCTGACTTGCCGCCTTGTTACTAA---
 BoTT10 (1659) GCCTCCACCTCCTGACTTGCCCTCCTTGTTACTAA---

1681

1717

11. BnUGT2

AtUGT72B1 (1) ATGGAGGAATCCAAAACACCTCACGTTGCGATCATAACCAAGTCCGGAATGGGTCATCTC
 BnUGT2 (1) ATGGAGGAATCAAAAAGCGCCTCACGTTGCGATCATTCCGAGTCTTGAATGGGTCACCTC
 BrUGT2-1 (1) -----
 BrUGT2-2 (1) ATGGAGGAATCAAAAAGCGCCTCACGTTGCGATGATACCGAGTCCGGAATGGGCCACCTC
 BrUGT2-4 (1) ATGGAAGAATCAAAAAGCGCCTCACGTTGCGATCATAACCGAGTCCAGGAATGGGTCACCTC
 BrUGT2-3 (1) ATGGAGGAATCAAAAAGTGCCTCACGTTGCGATCATTCCGAGTCCGGAATGGGTCACCTC
 BoUGT2-1 (1) ATGGAGGAATCAAAAAGCACCTCACGTCGCCATCCTCCGAGTCCGGAATGGGTCACCTC
 BoUGT2-2 (1) ATGGAGGAATCAAAAAGCGCCTCACGTTGCGATCATAACCGAGTCCAGGAATGGGTCACCTC
 BoUGT2-3 (1) ATGGAGGAATCAAAAAGCGCCTCACGTTGCGATGATACCGAGTCCGGAATGGGCCACCTC
 BoUGT2-4 (1) ATGGAGGAATCAAAAAGCGCCTCACGTTGCGATCATTCCGAGTCCGGAATGGGTCACCTC

 AtUGT72B1 (61) ATCCACTCGTCGAGTTTGCTAAACGACTCGTCCATCTTCACGGCCTCACCGTTACCTTC
 BnUGT2 (61) ATCCACTCGTGCAGTTTGCTAAACGACTCGTTCACCGCCACGGCGTAACCATAACCTTT
 BrUGT2-1 (1) -----
 BrUGT2-2 (61) ATCCATTCGTCGAGTTAGCTAAACGACTCGTCCACAACCATGGCTTCACCGTAACCTTC
 BrUGT2-4 (61) ATCCACTCGTGCAGTTTCGCTAAACGACTCGTTCACCGCCACGGCTTCTCCGTAACCTTC
 BrUGT2-3 (61) ATCCACTCGTGCAGTTTGCTAAACGACTCGTTCACCGCCACGGCGTAACCATAACCTTT
 BoUGT2-1 (61) ATCCACTCGCCAGTTTCGCTAAACAACCTCGTTCACTACCACGCCTTCTCCGTAACCTTT
 BoUGT2-2 (61) ATCCACTCGTCCAGTTTCGCTAAACGACTCGTTCACCGCCACGGCTTCTCCGTAACCTTC
 BoUGT2-3 (61) ATCCATTCGTTGAGTTAGCTAAACGACTCGTCCACAACCATGGCTTCACCGTAACCTTC
 BoUGT2-4 (61) ATCCACTCGTCCAGTTTGCTAAACGACTCGTTCACCGCCACGGCGTAACCATAACCTTT

 AtUGT72B1 (121) GTCATCGCCGGCGAAGGTCCACCATCAAAAAGCTCAGAGAACCGTCTCGACTCTCTCCCT
 BnUGT2 (121) GTCGTCGTCGGCGATGGTCCACCACAAAAGCTCAGAGAACTGTCTTACTCTCTCTCT
 BrUGT2-1 (1) -----
 BrUGT2-2 (121) GTCGTCGTCGGCGAAGGTCCACCCTCAAAAAGCTCAGAGAACCGTCTCGACTCTCTCCCT
 BrUGT2-4 (121) ATCGTCGTCGGCGAAGGTCCACCCTCAAAAAGCTCAGAGAACCGTCTTACTCTCTCTCT
 BrUGT2-3 (121) GTCGTCGTCGGCGATGGTCCACCACAAAAGCTCAGAGAACTGTCTTACTCTCTCTCT
 BoUGT2-1 (121) CTCGTCATCGGCGAAGGTCCACCCTCAAAAATCTCAAAGAAGTGTACTAAACTCTCTCCCG
 BoUGT2-2 (121) ATCGTCGTCGGCGAAGGTCCACCCTCAAAAAGCTCAAAGAACCGTCTCGACTCTCTCCCT
 BoUGT2-3 (121) GTCGTAGTTGGCGAAGGTCCACCCTCAAAAAGCTCAGAGAACCGTCTCGACTCTCTCCCT
 BoUGT2-4 (121) GTCGTCGTCGGCGATGGTCCACCACAAAAGCTCAGAGAACTGTCTTACTCTCTCTCT

 AtUGT72B1 (181) TCTTCAATCTCCTCCGTCTTTCTCCCTCCTGTTGATCTCACCGATCTCTCTTCGTCCT
 BnUGT2 (181) CCTTCTATATCCTCCGTCTTCTCGTCTCCGCGACCTCACCGACTCCTCCTCCGACAACT
 BrUGT2-1 (1) -----
 BrUGT2-2 (181) TCTTCAATCTCCTCCGTCTTTCTCCCTCCACCAGTCTTACCGATATCCCGTCAACGGCT
 BrUGT2-4 (181) TCTTCTTCTCCTCCGTATTTCTCCCTCCCGCTGACTCACCGACTCCTCCTCCGACGGCT

BrUGT2-3 (181) CCTTCTATATCCTCCGTCTTCCCTCGCTCCCGCCGACCTCACCGACCTCCCTCCGACAAC
 BoUGT2-1 (181) TCGTCCATCTCCTCCGTCTTTCTCCCTCCCGCCGACCTCACCGACCTTCCACCCACCACT
 BoUGT2-2 (181) TCCTCCTTCTCCTCCGTATTTCTCCCTCCCCTGACCTCACCGACCTCCCTCCGACGGCT
 BoUGT2-3 (181) TCTTCAATCTCCTCCGTCTTTCTCCCTCCCACCATCTTACCATATACAGTCAACGGCT
 BoUGT2-4 (181) CCTTCTATATCCTCCGTCTTCCCTCCCTCCCGCCGACCTCACCGAACCTCCCTCCGACAAC

 AtUGT72B1 (241) CGCATCGAATCTCGGATCTCCCTCACCGTGACTCGTTCAAACCCGGAGCTCCGGAAAAGTC
 BnUGT2 (241) CGCATCGAAACTCGGATCTCCCTCACCGTGACTCGTTCAAACCCGGAGCTCCGGCGAGTC
 BrUGT2-1 (1) -----
 BrUGT2-2 (241) CGCATTGCAACTCGCATTTCTCTCACCGTGACCCGTTCAAACCCGGAGCTCCGTAAAAGTC
 BrUGT2-4 (241) CGCATCGAGACTCGCATCTCCCTCACCGTGAGCCGTTCAAACCCGGAGCTCCGGCGAGTC
 BrUGT2-3 (241) CGCATCGAAACTCGGATCTCCCTCACCGTGACTCGTTCAAACCCGGAGCTCCGGCGAGTC
 BoUGT2-1 (241) CGCATCGAAACTCGTATATCCCTCACCGTGAGTCGTTCAAACCCGGAGCTCCGGCGAGTC
 BoUGT2-2 (241) CGCATCGAGACTCGCATCTCCCTCACCGTGAGCCGTTCAAACCCGGAGCTCCGGCGAGTC
 BoUGT2-3 (241) CGCATTGCAACTCGCATTTCTCTCACCGTGACCCGTTCAAACCCGGAGCTCCGTAAAAGTC
 BoUGT2-4 (241) CGCATCGAAACTCGGATCTCCCTCACCGTGACTCGTTCAAACCCGGAGCTCCGGCGAGTC

 AtUGT72B1 (301) TTCGACTCGTTTCGTTGGAGGGAGGTCGTTTGCCAACGGCGCTCGTCGTCGATCTCTTCGGT
 BnUGT2 (301) TTTGACTCGTTTCGCGCGGAAGGTCGTTTGCCGACAGCGCTATTTGTCGACCTTTTTCGGC
 BrUGT2-1 (1) -----
 BrUGT2-2 (301) TTCAACTCTTTCACGGCGGATGGTCGTTTGCCGACGGCGCTCATCGTCGATTTGTTTGGA
 BrUGT2-4 (301) TTCGAGACGTTTCGCGCGGAGGGGCGTTTGCCGACCGTGCTCGTCGTCGATCTTTTTCGGT
 BrUGT2-3 (301) TTTGACTCGTTTCGCGCGGAAGGTCGTTTGCCGACAGCGCTATTTGTCGACCTTTTTCGGC
 BoUGT2-1 (301) TTTGACTCGTTTCGCGCGGAAGGTCGTTTGCCGACCGTGCTCGTCGTCGATCTTTTTCGGT
 BoUGT2-2 (301) TTCGAGACGTTTCGCGCGGAGGGGCGTTTGCCGACCGTGCTCGTCGTCGATCTTTTTCGGT
 BoUGT2-3 (301) TTCAGCTCTTTCACGGCGGATGGTCGTTTTCGCGACGGCGCTCATCGTCGATTTGTTTGGA
 BoUGT2-4 (301) TTTGACTCGTTTCGCGCGGAAGGTCGTTTGCCGACAGCGCTATTTGTCGACCTTTTTCGGC

 AtUGT72B1 (361) ACGGACGCTTTCGACGTGGCCGTAGAATTTACAGTGCCACCGTATATTTTCTACCCAACA
 BnUGT2 (361) ACGGACGCTTTCGACGTGCGCCGCCGAGTTCAACGTGTTGCCGTATATTTTCTTCCCGACA
 BrUGT2-1 (1) -----
 BrUGT2-2 (361) ACGGATGCTTTCGACGTGCGCCTCAGAGTTTCAAGTGTACCGTATCTTTTCTACCCATCA
 BrUGT2-4 (361) ACGGACGCTTTCGACGTAGCCAAGGAGTTCCACGTGTCGCTTATATTTTCTTCCATCA
 BrUGT2-3 (361) ACGGACGCTTTCGACGTGCGCCGCCGAGTTCAACGTGTTGCCGTATATTTTCTTCCCGACA
 BoUGT2-1 (361) ACGGATGCTTTCGACGTGCGCCGTGGAGTTCCACGTGTCGCCGTACATTTTCTTCCATCA
 BoUGT2-2 (361) ACGGCCGCTTTCGACGTAGCCGTGGAGTTCCACGTGTCGCTTATATTTTCTTCCATCA
 BoUGT2-3 (361) ACGGATGCTTTCGACGTGCGCCTCTGAGTTTCAAGTGTACCGTATCTTTTCTACCCATCA
 BoUGT2-4 (361) ACGGACGCTTTCGACGTGCGCCGCCGAGTTCAACGTGTTGCCGTATATTTTCTTCCCGACA

 AtUGT72B1 (421) ACGGCCAACGTCTTGTGCTTTTTTCTCCATTTGCCTAAACTAGACGAAACGGTGTGCTGT
 BnUGT2 (421) ACGGCCAACGTCTTGTGCTTTTTTCTTCACTTCCCTAAACTTAATGAAACGATGTCGCTGT
 BrUGT2-1 (1) -----ATGTCGCTGT
 BrUGT2-2 (421) ACGGCCAACGTCTTGTGCTTTTTTCTAAATTTGCCTAAACTTGACGAAACGGTGTGCTGT
 BrUGT2-4 (421) ACGGCCAACGTCTTGTGCTTTTTTCTCAATTTCCCTAAACTCGCCGAAACGATGTCGCTGT
 BrUGT2-3 (421) ACGGCCAACGTCTTGTGCTTTTTTCTCAATTTCCCTAAACTTAATGAAACGATGTCGCTGT
 BoUGT2-1 (421) ACGGCCAACGTCTTGTGCTTTTTTCTCCATCTTCCCTAAACTTGACGAAACGATGTCGCTGT
 BoUGT2-2 (421) ACGGCCAACGTCTTGTGCTTTTTTCTCAATTTCCCTAAACTCGCCGAAACGATGTCGCTGT
 BoUGT2-3 (421) ATGGCCAACGTCTTGTGCTTTTTTCTCAATTTGCCTAAACTTGACGAAACGGTGTGCTGT
 BoUGT2-4 (421) ACGGCCAACGTCTTGTGCTTTTTTCTTCAATTTCCCTAAACTTAATGAAACGATGTCGCTGT

 AtUGT72B1 (481) GAGTTTACGGGAATTAACCGAACCGTTATGCTTCCCTGGATGTGTACCGGTTGCCGGGAAA
 BnUGT2 (481) CCTTTCAGCGAATTAACCGAACCGTTAATCTCCCAGGATGTGTACCGGTTCCGGGAAA
 BrUGT2-1 (10) GAGGTTAGTGAGTTAACCGAACCGGTTAAGCTTCCCTGGATGTGTACCGGTTCCGGGAAA
 BrUGT2-2 (481) GAGTTTACGGGAATTAACCGAACCGGTTAAGCTTCCCTGGATGTGTACCGGTTTGGTAAA
 BrUGT2-4 (481) GACTTTGGTGAGTTAACCGAACCGGTTAAGGTCACCGGTTGTGTACCGGTTGTCTGGAAAA
 BrUGT2-3 (481) CCTTTCAGCGAATTAACCGAACCGTTAATCTCCCAGGATGTGTACCGGTTCCGGGAAA
 BoUGT2-1 (481) GAGTTTAGTGAGTTAACCGAACCGGTTAAGCTTCCCTGGATGTGTACCGGTTCCGGGAAA
 BoUGT2-2 (481) GACTTTGGTGAGTTAACCGAACCGGTTAAGGTCACCGGTTGTGTACCGGTTGTCTGGAAAA
 BoUGT2-3 (481) GAGTTTACGGGAATTAACCGAACCGGTTAAGCTTCCCTGGATGTGTACCGGTTTGGTAAA
 BoUGT2-4 (481) CAATTCAGTGAATTAACCGAACCGTTAATCTCCCAGGATGTGTACCGGTTCCGGGAAA

 AtUGT72B1 (541) GATTTCTTGGACCCGCCCAAGACCGGAAAGACGATGCATACAAATGGCTTCTCCATAAC
 BnUGT2 (541) GATGTTCTTGATCCGGCTCAAGACCGGAAATGATGACCGGTACAAATGGCTTCTCCATAAC

BrUGT2-1 (70) GATGCTCCTGACCCGGCTAGAGATCGGAAACATGACGTGTACAAATGTCTTCTCCACAAC
 BrUGT2-2 (541) GATTTCTCGAGACAGCTCAAGACCGGAAAAACGACGGATACAAATGGCTATTACACAAC
 BrUGT2-4 (541) GATGTTCTTGACCCGGCTCAAGATCGGAAAAATGACCGGTACAAATGGCTTCTCCACAAC
 BrUGT2-3 (541) GATGTTCTTGATCCGGCTCAAGACCGGAATGATGACCGGTACAAATGGCTTCTCCATAAC
 BoUGT2-1 (541) GATGCTCCTGACCCGGCTAGAGATCGGAAACATGACGTGTACAAATGTCTTCTCCACAAT
 BoUGT2-2 (541) GATGTTCTTGACCCGGCTCAAGATCGGAAAAATGACCGGTACAAATGGCTTCTCCACAAC
 BoUGT2-3 (541) GATTTCTCGAGACAGCTCAAGACCGGAAAAACGACGGATACAAATGGCTATTACACAAC
 BoUGT2-4 (541) GATGTTCTTGATCCGGCTCAAGACCGGAAAGATGACCGGTACAAATGGCTTCTCCATAAC

 AtUGT72B1 (601) ACCAAGAGGTACAAAGAAGCCGAAGGTATTCTTGTGAATACCTTCTTTGAGCTAGAGCCA
 BnUGT2 (601) ACCAAGAGGTACAAAGAAGCCGAAGGAATTCTTGTGAATACTTTCTCGAGCTGGAGCCA
 BrUGT2-1 (130) GCCAAGAGGTACAAAGAAGCCGAAGGATTCTTGTTAATACTTTCTCGAGCTAGAGCCA
 BrUGT2-2 (601) ACCAAGAGGTATAAAGAAGCCAAAGGATTCTTGTGAATACCTTTCGACGAGCTAGAGCCA
 BrUGT2-4 (601) ACCAAGAGGTACAAAGAAGCAGAAGGATTCTTGTTAATAGTTTTCTCGAGCTAGAGCCT
 BrUGT2-3 (601) ACCAAGAGGTACAAAGAAGCCGAAGGAATTCTTGTGAATACTTTCTCGAGCTGGAGCCA
 BoUGT2-1 (601) GCCAAGAGGTACAAAGAAGCCGAAGGATTCTTGTTAATACTTTCTCGATCTAGAGCCA
 BoUGT2-2 (601) ACCAAGAGGTACAAAGAAGCAGAAGGATTCTTGTTAATAGTTTTCTCGAGCTAGAGCCA
 BoUGT2-3 (601) ACCAAGAGGTATAAAGAAGCCAAAGGATTCTTGTGAATACTTTTCGACGAGCTAGAGCCA
 BoUGT2-4 (601) ACCAAGAGGTACAAAGAAGCCGAAGGAATTCTTGTGAATACTTTTCTCGAGCTGGAGCCA

 AtUGT72B1 (661) AATGCTATAAAGGCCTTGCAAGAACCAGGTCTTGATAAACCACCGTATTATCCGGTTGGA
 BnUGT2 (661) AATGCTATAAAGGCCTTGCAAGAACCAGGTCTTGATAAACCACCGTATTATCCAATTGGA
 BrUGT2-1 (190) AATGCTTTAAAGGCCTTGCAAGAACCAGGTCTTGACAAACCACCGTATTATCCTATTGGA
 BrUGT2-2 (661) AATGCTATAAAGGCCTTGCAAGAACCCTGGTCTTGATAAACCACCTGTTTATCCGGTTGGA
 BrUGT2-4 (661) AATGCTATCAAGGCCTTGCAAGAACCAGGTTTAGATAAACCACCGTATTATCCGATCGGA
 BrUGT2-3 (661) AATGCTATAAAGGCCTTGCAAGAACCAGGTCTTGATAAACCACCGTATTATCCAATTGGA
 BoUGT2-1 (661) AATGCTTTAAAGGCCTTGCAAGAACCAGGTCTTGACAAACCACCGTATTATCCAATTGGA
 BoUGT2-2 (661) AATGCTATCAAGGCCTTGCAAGAACCAGGTCTTGATAAACCACCGTATTATCCAATTGGA
 BoUGT2-3 (661) GATGCTATAAAGGCCTTGCAAGAACCCTGGTCTTGATAAACCACCTGTTTATCCGGTTGGA
 BoUGT2-4 (661) AATGCTATAAAGGCCTTGCAAGAACCAGGTCTTGATAAACCACCGTATTATCCAATTGGA

 AtUGT72B1 (721) CCGTTGGTTAAACATTGGTAAGCAAGAGGCTAAGCA-----A-ACCGAAGA---GTCTGAA
 BnUGT2 (721) CCATTGGTTAACGTTGGTAAGCAAGAGAGTAGTAA---CGGGATCGAAGAAGAGTCCGAA
 BrUGT2-1 (250) CCGTTGGTTAA-----GCAAGAGAGTGGAAA---CGGGATAGAGGA---GTCCGAA
 BrUGT2-2 (721) CCGTTGGTTAAACATTGGTAAGCGTAGGGTGACCA-----G-AGTGAAGA---GTCTGAA
 BrUGT2-4 (721) CCGTTGGTTAAACATTGGTCAGCAAGAGGGTAGTAA---CGGGGTGGAAAA---GGCCGAG
 BrUGT2-3 (721) CCATTGGTTAACGTTGGTAAGCAAGAGAGTAGTAA---CGGGATCGAAGAAGAGTCCGAA
 BoUGT2-1 (721) CCGTTGGTTAA-----GCAAGAGGGTAGTAA---CGGGACCGAAGA---GTCTGAA
 BoUGT2-2 (721) CCGTTGGTTAAACATTGGTCAGCAAGAGGGTGGTAA---CGGGGTGGAAAA---GGCCGAG
 BoUGT2-3 (721) CCGTTGGTTAAACATTGGTAAGCGTAGGGTGACCA-----G-AGTGAAGA---GTCTGAA
 BoUGT2-4 (721) CCGTTGGTTAACGTTGGTAAGCAAGAGAGTAGTAAGGACGGGATCGAAGAAGAGTCCGAA

 AtUGT72B1 (772) TGTTTAAAGTGGTTGGATAACCAGCCGCTCGGTTCCGGTTTTATATGTGTCCTTTGGTAGT
 BnUGT2 (778) TGTTTAAAGTGGTTAGATAACCAACCCTCGGTTCCGGTTTTGATGGGTCGTTTGGTAGT
 BrUGT2-1 (295) TGTTTGAAGTGGTTGGACAAACAACCCTCGGTTCCGGTTTGGTATGTTTCAATTTGGGAGT
 BrUGT2-2 (772) TGCTTAAAGTGGTTGGACAACCAACCATTCCGGTTCCGGTTTTGTATGTGTCCTTCCGGTAGT
 BrUGT2-4 (775) TGTTTGAAGTGGTTGGATAACCAACCCTCGGTTCCGGTTTTGTATGTGTCATTTGGGAGT
 BrUGT2-3 (778) TGTTTAAAGTGGTTAGATAACCAACCCTCGGTTCCGGTTTTGTATGTGTCGTTTGGTAGT
 BoUGT2-1 (766) TGCTTGAAGTGGTTGGACAACAACCCTCGGTTCCGGTTTTGTATGTTTCAATTTGGGAGT
 BoUGT2-2 (775) TGTTTGAAGTGGTTGGATAAACAACCCTCGGTTCCGGTTTTGTATGTGTCATTTGGGAGT
 BoUGT2-3 (772) TGCTTAAAGTGGTTGGACAACAACCATTCCGGTTCCGGTTTTGTATGTGTCCTTCCGGTAGT
 BoUGT2-4 (781) TGTTTAAACGTGGTTAGATAACCAACCCTCGGTTCCGGTTTTGTATGTGTCGTTTGGTAGT

 AtUGT72B1 (832) GGCGGTACCCTCACATGTGAGCAGCTCAATGAGCTTGCTCTTGGTCTTGCAGATAGTGAG
 BnUGT2 (838) GGTGGTGCACCTCACATGCGAGCAGTTTCGATGAGCTTGCTCATGGTCTTGCAGACAGCGAG
 BrUGT2-1 (355) GGTGGTGTACTAACGCTTGAGCAGCTCAATGAGCTTGCTCTTGGTCTTGAAGACAGCAAA
 BrUGT2-2 (832) GGCGGTACACTCTCATGTGAGCAGCTTAATGAGCTTGCTCTTGGTCTTGCAGATAGTAAG
 BrUGT2-4 (835) GGTGGTGCACCTCACGCTTGAGCAGCAAAATGAGCTTGCTCTTGGTCTTGCAGACAGCGAG
 BrUGT2-3 (838) GGTGGTGCACCTCACATGCGAGCAGTTTCGATGAGCTTGCTCATGGTCTTGCAGACAGCGAG
 BoUGT2-1 (826) GGTGGTGTACTAACGCTTGAGCAGCTCAATGAGCTTGCTCTTGGTCTTGAAGACAGCAAG
 BoUGT2-2 (835) GGTGGTGCACCTCACGCTTGAGCAGCAAAATGAGCTTGCTCTTGGTCTTGCAGACAGCGAG
 BoUGT2-3 (832) GGCGGTACACTCTCATGCGAGCAGTTAATGAGCTTGCTCTTGGTCTTGCAGATAGTAAG
 BoUGT2-4 (841) GGTGGTGCACCTCACATGCGAGCAGTTTCGATGAGCTTGCTCATGGTCTTGCAGACAGCGAG

AtUGT72B1 (892) CAACGGTTTCTTTGGGTCATACGAAGTCCTAGTGGGATCGCTAATTCTGTCGTATTTTGAT
 BnUGT2 (898) CAACGGTTTCTTTGGGTCATA**CGGAGTCCAAGTCAAATAGCT**GATGCTTCGTTTTTCAAT
 BrUGT2-1 (415) CAACGGTTTCTTTGGGTCATACGGAGCCCAAGTCAAACAGCAAATGCTTCGTTTTTGTAGA
 BrUGT2-2 (892) CAACGGTTTCTTTGGGTCATACGAAGTCCGAGTGGGGTTGCTAAATCTTCGTATTTTGAT
 BrUGT2-4 (895) CAACGGTTCCTTTGGGTCATACGTAGTCCGAGTCAAGTTGCTGACGCTTCGTTTTTCAAT
 BrUGT2-3 (898) CAACGGTTTCTTTGGGTCATACGGAGTCCAAGTCAAATAGCTGATGCTTCGTTTTTCAAT
 BoUGT2-1 (886) CAACGGTTTCTTTGGGTCATACGGAGCCCAAGTCAAACCGCAGATGCTTCGTTTTTGTAGA
 BoUGT2-2 (895) CAACGGTTCCTTTGGGTCATACGTAGTCCGAGTCAAGTTGCTGATGCTTCGTTTTTCAAT
 BoUGT2-3 (892) CAACGGTTTCTTTGGGTCATACGAAGTCCGAATGGGGTTGCTAATCTTCGTATTTTGAT
 BoUGT2-4 (901) CAACGGTTTCTTTGGGTCATACGGAGTCCAAGTCAAATCGCTGATGCTTCGTTTTTCAAT

AtUGT72B1 (952) TCACATAGCCAAAACAGATCCATTGACATTTTTACCACCGGGATTTTTAGAGCGGACTAAA
 BnUGT2 (958) CCGCATAGCCAAAACGATCCGTTAACATTTTTACCACCAGGATTTTTAGAACGGACTAAA
 BrUGT2-1 (475) TCGCATAGTGAAGCCGACCCACTGACATTTTTGCCGCATGGTTTTCTTGGAACGGACTAAA
 BrUGT2-2 (952) TCACATAGCCATACTGATCCATTAACTTTTTACCATCCGGATATTTAGCTCGCACCAAAA
 BrUGT2-4 (955) TCACATAGCGAATCCGACCCGTTAAGCTATTTACCACCGGTTTTCTTGGAACGGACCAAC
 BrUGT2-3 (958) CCGCATAGCCAAAACGATCCGTTAACATTTTTACCACCAGGATTTTTAGAACGGACTAAA
 BoUGT2-1 (946) TCGCATAGCGAAGCCGACCCACTGACATTTTTGCCGCATGGTTTTCTTGGAACGGACTAAA
 BoUGT2-2 (955) TCACACAGCGAATCCGACCCGTTAAGCTATTTACCACCGGTTTTCTTGGAACGGACCAAC
 BoUGT2-3 (952) TCACATAGCCATACTGATCCATTAACTTTTTACCATCCGGATATTTGCTCGCACCAAAA
 BoUGT2-4 (961) CCGCATAGCCAAAACGATCCGTTAACATTTTTACCACCAGGATTTTTAGAACGGACTAAA

AtUGT72B1 (1012) AAAAGAGGTTTTGTGATCCCTTTTTGGGCTCCACAAGCCCAAGTCTTGGCGCATCCATCC
 BnUGT2 (1018) GGTAGAGGTTTTGTGATCCCTTCATGGGCTCCACAAGCCCAAATTTAGCACATCCATCT
 BrUGT2-1 (535) GATAGAGGCTTTATGATCCCTTCATGGGCTCCACAAGCCCAAATTTAGCTCATCCGCTCT
 BrUGT2-2 (1012) GACAGAGGTTTCGTGATCGCCTCTTGGGCTCCACAAGCCCAAATTTAGCCATTATCC
 BrUGT2-4 (1015) GGCAGAGGTTTTATGATCCCTTCATGGGCTCCACAAGCCCAAATTTAGCTCATTCGTCT
 BrUGT2-3 (1018) GGTAGAGGTTTTGTGATCCCTTCATGGGCTCCACAAGCCCAAATTTAGCACATCCATCT
 BoUGT2-1 (1006) GATAGAGGCTTTATGATCCCTTCATGGGCTCCACAAGCCCAAGTCTTAGCTCATCCGCTCT
 BoUGT2-2 (1015) GGCAGAGGCTTTATGATCCCTTCATGGGCTCCACAAGCCCAAATTTAGCTCATTCGTCT
 BoUGT2-3 (1012) GACAGAGGTTTCGTGATCGCCTCTTGGGCTCCACAAGCCCAAATTTAGCCATTATCC
 BoUGT2-4 (1021) GGTAGAGGTTTTGTGATCCCTTCATGGGCTCCACAAGCCCAAATTTAGCACATCCATCT

AtUGT72B1 (1072) ACGGGAGGATTTTTAACTCATTGTGGATGGAATTCGACTCTAGAGAGTGTAGTAAGCGGT
 BnUGT2 (1078) ACCGGAGGGTTTTTAACTCATTGTGGATGGAATTCGACTCTAGAAAAGTATAGTAAGTGGT
 BrUGT2-1 (595) ACCGGAGGGTTTTTAACTCATTGTGGATGGAATTCGACTCTGAAAAGTATAGTAAGCGGT
 BrUGT2-2 (1072) ACAGGAGGATTTCTTACTCATTGTGGATGGAATTCGACTCTAGAAAAGTATAGTAAGTGGT
 BrUGT2-4 (1075) ACAGGAGGGTTTTTAACTCATTGTGGATGGAATTCGACTCTAGAGAGTATAGTAAGCGGT
 BrUGT2-3 (1078) ACCGGAGGGTTTTTAACTCATTGTGGATGGAATTCGACTCTAGAAAAGTATAGTAAGTGGT
 BoUGT2-1 (1066) ACCGGAGGGTTTTTAACTCATTGTGGATGGAATTCGACTCTGAAAAGTATAGTAAGCGGT
 BoUGT2-2 (1075) ACAGGAGGGTTTTTAACTCATTGTGGATGGAATTCGACTCTAGAGAGTATAGTAAGCGGT
 BoUGT2-3 (1072) ACAGGAGGATTTCTTACTCATTGTGGATGGAATTCGACTCTAGAAAAGTATAGTAAGTGGT
 BoUGT2-4 (1081) ACCGGAGGGTTTTTAACTCATTGTGGATGGAATTCGACTCTAGAAAAGTATAGTAAGTGGT

AtUGT72B1 (1132) ATTCCACTTATAGCATGGCCATTATACGCCGAAACAGAGGATGAATGCGGTTTTGTTGAGT
 BnUGT2 (1138) GTTCCACTCATAGCATGGCCATTATACGCCGAAACAGAGGATGAATGCGGTTTTGTTGGCA
 BrUGT2-1 (655) GCTCCACTTATTGCTTGGCCATTGTACGCTGAGCAGAAGATGAACGCGTTTTGTTGGCC
 BrUGT2-2 (1132) GTTCCACTTATTGCTTGGCCATTATACGCTGAGCAAAAATGAATGCGGTTTTGTTGACG
 BrUGT2-4 (1135) GTTCCGCTCATTGCTTGGCCATTATACGCTGAGCAGAAGATGAATGCGGTTTCGTTGGCC
 BrUGT2-3 (1138) GTTCCACTCATAGCATGGCCATTATACGCCGAAACAGAGGATGAATGCGGTTTTGTTGGCA
 BoUGT2-1 (1126) GTTCCACTTATTGCTTGGCCATTGTACGCTGAGCAGAAGATGAACGCGTTTTGTTGGCC
 BoUGT2-2 (1135) GTTCCGCTCATTGCTTGGCCATTATACGCCGAAACAGAGGATGAATGCGGTTTCGTTGGCC
 BoUGT2-3 (1132) GTTCCACTTATTGCTTGGCCATTATACGCTGAGCAAAAATGAATGCGGTTTTGTTGACG
 BoUGT2-4 (1141) GTTCCACTCATAGCATGGCCATTATACGCCGAAACAGAGGATGAATGCGGTTTTGTTGGCA

AtUGT72B1 (1192) GAAGATATTCGTGCGGCACTTAGGCCGCGTGCCGGGGACGATGGGTTAGTTAGAAGAGAA
 BnUGT2 (1198) GAAGATATCCATGTTGCACTTAGGGCGCATGCAGGGGAGGATGGGATGGTGAAGAGAGAA
 BrUGT2-1 (715) GAAGATATTCATGTTGCGCTTAGGGCTCATGCAGGGGAGGATGGGATGGTGAAGAGAGAA
 BrUGT2-2 (1192) GAAGATATCCATGTTGCGCTTAGAGCCCGTGCAGGGGTTGATGGGCTGGTGAAGAGAGAA
 BrUGT2-4 (1195) GAAGATATTCGAGTTGCGATCAGGGCTCGTGCCGGGGAGGATGGGTTGGTGAAGAGAGAA
 BrUGT2-3 (1198) GAAGATATCCATGTTGCACTTAGGGCGCATGCAGGGGAGGATGGGATGGTGAAGAGAGAA
 BoUGT2-1 (1186) GAAGATATTCATGTTGCGCTTAGGGCTCATGCAGGGGATGAAGGATGGTGAAGAGAGAA

BoUGT2-2 (1195) GAAGATATTTCGTGTTGCGATTAGAGCTCGTGCGGGGACGATGGGCTGGTGAGAAGAGAA
 BoUGT2-3 (1192) GAAGATATCCATGTGCGCCTTAGAGCCCGTGCAGGGGTTGATGGGCTGGTGATGAGAGAA
 BoUGT2-4 (1201) GAAGATATCCATGTTGCGCCTTAGGGCCATGCAGGGGAGGATGGGATGGTGAGACGAGAA

 AtUGT72B1 (1252) GAGGTGGCTAGAGTGGTAAAAGGATTGATGGAAGGTGAAGAAGGCCAAAGGA-----
 BnUGT2 (1258) GAGGTGGCTAGAGTGGTTAAGGGATTAATGGAAGGTGAAGAAGGCCAAAGGT-----
 BrUGT2-1 (775) GAGGTAGCTAGAGTGGTTAAGGGATTAATGGAAGGTGAAGAAGGTAAAAGGT-----
 BrUGT2-2 (1252) GAGGTGGCTAGAGTGGTGAAGGGATTAATGGAAGGTGAAGAAGGTAAAAGGAATGATGGAA
 BrUGT2-4 (1255) GAGGTGGTTAGAGTGGTTAAGGGATTAATGGAAGGTGAAGAAGGTAAAATGT-----
 BrUGT2-3 (1258) GAGGTGGCTAGAGTGGTTAAGGGATTAATGGAAGGTGAAGAAGGCCAAAGGT-----
 BoUGT2-1 (1246) GAGGTAGCTAGAGTGGTTAAGGGATTAATGGAAGGTGAAGAAGGTAAAAGGT-----
 BoUGT2-2 (1255) GAGGTGGTTAGAGTGGTTAAGGGATTAATGGAAGGTGAAGAAGGTAAAATGC-----
 BoUGT2-3 (1252) GAGGTGGCTAGAGTGGTGAAGGGATTAATGGAAGGTGAAGAAGGTAAAAGGAATGATGGAA
 BoUGT2-4 (1261) GAGGTGGCTAGAGTGGTTAAGGGATTAATGGAAGGTGAAGAAGGCCAAAGGT-----

 AtUGT72B1 (1303) -----GTGAGGAACAAGATGAAGGAGTTGAAGGAAGCAGCTTGTAGG
 BnUGT2 (1309) -----GTGAGGAACAAGATGAAGGAAATGAAGGAAGGAGCTAGTAGG
 BrUGT2-1 (826) -----GTGAGGAATAAGATGAAGGAAATGAAGGAAGGAGCTAGCAGG
 BrUGT2-2 (1312) GGTGATGAAGGTAAGAGAGTGAGGAATAAGATGACAAAATGAAGGAAGGAGCTTGTAGA
 BrUGT2-4 (1306) -----GTGAGGAATAAGATGAAGGAAATGAAGGAAGGAGCTAGTAGG
 BrUGT2-3 (1309) -----GTGAGGAACAAGATGAAGGAAATGAAGGAAGGAGCTAGTAGG
 BoUGT2-1 (1297) -----GTGAGGAATAAGATGAAGGAAATGAAGGAAGGAGCTAGTAGG
 BoUGT2-2 (1306) -----GTGAGGAATAAGATGAAGGAAATGAAGGAAGGAGCTAGTAGG
 BoUGT2-3 (1312) GGTGATGAAGGTAAGAGAGTGAGGAATAAGATGACAAAATGAAGGAAGGAGCTTGTAGG
 BoUGT2-4 (1312) -----GTGAGGAACAAGATGAAGGAAATGAAGGAAGGAGCTAGTAGG

 AtUGT72B1 (1345) GTGTTGAAGGATGATGGGACTTCTACAAAAGCACTTAGTCTTGTGGCCTTAAAGTGGAAA
 BnUGT2 (1351) GTGCTGAATGATACTGGGACTTCTACAAAAGCACTTAATCTTGTGACATTTAAGTGGAAA
 BrUGT2-1 (868) GTGCTGAGTGATGATGGGTCTTCTACAAAAGCACTTAGTCTTGTGGCATTGAAGTGGAAA
 BrUGT2-2 (1372) GTGATGAAGGATGATGGGTCAATTTACAAAAGGCTCTTAGTCAGTTAGTCTTGTAA-----
 BrUGT2-4 (1348) GTGTTGAGTGATGATGGGTCTCTACAAAAGCACTTAGTCTTGTGACATTTAAGTGGAAA
 BrUGT2-3 (1351) GTGCTGAATGATACTGGGACTTCTACAAAAGCACTTAATCTTGTGACATTTAAGTGGAAA
 BoUGT2-1 (1339) GTGCTGAGTGATGATGGGTCTTCTACAAAAGCACTTAGTCTTGTGGCATTGAAGTGGAAA
 BoUGT2-2 (1348) GTGTTGAGTGATGATGGGTCTCTACAAAAGCACTTAGTCTTGTGCGTTAAAGTGGAAA
 BoUGT2-3 (1372) GTGATGAAGGATGATGGGTCAATTTACAAAAGGCTCTTAGTCAGTTAGTCTTGTAA-----
 BoUGT2-4 (1354) GTGCTGAATGATAATGGGACTTCTACAAAAGCACTTAATCTTGTGACATTTAAGTGGAAA
1441 1479

 AtUGT72B1 (1405) GCCCACAAAAAGAGTTAGAGCAAAATGGCAACCACTAA
 BnUGT2 (1411) GCCCACAAAGAGAGCTAAAGCAAAATGGCAAGCATTGA
 BrUGT2-1 (928) GACCACCAAAAAGGGTTAGAGCAAAATGGCAAGCACTGA
 BrUGT2-2 (1426) -----
 BrUGT2-4 (1408) GACCACCAAAAAGGGTTAGTGCAAAATGGCAAGCACTGA
 BrUGT2-3 (1411) GCCCACAAAGAGAGCTAAAGCAAAATGGCAACCACTGA
 BoUGT2-1 (1399) GACCACCAAAAAGGGTTAGAGCAAAATGGCAAGCACTGA
 BoUGT2-2 (1408) GACCACCAAAAAGGGTTAGTGCAAAATGGCAAGCACTGA
 BoUGT2-3 (1426) -----
 BoUGT2-4 (1414) GCCCACAAAGAGAGCTAAAGCAAAATGGCAACCACTGA

12. BnTT8

AtTT8 (1) -----
 BnTT8 (1) GAAAGTTGCACGATCTTACTCTTTCATTAGAGAGAGAGACAGAGGGGAGAGAGAGAGG
 BrTT8-1 (1) -----
 BrTT8-2 (1) -----
 BoTT8 (1) -----

 AtTT8 (1) -----
 BnTT8 (61) GAGAGGGAGAGAGATAGAGATAGAGAGAGGGATAATACAGGTTTTTCATCTCGGGGAAA
 BrTT8-1 (1) -----
 BrTT8-2 (1) -----
 BoTT8 (1) -----

 AtTT8 (1) -ATGGATGAATCAAGTATTATTCCGGCAGAGAAAGTGCCGGAGCTGAGAAAAAGAGCT
 BnTT8 (121) GATGGATGAATTAAGTATCATACCGTTATGAAAGTGATCGGGGCTGAGAAAGAAGAT

BrTT8-1 (1) -ATGGATGAATTAAGTATCATACCGTTATGGAAAGTGATCGGGGCTGAGAAAGAAGAGAT
 BrTT8-2 (1) -ATGGATGAATTAAGTATTATACCGTTATGGAAAGTGATCGGGGCTGAGAAAGAAGAGAT
 BoTT8 (1) -ATGGATGAATTAAGTATTATACCGTTATGGAAAGTGATCGGGGCTGAGAAAGAAGAGAT

AtTT8 (60) TCAAGGGCTGCTTAAGACCGCGGTTCAATCTGTGGACTGGACTTATAGTGTCTTCTGGCA
 BnTT8 (181) TCAAGGGCTACTTAAGCGCGTGGTCAATCTGTGGGTGGACTTATAGTGTCTTCTGGCA
 BrTT8-1 (60) TCAAGGGCTACTTAAGCGCGTGGTCAATCTGTGGGTGGACTTATAGTGTCTTCTGGCA
 BrTT8-2 (60) TCAAGGGCTACTTAAGCGCGTGGTCAATCTGTGGGTGGACTTATAGTGTCTTCTGGCA
 BoTT8 (60) TCAAGGGCTACTTAAGCGCGTGGTCAATCTGTGGGTGGACTTATAGTGTCTTCTGGCA

AtTT8 (120) ATTTTGTCTCAACAACGGGCTCTTGGTGTGGGGGAATGGATACTACAACGGTCAATAAA
 BnTT8 (241) ACTTTGTCTCAACGAAGGAAATTGATGTGGAGTAGTGGATACTACAACGGCGCAATAAA
 BrTT8-1 (120) ACTTTGTCTCAACGAAGGAAATTGATGTGGAGTAGTGGATACTACAACGGCGCAATAAA
 BrTT8-2 (120) ACTTTGTCTCAACGAAGGAAATTGATGTGGAGTAGTGGATACTACAACGGCGCAATAAA
 BoTT8 (120) ACTTTGTCTCAACTAAGGAAATTGATGTGGAGTAGTGGAACTATAACGGTCAATAAA

AtTT8 (180) GACGAGGAAGACAACCTCAACCAGCGGAGGTGACGGCAGAAGAGGGCGGTTAGAGAGGAG
 BnTT8 (301) GACTAGAAAGACAACCTCAGCCGGCGGAAGTTACGGCTGAAGAGGCTGCGTCGGAGAGAAG
 BrTT8-1 (180) GACTAGAAAGACAACCTCAGCCGGCGGAAGTTACGGCTGAAGAGGCTGCGTCGGAGAGAAG
 BrTT8-2 (180) GACTAGAAAGACAACCTCAGCCGGCGGAAGTTACGGCTGAAGAGGCTGCGTCGGAGAGAAG
 BoTT8 (180) GACTAGAAAGACAACCTCAGCCGGCGGAAGTTAAGGCTGAAGAGGCTGCGTCGGAAAGAAG

AtTT8 (240) CCAACAGCTCAGGGAGCTTTATGAGACACTTTTAGCCGGAGAGTCAACGTCAGAAGCAAG
 BnTT8 (361) CCAACAGCTCATGGAGCTTTACGAGACGCTTTTGTGGAGAATCATCGATGGAAGCGAG
 BrTT8-1 (240) CCAACAGCTCATGGAGCTTTACGAGACGCTTTTGTGGAGAATCATCGATGGAAGCGAG
 BrTT8-2 (240) CCAACAGCTCATGGAGCTTTACGAGACGCTTTTGTGGAGAATCATCGATGGAAGCGAG
 BoTT8 (240) CCAACAGCTCATGGAGCTTTACGAGACGCTTTTGTGGAGAATCATCGATGGAAGCGAG

AtTT8 (300) AGCATGCACCGCATTTGTCACCGGAGGATTTGACGGAGACAGAATGGTTTTATCTAATGTG
 BnTT8 (421) GGCTTGCACAGCACTGTGCGCCGGAGGATTTGACGGATCCTGAATGGTTTTATGTGCTGTG
 BrTT8-1 (300) GGCTTGCACAGCACTGTGCGCCGGAGGATTTGACGGATCCTGAATGGTTTTATGTGCTGTG
 BrTT8-2 (300) GGCTTGCACAGCACTGTGCGCCGGAGGATTTGACAGATCCTGAATGGTTTTATGTGCTGTG
 BoTT8 (300) GGCTTGCACAGCACTGTGCGCCGGAGGATTTGACGGATCCTGAATGGTTTTATGTGCTGTG

AtTT8 (360) CGTCTCTTTCTCTTTTCTCTCCTCCTCCATCTGGGATGCCAGGAAAAGCGTATGCAAGGAGGAA
 BnTT8 (481) TTTCACTTACTCTTTTTCGAACCTCCTTCTGGGATGCCAGGAAAAGCGTATGCGAGGAGGAA
 BrTT8-1 (360) TTTCACTTACTCTTTTTCGAACCTCCTTCTGGGATGCCAGGAAAAGCGTATGCGAGGAGGAA
 BrTT8-2 (360) TTTCACTTACTCTTTTTCGAACCTCCTTCTGGGATGCCAGGAAAAGCGTATGCGAGGAGGAA
 BoTT8 (360) TTTCACTTACTCTTTTTCGAACCTCCTTCTGGGATGCCAGGAAAAGCGTATGCGAGGAGGAA

AtTT8 (420) GCACGTATGGCTAAGTGGTGCAAATGAGGTTGACAGTAAAACCTTTTCTAGAGCTATTCT
 BnTT8 (541) GCACATATGGCTAAGTGGTGCAAATGAGGTTGACAATAAAAATCTTCTCTAGGGCTATTTTC
 BrTT8-1 (420) GCACATATGGCTAAGTGGTGCAAATGAGGTTGACAATAAAAATCTTCTCTAGGGCTATTTTC
 BrTT8-2 (420) GCACATATGGCTACGTGGTGCAAATGAGGTTGACAATAAAAATCTTCTCTAGGGCTATTTTC
 BoTT8 (420) TCACATATGGCTAAGTGGTGCAAATGAGGTTGACAATAAAAATCTTCTCTAGGGCTATTTTC

AtTT8 (480) CGCTAAGAGTGCTAAAATTTCAGACAGTGGTTTGCATTCGAATGCTTGTATGGTGTGTGGAA
 BnTT8 (601) TGCAAAGAGTGCCAAATTCAGACAGTGGTTTGCATTCGCCGTGCTTGTATGGCGTTTTGGA
 BrTT8-1 (480) TGCAAAGAGTGCCAAATTCAGACAGTGGTTTGCATTCGCCGTGCTTGTATGGCGTTTTGGA
 BrTT8-2 (480) TGCAA-----G-----A--CAG-----TGGTTGCATTCGCCGTGCTTGTATGGCGTTTTGGA
 BoTT8 (480) TGCAA-----G-----A--CAG-----TGGTTGCATTCGCCGTGCTTGTATGGCGTTTTGGA

AtTT8 (540) ACTAGGCACAACGAAAAAGGTAAGAGAAGATGTAGAGTTTGTGAGCTCACAAGAGTTT
 BnTT8 (661) ACTAGGCACAACGAACAAGGTCAAAGAGAGTGAAGAGTTTGTGAGCACATAAAGAGTTT
 BrTT8-1 (540) ACTAGGCACAACGAAAAAGGTAAGAGAAGATGTAGAGTTTGTGAGCTCACAAGAGTTT
 BrTT8-2 (487) -----G-TCAAAGAGAGTGAAGAGTTTGTGAGCACATAAAGAGTTT
 BoTT8 (525) ACTAGGCACAACGAAAAAGGTAAGAGAAGATGTAGAGTTTGTGAGCTCACAAGAGTTT

AtTT8 (600) CTTCTATGACCCTGCAAGACGAACCAAGCCGGCTCTTTCTGAACACTCCACTACGA
 BnTT8 (721) CTTCCACAACCACCCGAAGTCAAACACTAAGCCTACTCTTTCTGAACACTTCATCAACGA
 BrTT8-1 (600) CTTCCACAACCACCCGAAGTCAAACACTAAGCCTACTCTTTCTGAACACTTCATCAACGA
 BrTT8-2 (528) CTTCCACAACCACCCGAAGTCAAACACTAAGCCTACTCTTTCTGAACACTTCATCAACGA
 BoTT8 (585) CTTCCACAACACTACCCGAAGTCAAACACTAAGCCTACTCTTTCTGAACACTTCATCAACGA

AtTT8 (660) AGTGCATGAAGAAGCGAAGACGAAGAAGAAGTAGAAGAAGAGATGACAATGTCAGAGGA
 BnTT8 (781) AGAGCATGAAGAAGACGAAGAAGAAGTAGAAGAAGAAGAA---ATGACAATGTCAGAAGA
 BrTT8-1 (660) AGAGCATGAAGAAGACGAAGAAGAAGTAGAAGAAGAAGAA---ATGACAATGTCAGAAGA
 BrTT8-2 (588) AGAGCACGAAGAAGACGAAGAAGAAGTAGAAGAAGAAGAA---ATGACAATGTCAGAAGA
 BoTT8 (645) AGAGCATGAAGAAGACGAAGACGAAGTAGAAGAAGAAGAA---ATGACAATGTCAGAGGA

AtTT8 (720) AATGAGGCTTGGCTCTCCTGATGATGAAGATGTTTCCAATCAAAATCTACACTCTGATCT
 BnTT8 (838) GATAAGACTTGGTTCTCCTGATGACGATGACGCTCCAATCAAAATCTACTCTCTGATTT
 BrTT8-1 (717) GATAAGACTTGGTTCTCCTGATGACGATGACGCTCCAATCAAAATCTACTCTCTGATTT
 BrTT8-2 (645) GATAAGACTTGGTTCTCCTGATGACGATGACGCTCCAATCAAAATCTACTCTCTGATTT
 BoTT8 (702) GATAAGACTTGGTTCTCCTGATGACGATGACCTCCAATCAAAATCTACTCTCTGATTT

AtTT8 (780) TCATATTGAATCAACCATACGTTAGACACACATATGGACATGATGAATCTAATGGAGGA
 BnTT8 (898) CCATATAGAAGCAACCAATAGTTTATAGATACACACATGGACATGATGAATCTAATGGAGGA
 BrTT8-1 (777) CCATATAGAAGCAACCAATAGTTTATAGATACACACATGGACATGATGAATCTAATGGAGGA
 BrTT8-2 (705) CCATATAGAAGCAACCAATAGTTTATAGATACACACATGGACATGATGAATCTAATGGAGGA
 BoTT8 (762) CCATATAGAAGCAACCAATAGTTTATAGATACACACATGGACATGATGAATCTAATGGAGGA

AtTT8 (840) AGGTGGAAACTATTCTCAGACAGTAAACAACACTTCTCATGTCCACACCCACAAGTCTTCT
 BnTT8 (958) AGGAGGAAATTATTCTCAGACAGTATCAACACTTCTCATGTCCACACCCACAAGTCTTCT
 BrTT8-1 (837) AGGAGGAAATTATTCTCAGACAGTATCAACACTTCTCATGTCCACACCCACAAGTCTTCT
 BrTT8-2 (765) AGGCGGAAATTATTCTCAGACAGTATCAACACTTCTCATGTCCACACCCACAAGTCTTCT
 BoTT8 (822) AGGCGGAAATTATTCTCAGACAGTATCAACACTTCTCATGTCCACACCCACCAGTCTTCT

AtTT8 (900) TTCAGATTCAGTTTCCACATCTTCTTACATCCAATCATCGTTTGCCACGTGGAGGGTTGA
 BnTT8 (1018) TTCAGATTCAGTTTCCACATCTTCTTACGTTCAATCATCGTTTGTCTCGTGGAGAGTTGA
 BrTT8-1 (897) TTCAGATTCAGTTTCCACATCTTCTTACGTTCAATCATCGTTTGTCTCGTGGAGAGTTGA
 BrTT8-2 (825) TTCAGATTCAGTTTCCACATCTTCTTACGTTCAATCATCGTTTGTCTCGTGGAGAGTTGA
 BoTT8 (882) TTCAGATTCAGTTTCCACATCTTCTTACGTTCAATCATCGTTTATATCGTGGAGAGTTGA

AtTT8 (960) GAATGCGCAAAGAGCATCAGCA--A-----GTGAAAACGGCG---CCGTCGTCACA
 BnTT8 (1078) GAATGTCAAAGAGCATCAGCAATATCAGCGAGTGGAGAAAAGCGGCGTGGTCATCGTCGCA
 BrTT8-1 (957) GAATGTCAAAGAGCATCAGCAATATCAGCGAGTGGAGAAAAGCGGCGTGGTCATCGTCGCA
 BrTT8-2 (885) GAATGTCAAAGAGCATCAGCAATATCAGCGAGTGGAGAAAAGCGGCGTGGTCATCGTCGCA
 BoTT8 (942) GAATGTCAAAGAGCATCAGCAATATCAGCGAGTGGAGAAAAGCGGCGTCTTCGTCGTCGCA

AtTT8 (1005) ATGGGTGCTCAAACAATGATCTTCAAGATTCCCTTCCATGACAACACTAAAGATAA
 BnTT8 (1138) ATGGATGCTCAAACACATAATCTTGAAGTTCCCTTCCATGACAACACTAAAGATAA
 BrTT8-1 (1017) ATGGATGCTCAAACACATAATCTTGAAGTTCCCTTCCATGACAACACTAAAGATAA
 BrTT8-2 (945) ATGGATGCTCAAACACATAATCTTGAAGTTCCCTTCCATGACAACACTAAAGATAA
 BoTT8 (1002) ATGGATGCTCAAACACATAATCTTGAAGTTCCCTTCCATGACAACACTAAAGATAA

AtTT8 (1065) GAGGCTACCGCGGAAGATCTGAGCCAGTAGTAGCAGAGCGACGCAGGAGGGAGAAGCT
 BnTT8 (1198) GAGGCTACCGCGAGAAGAGCTTAACCATGTGGTGGCCGAGCGACGCAGAAGAGAGAAGCT
 BrTT8-1 (1077) GAGGCTACCGCGAGAAGAGCTTAACCATGTGGTGGCCGAGCGACGCAGAAGAGAGAAGCT
 BrTT8-2 (1005) GAGGCTACCGCGAGAAGAGCTTAACCATGTGGTGGCCGAGCGACGCAGAAGAGAGAAGCT
 BoTT8 (1062) GAGGCTGCCGCGAGAAGAGCTTAACCATGTGGTGGCCGAGCGACGCAGAAGAGAGAAGCT

AtTT8 (1125) GAACGAGAAATTCATAACGTTGAGATCAATGGTTCCATTTGTGACCAAGATGGATAAAAGT
 BnTT8 (1258) AAATGAGAGATTCATAACGTTGAGATCAATGGTTCCATTTGTGACCAAGATGGATAAAAGT
 BrTT8-1 (1137) AAATGAGAGATTCATAACGTTGAGATCAATGGTTCCATTTGTGACCAAGATGGATAAAAGT
 BrTT8-2 (1065) AAATGAGAGATTCATAACGTTGAGATCAATGGTTCCATTTGTGACCAAGATGGATAAAAGT
 BoTT8 (1122) AAATGAGAGATTCATAACGTTGAGATCAATGGTTCCATTTGTGACCAAGATGGATAAAAT

AtTT8 (1185) CTCAATCCTTGGAGACACCATTGCGTACGTAATCATCTTCGAAAGAGGGTCCATGAGCT
 BnTT8 (1318) CTCGATCCTTGGAGACACCATTGAATACGTAATCATCTTCTAAGAGGATACATGAGCT
 BrTT8-1 (1197) CTCGATCCTTGGAGACACCATTGAATACGTAATCATCTTCTAAGAGGATACATGAGCT
 BrTT8-2 (1125) CTCGATCCTTGGAGACACCATTGAATACGTAATCATCTTCTAAGAGGATACATGAGCT
 BoTT8 (1182) CTCGATCCTTGGAGACACCATTGAGTACGTAATCATCTTCTAAGAGGATCCATGAGCT

AtTT8 (1245) TGAGAACTACTCATCATGAGCAACGCATTAAGCGGACGCGTACTTGTAAGAGAAAAACATC
 BnTT8 (1378) GGAATCTACTCATCACGAGCCAACCAAAAGCGGATGCGTATCGGTAAGGGAAGAACTTG

BrTT8-1 (1257) GGAATCTACTCATCACGAGCCAAACCAAAGCGGATGCGTATCGGTAAGGGAAGAACTTG
 BrTT8-2 (1185) GGAATCTACTCATCACGAGCCAAACCAAAGCGGATGCGTATCGGTAAGGGAAGAACTTG
 BoTT8 (1242) GGAATCTACTCATCACGAGCCAAACCAAAGCGGATGCGTATCTGTAAGGGAAGAACTTG

 AtTT8 (1305) GGAGGAGGTGGAGGTTTCCATCATAGAGAATGATGTTTTGTTAGAGATGAGATGTGAGTA
 BnTT8 (1438) GGAAGAGGTGGAGGTTTCCATTATAGAGAGCGATGTTTTGTTAGAGATGAGATGCGGAGTA
 BrTT8-1 (1317) GGAAGAGGTGGAGGTTTCCATTATAGAGAGCGATGTTTTGTTAGAGATGAGATGCGGAGTA
 BrTT8-2 (1245) GGAAGAGGTGGAGGTTTCCATTATAGAGAGCGATGTTTTGTTAGAGATGAGATGCGGAGTA
 BoTT8 (1302) GGAAGAGGTGGAGGTTTCCATTATAGAGAGCGATGTTTTGTTAGAGATGAGATGCGGAGTA

 AtTT8 (1365) CCGAGATGGTTTTGTTGCTTGACATTCCTCAGGTTCTTCATGAGCTTGGTATAGAGACTAC
 BnTT8 (1498) CCGAGATGGTTTTATTGCTCAACATTCCTCAGGTACTTAAGGAGCTGGGTATAGAGACCAC
 BrTT8-1 (1377) CCGAGATGGTTTTATTGCTCAACATTCCTCAGGTACTTAAGGAGCTGGGTATAGAGACCAC
 BrTT8-2 (1305) CCGAGATGGTTTTATTGCTCAACATTCCTCAGGTACTTAAGGAGCTGGGTATAGAGACCAC
 BoTT8 (1362) CCGAGATGGTTTTATTGCTCAACATTCCTCAGGTACTTAAGGAGCTAGGTATAGAGACCAC

 AtTT8 (1425) GGCAGTTCATACCTCGGTGAACGACCATGATTTTCGAGGCGGAGATAAGGGCGAAAGTAAG
 BnTT8 (1558) TGCGGTTACACTGCCTTGAACGACAATCATTTCGAGGAGAGATAAGGGCGAAAGTGAG
 BrTT8-1 (1437) TGCGGTTACACTGCCTTGAACGACAATCATTTCGAGGAGAGATAAGGGCGAAAGTGAG
 BrTT8-2 (1365) TGCGGTTACACTGCCTTGAACGACAATCATTTCGAGGAGAGATAAGGGCGAAAGTGAG
 BoTT8 (1422) TGCGGTTACACTGCCTTGAACGACCACCATTTCGAGGAGAGATAAGGGCGAAAGTGAG

 AtTT8 (1485) AGGGAAGAAAGCAAGCATCGCTGAGGTCAAAGAGCCATCCACCAAGTCATAATACATGA
 BnTT8 (1618) AGGGAAGAAACCAACCATTGCTGAGGTTAAAATAGCCATCCATCAAATCATAT---ATAA
 BrTT8-1 (1497) AGGGAAGAAACCAACCATTGCTGAGGTTAAAATAGCCATCCATCAAATCATAT---ATAA
 BrTT8-2 (1425) AGGGAAGAAACCAACCATTGCTGAGGTTAAAATAGCCATCCATCAAATCATAT---ATAA
 BoTT8 (1482) AGGGAAGAAACCAACCATTGCTGAGGTTAAAATAGCCATCCATCAAATCATAT---ATAA

 AtTT8 (1545) TACTAATCTATAG-----
 BnTT8 (1675) TAATAAACTCTAGTTCGGAGATTCCTAACCTTAATGATGCAACTTTAGAGAAGGACATGTG
 BrTT8-1 (1554) TAATAAACTCTAG-----
 BrTT8-2 (1482) TAATAAACTCTAG-----
 BoTT8 (1539) TAATAAACTCTAG-----

 AtTT8 (1558) -----
 BnTT8 (1735) ATCGCTTATTTAATTTTAGCGTCGCTATGCTACATTATCAGTTTTACATATACAAAATA
 BrTT8-1 (1567) -----
 BrTT8-2 (1495) -----
 BoTT8 (1552) -----

 AtTT8 (1558) -----
 BnTT8 (1795) TTGTCTATGTTAAA
 BrTT8-1 (1567) -----
 BrTT8-2 (1495) -----
 BoTT8 (1552) -----

13. BnTTG1

AtTTG1 (1) -----
 BnTTG1-1 (1) -----
 BnTTG1-2 (1) -----
 BnTTG1.1 (1) -----
 BnTTG1.2 (1) -----
 BrTTG1_P8 (1) -----
 BrTTG1_Tsuda (1) -----
 BrTTG1_Y195-93 (1) -----
 BrTTG1 (1) -----
 BoTTG1-1 (1) AATGGTTACCACCTTTTTGTGACCAATTTATATTTTTTAATCTTGAGCTGATTTTTAAG
 BoTTG1-2 (1) -----

 AtTTG1 (1) -----
 BnTTG1-1 (1) -----
 BnTTG1-2 (1) -----

BnTTG1.1	(1)	-----
BnTTG1.2	(1)	-----
BrTTG1_P8	(1)	-----
BrTTG1_Tsuda	(1)	-----
BrTTG1_Y195-93	(1)	-----
BrTTG1	(1)	-----
BoTTG1-1	(61)	AAAATCCACTACTTATGGTTCTATTTTTATCTTGTTTAAAATTTTATTATAAGTTTTTCT
BoTTG1-2	(1)	-----
AtTTG1	(1)	-----
BnTTG1-1	(1)	-----
BnTTG1-2	(1)	-----
BnTTG1.1	(1)	-----
BnTTG1.2	(1)	-----
BrTTG1_P8	(1)	-----
BrTTG1_Tsuda	(1)	-----
BrTTG1_Y195-93	(1)	-----
BrTTG1	(1)	-----
BoTTG1-1	(121)	TTCATTAATATACATAAATTGTTAATGAATAAGTATTATCAACCTATACTTGTGCTGCTC
BoTTG1-2	(1)	-----
AtTTG1	(1)	-----
BnTTG1-1	(1)	-----
BnTTG1-2	(1)	-----
BnTTG1.1	(1)	-----
BnTTG1.2	(1)	-----
BrTTG1_P8	(1)	-----
BrTTG1_Tsuda	(1)	-----
BrTTG1_Y195-93	(1)	-----
BrTTG1	(1)	-----
BoTTG1-1	(181)	GGGGAAAATAAAAATAAAAGTAAGGCCACACAAGCGTAGAAAAGGTCAGCTATCCGTAGAC
BoTTG1-2	(1)	-----
AtTTG1	(1)	-----
BnTTG1-1	(1)	-----
BnTTG1-2	(1)	-----
BnTTG1.1	(1)	-----
BnTTG1.2	(1)	-----
BrTTG1_P8	(1)	-----
BrTTG1_Tsuda	(1)	-----
BrTTG1_Y195-93	(1)	-----
BrTTG1	(1)	-----
BoTTG1-1	(241)	ACAAGACCCACAAAACGCGTAGATAGGCCATTATACATTAAACATTACTGACTGAGTCA
BoTTG1-2	(1)	-----
AtTTG1	(1)	-----
BnTTG1-1	(1)	-----
BnTTG1-2	(1)	-----
BnTTG1.1	(1)	-----
BnTTG1.2	(1)	-----
BrTTG1_P8	(1)	-----
BrTTG1_Tsuda	(1)	-----
BrTTG1_Y195-93	(1)	-----
BrTTG1	(1)	-----
BoTTG1-1	(301)	GAGGGTTCAGCTCAGCTCAGCTCAGCTCCGGCTCCAAATCGCAACTGACACTGACCGTGG
BoTTG1-2	(1)	-----
AtTTG1	(1)	-----
BnTTG1-1	(1)	-----ATACCGAATCAAATCCATCTCACATTTTTTCCGG
BnTTG1-2	(1)	-----ATACCGAATCAAATCCATCTCACATTTTTTCCGG
BnTTG1.1	(1)	-----
BnTTG1.2	(1)	-----
BrTTG1_P8	(1)	-----

BrTTG1_Tsuda	(1)	-----
BrTTG1_Y195-93	(1)	-----
BrTTG1	(1)	-----
BoTTG1-1	(361)	AACTTTCATCGTCGCCAAGAATCTTATACCGAATCAAATCCATCTCACATTTTTTCCGG
BoTTG1-2	(1)	-----
AtTTG1	(1)	-----ATGGATAATTGAGCTCCAGATTCGTTATCCAGATCGGAA
BnTTG1-1	(35)	CGAGAGAGAGAGAGA--GACGATGGACAACTCAGCTCCAGACTCTTTACCTAGATCGGAA
BnTTG1-2	(35)	CGAGAGAGAGAGAGAGAGACGATGGACAACTCAGCTCCGACTCTTTACCTAGATCGGAA
BnTTG1.1	(1)	-----ATGGACAACTCAGCTCCAGACTCTTTACCTAGATCGGAA
BnTTG1.2	(1)	-----ATGGACAACTCAGCTCCAGACTCTTTACCTAGATCGGAA
BrTTG1_P8	(1)	-----ATGGACAACTCAGCTCCGACTCCTTACCTAGATCGGAA
BrTTG1_Tsuda	(1)	-----ATGGACAACGCAGCTCCGACTCCTTACCTAGATCGGAA
BrTTG1_Y195-93	(1)	-----ATGGACAACTCAGCTCCGACTCCTTACCTAGATCGGAA
BrTTG1	(1)	-----ATGGACAACTCAGCTCCGACTCCTTACCTAGATCGGAA
BoTTG1-1	(421)	CGAGAGAGAGAGA---GACGATGGACAACTCAGCTCCAGACTCTTTACCTAGATCGGAA
BoTTG1-2	(1)	-----ATGGACAACTCAGCTCCGACTCCTTACCTAGATCGGAA
AtTTG1	(40)	ACCGCCGTCACATACGACTCACCATATCCACTCTACGCCATGGCTTTCTCTTCTCTCCGC
BnTTG1-1	(93)	ACCGCCGTCACCTACGACTCTCCTTACCCCTCTACGCCATGTCCTTCTC-----C
BnTTG1-2	(95)	ACCGCCGTCACCTACGACTCTCCGTACCCGCTCTACGCCATGTCCTTCTC-----C
BnTTG1.1	(40)	ACCGCCGTCACCTACGACTCTCCTTACCCCTCTACGCCATGTCCTTCTC-----C
BnTTG1.2	(40)	ACCGCCGTCACCTACGACTCTCCGTACCCGCTCTACGCCATGTCCTTCTC-----C
BrTTG1_P8	(40)	ACCGCCGTCACCTACGACTCTCCTTACCCCTCTACGCCATGTCCTTCTC-----C
BrTTG1_Tsuda	(40)	ACCGCCGTCACCTACGACTCTCCTTACCCCTCTACGCCATGTCCTTCTC-----C
BrTTG1_Y195-93	(40)	ACCGCCGTCACCTACGACTCTCCTTACCCCTCTACGCCATGTCCTTCTC-----C
BrTTG1	(40)	ACCGCCGTCACCTACGACTCTCCTTACCCCTCTACGCCATGTCCTTCTC-----C
BoTTG1-1	(477)	ACTGCCGTCACCTACGACTCTCCGTACCCCTCTACGCCATGTCCTTCTC-----C
BoTTG1-2	(40)	ACCGCCGTCACCTACGACTCTCCGTACCCCTCTACGCCATGTCCTTCTC-----C
AtTTG1	(100)	TCATCCTCCGGTCACAGAATCGCCGTCGGAAGCTTCTCGAAGATTACAACAACCGCATC
BnTTG1-1	(144)	TCCTCCACC---CACCGAATCGCCGTCGGGAGCTTCTCGAGGACTACAACAACCGCATC
BnTTG1-2	(146)	TCCTCCACC---CACCGAATCGCCGTCGGGAGCTTCTCGAGGACTACAACAACCGCATC
BnTTG1.1	(91)	TCCTCCACC---CACCGAATCGCCGTCGGGAGCTTCTCGAGGACTACAACAACCGCATC
BnTTG1.2	(91)	TCCTCCACC---CACCGAATCGCCGTCGGGAGCTTCTCGAGGACTACAACAACCGCATC
BrTTG1_P8	(91)	TCCTCCACC---CACCGAATCGCCGTCGGAAGCTTCTCGAGGACTACAACAACCGCATC
BrTTG1_Tsuda	(91)	TCCTCCACC---CACCGAATCGCCGTCGGGAGCTTCTCGAGGACTACAACAACCGCATC
BrTTG1_Y195-93	(91)	TCCTCCACC---CACCGAATCGCCGTCGGAAGCTTCTCGAAGACTACAACAACCGCATC
BrTTG1	(91)	TCCTCCACC---CACCGAATCGCCGTCGGGAGCTTCTCGAGGACTACAACAACCGCATC
BoTTG1-1	(528)	TCCTCCACC---CACCGAATCGCCGTCGGGAGCTTCTCGAGGACTACAACAACCGCATC
BoTTG1-2	(91)	TCCTCCACC---CACCGAATCGCCGTCGGGAGCTTCTCGAGGACTACAACAACCGCATC
AtTTG1	(160)	GACATCTCTCTTTTCGATTCCGATTCGAATCAATGACCGTTAAGCCTCTCCCGAATCTCTCCTTC
BnTTG1-1	(201)	GACATCCTCTCCTTCGACTCCGACTCCATGTCCCTCAAGCCCTCCCGTCCCTCTCCTTC
BnTTG1-2	(203)	GACATCCTCTCCTTCGACTCCGACTCCATGTCCCTCAAGCCCTCCCATCCCTCTCCTTC
BnTTG1.1	(148)	GACATCCTCTCCTTCGACTCCGACTCCATGTCCCTCAAGCCCTCCCGTCCCTCTCCTTC
BnTTG1.2	(148)	GACATCCTCTCCTTCGACTCCGACTCCATGTCCCTCAAGCCCTCCCATCCCTCTCCTTC
BrTTG1_P8	(148)	GACATCCTCTCCTTCGACTCCGACTCCATGTCCCTCAAGCCCTCCCGTCCCTCTCCTTC
BrTTG1_Tsuda	(148)	GACATCCTCTCCTTCGACTCCGACTCCATGTCCCTCAAGCCCTCCCGTCCCTCTCCTTC
BrTTG1_Y195-93	(148)	GACATCCTCTCCTTCGACTCCGACTCCATGTCCCTCAAGCCCTCCCGTCCCTCTCCTTC
BrTTG1	(148)	GACATCCTCTCCTTCGACTCCGACTCCATGTCCCTCAAGCCCTCCCGTCCCTCTCCTTC
BoTTG1-1	(585)	GACATCCTCTCCTTCGACTCCGACTCCATGTCCCTCAAGCCCTCCCGTCCCTCTCCTTC
BoTTG1-2	(148)	GACATCCTCTCCTTCGACTCCGACTCCATGTCCCTCAAGCCCTCCCGTCCCTCTCCTTC
AtTTG1	(220)	GAGCATCCTTATCCTCCAACAAGCTAATGTTTCAGTCCCTCCTTCTTCCGTCGTCCTTCC
BnTTG1-1	(261)	GAGCACCTTACCCTCCACCAAGCTCATGTTTCAGTCCCTCCTTCTTCCGTCGTCCTTCC
BnTTG1-2	(263)	GAGCACCTTACCCTCCACCAAGCTCATGTTTCAGTCCCTCCTTCTTCCGTCGTCCTTCC
BnTTG1.1	(208)	GAGCACCTTACCCTCCACCAAGCTCATGTTTCAGTCCCTCCTTCTTCCGTCGTCCTTCC
BnTTG1.2	(208)	GAGCACCTTACCCTCCACCAAGCTCATGTTTCAGTCCCTCCTTCTTCCGTCGTCCTTCC
BrTTG1_P8	(208)	GAGCACCTTACCCTCCACCAAGCTCATGTTTCAGTCCCTCCTTCTTCCGTCGTCCTTCC
BrTTG1_Tsuda	(208)	GAGCACCTTACCCTCCACCAAGCTCATGTTTCAGTCCCTCCTTCTTCCGTCGTCCTTCC
BrTTG1_Y195-93	(208)	GAGCACCTTACCCTCCACCAAGCTCATGTTTCAGTCCCTCCTTCTTCCGTCGTCCTTCC
BrTTG1	(208)	GAGCACCTTACCCTCCACCAAGCTCATGTTTCAGTCCCTCCTTCTTCCGTCGTCCTTCC

BoTTG1-1 (645) GAGCACCTTACCTCCACGAAGCTCATGTTCCAGCCCCCTCCCTCCGCGCAGCAGC
 BoTTG1-2 (208) GAGCACCTTACCTCCACGAAGCTCATGTTCCAGCCCCCTCCCTCCGCGCAGCAGC

 AtTTG1 (280) TCCGGAGATCTCCTCGCTTCCTCCGGCGATTTCCCTCCGTCCTTGGGAAATTAACGAAGAT
 BnTTG1-1 (321) GCGGGCGACTCCTCGCTCCTCCGGCGACTTCCTCCGCTCTGGGAGGTCAACGAAGAC
 BnTTG1-2 (323) GGGGGCGACTCCTCGCTCCTCCGGCGACTTCCTCCGCTCTGGGAGGTCAACGAAGAC
 BnTTG1.1 (268) GCGGGCGACTCCTCGCTCCTCCGGCGACTTCCTCCGCTCTGGGAGGTCAACGAAGAC
 BnTTG1.2 (268) GGGGGCGACTCCTCGCTCCTCCGGCGACTTCCTCCGCTCTGGGAGGTCAACGAAGAC
 BrTTG1_P8 (268) GCGGGCGACTCCTCGCTCCTCCGGCGACTTCCTCCGCTCTGGGAGGTCAACGAAGAC
 BrTTG1_Tsuda (268) GCGGGCGACTCCTCGCTCCTCCGGCGACTTCCTCCGCTCTGGGAGGTCAACGAAGAC
 BrTTG1_Y195-93 (268) GCGGGCGACTCCTCGCTCCTCCGGCGACTTCCTCCGCTCTGGGAGGTCAACGAAGAC
 BrTTG1 (268) GCGGGCGACTCCTCGCTCCTCCGGCGACTTCCTCCGCTCTGGGAGGTCAACGAAGAC
 BoTTG1-1 (705) GGGGGCGACTCCTCGCTCCTCCGGCGACTTCCTCCGCTCTGGGAGGTCAACGAAGAC
 BoTTG1-2 (268) GGGGGCGACTCCTCGCTCCTCCGGCGACTTCCTCCGCTCTGGGAGGTCAACGAAGAC

 AtTTG1 (340) TCATCAACCGTCGAGCCAATCTCGGTCTCAACAACAGCAAAACGAGCGAGTTTGTGCG
 BnTTG1-1 (381) TCCTCCTCCGCGGAGCCAGTATCCGTCTCAACAACAGCAAGACGAGCGAGTTCTGCGCG
 BnTTG1-2 (383) TCCTCCTCCGCGGAGCCAGTATCCGTCTCAACAACAGCAAGACGAGCGAGTTCTGCGCG
 BnTTG1.1 (328) TCCTCCTCCGCGGAGCCAGTATCCGTCTCAACAACAGCAAGACGAGCGAGTTCTGCGCG
 BnTTG1.2 (328) TCCTCCTCCGCGGAGCCAGTATCCGTCTCAACAACAGCAAGACGAGCGAGTTCTGCGCG
 BrTTG1_P8 (328) TCCTCCTCCGCGGAGCCAGTATCCGTCTCAACAACAGCAAGACGAGCGAGTTCTGCGCG
 BrTTG1_Tsuda (328) TCCTCCTCCGCGGAGCCAGTATCCGTCTCAACAACAGCAAGACGAGCGAGTTCTGCGCG
 BrTTG1_Y195-93 (328) TCCTCCTCCGCGGAGCCAGTATCCGTCTCAACAACAGCAAGACGAGCGAGTTCTGCGCG
 BrTTG1 (328) TCCTCCTCCGCGGAGCCAGTATCCGTCTCAACAACAGCAAGACGAGCGAGTTCTGCGCG
 BoTTG1-1 (765) TCCTCCTCCGCGGAGCCAGTATCCGTCTCAACAACAGCAAGACGAGCGAGTTCTGCGCG
 BoTTG1-2 (328) TCCTCCTCCGCGGAGCCAGTATCCGTCTCAACAACAGCAAGACGAGCGAGTTCTGCGCG

 AtTTG1 (400) CCGTTGACTTCTTCGATTGGAACGATGTAGAGCCGAAACGTCTCGAACTTGTAGTATT
 BnTTG1-1 (441) CCGCTGACCTCCTTCGACTGGAACGACGTGAGCCGAAGCGGTTAGGCACGTGCAGCATC
 BnTTG1-2 (443) CCGCTGACCTCCTTCGACTGGAACGACGTGAGCCGAAGCGGTTAGGCACGTGCAGCATC
 BnTTG1.1 (388) CCGCTGACCTCCTTCGACTGGAACGACGTGAGCCGAAGCGGTTAGGCACGTGCAGCATC
 BnTTG1.2 (388) CCGCTGACCTCCTTCGACTGGAACGACGTGAGCCGAAGCGGTTAGGCACGTGCAGCATC
 BrTTG1_P8 (388) CCGCTGACCTCCTTCGACTGGAACGACGTGAGCCGAAGCGGTTAGGCACGTGCAGCATC
 BrTTG1_Tsuda (388) CCGCTGACCTCCTTCGACTGGAACGACGTGAGCCGAAGCGGTTAGGCACGTGCAGCATC
 BrTTG1_Y195-93 (388) CCGCTGACCTCCTTCGACTGGAACGACGTGAGCCGAAGCGGTTAGGCACGTGCAGCATC
 BrTTG1 (388) CCGCTGACCTCCTTCGACTGGAACGACGTGAGCCGAAGCGGTTAGGCACGTGCAGCATC
 BoTTG1-1 (825) CCGCTGACCTCCTTCGACTGGAACGACGTGAGCCGAAGCGGTTAGGCACGTGCAGCATC
 BoTTG1-2 (388) CCGCTGACCTCCTTCGACTGGAACGACGTGAGCCGAAGCGGTTAGGCACGTGCAGCATC

 AtTTG1 (460) GATACGACGTGTACGATTTGGGATATTGAGAAGTCTGTTGTTGAGACTCAGCTTATAGCT
 BnTTG1-1 (501) GACACCACGTGCACGATCTGGGACGTGGAGAGGTCCGTGGTGGAGACGCAGCTCATCCGG
 BnTTG1-2 (503) GACACCACGTGCACGATCTGGGACGTGGAGAGGTCCGTGGTGGAGACGCAGCTCATCCGG
 BnTTG1.1 (448) GACACCACGTGCACGATCTGGGACGTGGAGAGGTCCGTGGTGGAGACGCAGCTCATCCGG
 BnTTG1.2 (448) GACACCACGTGCACGATCTGGGACGTGGAGAGGTCCGTGGTGGAGACGCAGCTCATCCGG
 BrTTG1_P8 (448) GACACCACGTGCACGATCTGGGACGTGGAGAGGTCCGTGGTGGAGACGCAGCTCATCCGG
 BrTTG1_Tsuda (448) GACACCACGTGCACGATCTGGGACGTGGAGAGGTCCGTGGTGGAGACGCAGCTCATCCGG
 BrTTG1_Y195-93 (448) GACACCACGTGCACGATCTGGGACGTGGAGAGGTCCGTGGTGGAGACGCAGCTCATCCGG
 BrTTG1 (448) GACACCACGTGCACGATCTGGGACGTGGAGAGGTCCGTGGTGGAGACGCAGCTCATCCGG
 BoTTG1-1 (885) GACACCACGTGCACGATCTGGGACGTGGAGAGGTCCGTGGTGGAGACGCAGCTCATCCGG
 BoTTG1-2 (448) GACACCACGTGCACGATCTGGGACGTGGAGAGGTCCGTGGTGGAGACGCAGCTCATCCGG

 AtTTG1 (520) CATGATAAAGAGGTTTCATGACATTGCTTGGGGAGAAGCTAGGGTTTTTCGCATCAGTCTCT
 BnTTG1-1 (561) CACGACAAGGAGGTCCACGACATCGCTGGGGGGAGGCTAGGGTTTTTCGCCTCGGTCTCC
 BnTTG1-2 (563) CACGACAAGGAGGTCCACGACATCGCTGGGGGGAGGCTAGGGTTTTTCGCCTCGGTCTCC
 BnTTG1.1 (508) CACGACAAGGAGGTCCACGACATCGCTGGGGGGAGGCTAGGGTTTTTCGCCTCGGTCTCC
 BnTTG1.2 (508) CACGACAAGGAGGTCCACGACATCGCTGGGGGGAGGCTAGGGTTTTTCGCCTCGGTCTCC
 BrTTG1_P8 (508) CACGACAAGGAGGTCCACGACATCGCTGGGGGGAGGCTAGGGTTTTTCGCCTCGGTCTCC
 BrTTG1_Tsuda (508) CACGATAAAGAGGTTTCACGACATCGCTGGGGGGAGGCTAGGGTTTTTCGCCTCGGTCTCC
 BrTTG1_Y195-93 (508) CACGACAARGAGGTCCACGACATCGCTGGGGGGAGGCTAGGGTTTTTCGCCTCGGTCTCC
 BrTTG1 (508) CACGACAAGGAGGTCCACGACATCGCTGGGGGGAGGCTAGGGTTTTTCGCCTCGGTCTCC
 BoTTG1-1 (945) CACGACAAGGAGGTCCACGACATCGCTGGGGGGAGGCTAGGGTTTTTCGCCTCGGTCTCC
 BoTTG1-2 (508) CACGACAAGGAGGTCCACGACATCGCTGGGGGGAGGCTAGGGTTTTTCGCCTCGGTCTCC

AtTTG1 (580) GCTGATGGATCCGTTAGGATCTTTGATTTACGTGATAAGGAACATTCTACAATCATTTAC
 BnTTG1-1 (621) GCCGACGGATCGGTGAGGATCTTCGATCTGCGCGACAAGGA**GCAC**TCCACCATCATCTAC
 BnTTG1-2 (623) GCCGACGGATCGGTGAGGATCTTCGATCTGCGCGACAAGGA**GCAC**TCCACCATCATCTAC
 BnTTG1.1 (568) GCCGACGGATCGGTGAGGATCTTCGATCTGCGCGACAAGGA**GCAC**TCCACCATCATCTAC
 BnTTG1.2 (568) GCCGACGGATCGGTGAGGATCTTCGATCTGCGCGACAAGGA**GCAC**TCCACCATCATCTAC
 BrTTG1_P8 (568) GCCGACGGATCGGTGAGGATCTTCGATCTGCGCGACAAGGA**GCAC**TCCACCATCATCTAC
 BrTTG1_Tsuda (568) GCCGACGGATCGGTGAGGATCTTCGATCTGCGCGACAAGGAGCACTCCACCATCATCTAC
 BrTTG1_Y195-93 (568) GCCGACGGATCGGTGAGGATCTTCGATCTGCGCGACAAGGAGCACTCCACCATCATCTAC
 BrTTG1 (568) GCCGACGGATCGGTGAGGATCTTCGATCTGCGCGACAAGGAGCACTCCACCATCATCTAC
 BoTTG1-1 (1005) GCCGACGGATCGGTGAGGATCTTCGATCTGCGCGACAAGGAGCACTCCACCATCATCTAC
 BoTTG1-2 (568) GCCGACGGATCGGTGAGGATCTTCGATCTGCGCGACAAGGAGCACTCCACCATCATCTAC

 AtTTG1 (640) GAGAGTCTCAGCCTGATACGCCCTTTGTTAAGACTTGCTTGAACAACAAGATCTTAGA
 BnTTG1-1 (681) **G**AGAGCCCCAGCCCGATACGCCGCTCCTGAGGCTCGCGTGAACAAGCAGGACTTGAGG
 BnTTG1-2 (683) **G**AGAGCCCCAGCCCGATACGCCGCTCCTGAGGCTCGCGTGAACAAGCAGGACTTGCGG
 BnTTG1.1 (628) **G**AGAGCCCCAGCCCGATACGCCGCTCCTGAGGCTCGCGTGAACAAGCAGGACTTGAGG
 BnTTG1.2 (628) **G**AGAGCCCCAGCCCGATACGCCGCTCCTGAGGCTCGCGTGAACAAGCAGGACTTGCGG
 BrTTG1_P8 (628) GAGAGCCCCAGCCCGATACGCCGCTCCTGAGGCTCGCGTGAACAAGCAGGACTTGAGG
 BrTTG1_Tsuda (628) GAGAGCCCCAGCCCGATACGCCGCTCCTGAGGCTCGCGTGAACAAGCAGGACTTGAGG
 BrTTG1_Y195-93 (628) GAGAGCCCCAGCCCGATACGCCGCTCCTGAGGCTCGCGTGAACAAGCAGGACTTGAGG
 BrTTG1 (628) GAGAGCCCCAGCCCGATACGCCGCTCCTGAGGCTCGCGTGAACAAGCAGGACTTGAGG
 BoTTG1-1 (1065) GAGAGCCCCAGCCCGATACGCCGCTCCTGAGGCTCGCGTGAACAAGCAGGACTTGAGG
 BoTTG1-2 (628) GAGAGCCCCAGCCCGATACGCCGCTCCTGAGGCTCGCGTGAACAAGCAGGACTTGAGG

 AtTTG1 (700) TATATGGCTACGATTTTGATGGATTCTAATAAGGTTGTGATTCTCGATATTGCTTCGCCG
 BnTTG1-1 (741) TGTATGGCCACGATTCTGATGGATTCTGAATAAGGTTGTGATTCTCGATATTGCTTCGCCG
 BnTTG1-2 (743) TGTATGGCCACGATTCTGATGGATTCTGAATAAGGTTGTGATTCTCGATATTGCTTCGCCG
 BnTTG1.1 (688) TGTATGGCCACGATTCTGATGGATTCTGAATAAGGTTGTGATTCTCGATATTGCTTCGCCG
 BnTTG1.2 (688) TGTATGGCCACGATTCTGATGGATTCTGAATAAGGTTGTGATTCTCGATATTGCTTCGCCG
 BrTTG1_P8 (688) TGTATGGCCACGATTCTGATGGATTCTGAATAAGGTTGTGATTCTCGATATTGCTTCGCCG
 BrTTG1_Tsuda (688) TGTATGGCCACGATTCTGATGGATTCTGAATAAGGTTGTGATTCTCGATATTGCTTCGCCG
 BrTTG1_Y195-93 (688) TGTATGGCCACGATTCTGATGGATTCTGAATAAGGTTGTGATTCTCGATATTGCTTCGCCG
 BrTTG1 (688) TGTATGGCCACGATTCTGATGGATTCTGAATAAGGTTGTGATTCTCGATATTGCTTCGCCG
 BoTTG1-1 (1125) TGTATGGCCACGATTCTGATGGATTCTGAATAAGGTTGTGATTCTCGATATTGCTTCGCCG
 BoTTG1-2 (688) TGTATGGCCACGATTCTGATGGATTCTGAATAAGGTTGTGATTCTCGATATTGCTTCGCCG

 AtTTG1 (760) ACTATGCCTGTTGCTGAGCTTGAAAGACATCAGGCTAGTGTGAATGCTATAGCTTGGGCC
 BnTTG1-1 (801) ACGATGCCTGTGCGGAGCTGGAGCGCACCCAGGGGAGTGTGAATGCGATTGCTTGGGCC
 BnTTG1-2 (803) ACGATGCCTGTGCGGAGCTTGAAAGGCACCCAGGGGAGTGTGAACGCGATTGCTTGGGCC
 BnTTG1.1 (748) ACGATGCCTGTGCGGAGCTGGAGCGCACCCAGGGGAGTGTGAATGCGATTGCTTGGGCC
 BnTTG1.2 (748) ACGATGCCTGTGCGGAGCTTGAAAGGCACCCAGGGGAGTGTGAACGCGATTGCTTGGGCC
 BrTTG1_P8 (748) ACGATGCCTGTGCGGAGCTGGAGCGCACCCAGGGGAGTGTGAACGCGATTGCTTGGGCC
 BrTTG1_Tsuda (748) ACGATGCCTGTGCGGAGCTGGAGCGCACCCAGGGGAGTGTGAACGCGATTGCTTGGGCC
 BrTTG1_Y195-93 (748) ACGATGCCTGTGCGGAGCTGGAGCGCACCCAGGGGAGTGTGAACGCGATTGCTTGGGCC
 BrTTG1 (748) ACGATGCCTGTGCGGAGCTGGAGCGCACCCAGGGGAGTGTGAACGCGATTGCTTGGGCC
 BoTTG1-1 (1185) ACGATGCCTGTGCGGAGCTTGAAAGGCACCCAGGGGAGTGTGAATGCGATTGCTTGGGCC
 BoTTG1-2 (748) ACGATGCCTGTGCGGAGCTTGAAAGGCACCCAGGGGAGTGTGAACGCGATTGCTTGGGCC

 AtTTG1 (820) CCTCAGAGCTGTAACATATCTGCTCGGGTGGGATGACGCGCAGGCTCTTATCTGGGAG
 BnTTG1-1 (861) CCGCAGAGCTGTAAGCATATCTGCTCGGGTGGGATGACGCGCAGGCTCTTATCTGGGAG
 BnTTG1-2 (863) CCGCAGAGCTGTAAGCATATCTGCTCGGGTGGGATGACGCGCAGGCTCTTATCTGGGAG
 BnTTG1.1 (808) CCGCAGAGCTGTAAGCATATCTGCTCGGGTGGGATGACGCGCAGGCTCTTATCTGGGAG
 BnTTG1.2 (808) CCGCAGAGCTGTAAGCATATCTGCTCGGGTGGGATGACGCGCAGGCTCTTATCTGGGAG
 BrTTG1_P8 (808) CCGCAGAGCTGTAAGCATATCTGCTCGGGTGGGATGACGCGCAGGCTCTTATCTGGGAG
 BrTTG1_Tsuda (808) CCGCAGAGCTGTAAGCATATCTGCTCGGGTGGGATGACGCGCAGGCTCTTATCTGGGAG
 BrTTG1_Y195-93 (808) CCGCAGAGCTGTAAGCATATCTGCTCGGGTGGGATGACGCGCAGGCTCTTATCTGGGAG
 BrTTG1 (808) CCGCAGAGCTGTAAGCATATCTGCTCGGGTGGGATGACGCGCAGGCTCTTATCTGGGAG
 BoTTG1-1 (1245) CCGCAGAGCTGTAAGCATATCTGCTCGGGTGGGATGACGCGCAGGCTCTTATCTGGGAG
 BoTTG1-2 (808) CCGCAGAGCTGTAAGCATATCTGCTCGGGTGGGATGACGCGCAGGCTCTTATCTGGGAG

 AtTTG1 (880) CTTCTACTGTTGCTGGACCAATGGGATTGATCCGATGTGCGGTTTATCTGGCTGGTTCC
 BnTTG1-1 (921) TTGCCGACGATGGCTGGACCGAATGGGATTGATCCATGTGCGGTTTACTCGGCCGGTTCC
 BnTTG1-2 (923) TTGCCGACGATGGCTGGGCCGAATGGGATTGATCCATGTGCGGTTTACTCGGCCGGTTCC

BnTTG1.1 (868) TTGCCGACGATGGCTGGACCGAATGGGATTGATCCATGTCCGGTTACTCGGCCGGTTCCG
 BnTTG1.2 (868) TTGCCGACGATGGCTGGGCCGAATGGGATTGATCCATGTCCGGTTACTCGGCCGGTTCCG
 BrTTG1_P8 (868) TTGCCGACGATGGCTGGACCGAATGGGATTGATCCATGTCCGGTTACTCGGCCGGTTCCG
 BrTTG1_Tsuda (868) TTGCCGACGATGGCTGGACCGAATGGGATTGATCCGATGTCCGGTTACTCGGCCGGTTCCG
 BrTTG1_Y195-93 (868) TTGCCGACGATGGCTGGACCGAATGGGATTGATCCGATGTCCGGTTACTCGGCCGGTTCCG
 BrTTG1 (868) TTGCCGACGATGGCTGGACCGAATGGGATTGATCCATGTCCGGTTACTCGGCCGGTTCCG
 BoTTG1-1 (1305) TTGCCGACGATGGCTGGACCGAATGGGATTGATCCATGTCCGGTTACTCGGCCGGTTCCG
 BoTTG1-2 (868) TTGCCGACGATGGCTGGGCCGAATGGGATTGATCCATGTCCGGTTACTCGGCCGGTTCCG

AtTTG1 (940) GAGATTAATCAGTTGCAGTGGTCTTCTTCGTCAGCCTGATTGGATTGGTATTGCTTTTGCT
 BnTTG1-1 (981) GAGATTAACCAGCTGCAGTGGTCTTCTTCGTTGCCTGATTGGATTGGCATTGCGTTTGCT
 BnTTG1-2 (983) GAGATTAACCAGTTGCAGTGGTCTTCTCTGCCTGATTGGATTGGCATTGCGTTTGCT
 BnTTG1.1 (928) GAGATTAACCAGCTGCAGTGGTCTTCTTCGTTGCCTGATTGGATTGGCATTGCGTTTGCT
 BnTTG1.2 (928) GAGATTAACCAGTTGCAGTGGTCTTCTCTGCCTGATTGGATTGGCATTGCGTTTGCT
 BrTTG1_P8 (928) GAGATTAACCAGCTGCAGTGGTCTTCTTCGTTGCCTGATTGGATTGGCATTGCGTTTGCT
 BrTTG1_Tsuda (928) GAGATTAACCAGCTGCAGTGGTCTTCTTCGTTGCCTGATTGGATTGGCATTGCGTTTGCT
 BrTTG1_Y195-93 (928) GAGATTAACCAGCTGCAGTGGTCTTCTTCGTTGCCTGATTGGATTGGCATTGCGTTTGCT
 BrTTG1 (928) GAGATTAACCAGCTGCAGTGGTCTTCTTCGTTGCCTGATTGGATTGGCATTGCGTTTGCT
 BoTTG1-1 (1365) GAGATTAACCAGTTGCAGTGGTCTTCTTCGCTGCCTGATTGGATCGGCATTGCTTTCGCT
 BoTTG1-2 (928) GAGATTAACCAGTTGCAGTGGTCTTCTTCGCTGCCTGATTGGATCGGCATTGCTTTCGCT

AtTTG1 (1000) AACAAAATGCAGCTCCTTAGAGTTTGA-----
 BnTTG1-1 (1041) AACAAAATGCAGCTCCTTAGAGTTTGAGATGCAGATGGGGAAGTGATCAAAAATGGGAGAT
 BnTTG1-2 (1043) AACAAAATGCAGCTCCTCAGAGTTTGAAGGTGGGGAAGTGATCAAAAATCAGA-GATAGCA
 BnTTG1.1 (988) AACAAAATGCAGCTCCTTAGAGTTTGA-----
 BnTTG1.2 (988) AACAAAATGCAGCTCCTTAGAGTTTGA-----
 BrTTG1_P8 (988) AACAAAATGCAGCTCCTTAGAGTTTGA-----
 BrTTG1_Tsuda (988) AACAAAATGCAGCTCCTTAGAGTTTGA-----
 BrTTG1_Y195-93 (988) AACAAAATGCAGCTCCTTAGAGTTTGA-----
 BrTTG1 (988) AACAAAATGCAGCTCCTTAGAGTTTGA-----
 BoTTG1-1 (1425) AACAAAATGCAGCTCCTCAGAGTTTGAAGTTTCGTATTGTTTTGAAAGTATGA-AATTGAT
 BoTTG1-2 (988) AACAAAATGCAGCTCCTCAGAGTTTGA-----

AtTTG1 (1027) -----
 BnTTG1-1 (1101) AGCATTAGACCCGTGGAACCAGTGCCTAAGCTTAGTGGGGTTTGGTGCAACCACATTCTG
 BnTTG1-2 (1102) TAGACCCGTGTAACCAGTGCCTAAGCTTAGTAGGGTTTGGTTGGTGCAAGCACATTCTG
 BnTTG1.1 (1015) -----
 BnTTG1.2 (1015) -----
 BrTTG1_P8 (1015) -----
 BrTTG1_Tsuda (1015) -----
 BrTTG1_Y195-93 (1015) -----
 BrTTG1 (1015) -----
 BoTTG1-1 (1484) GATATCTCACTTGGTTAGTAGTGCCATAGTAGTCTTCTTGTAGCTAAAGATGGAGTCTTT
 BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
 BnTTG1-1 (1161) GTTCTTTGATTTCGCAATGCGTCTCTGCATCTATGTGATTGTAACCTAAGACTTTATTCGT
 BnTTG1-2 (1162) GTTCTTTGATTTCGCAATGCCTCTATGCATCTATGTGATCGTAACCTAAGACTTTATTCGC
 BnTTG1.1 (1015) -----
 BnTTG1.2 (1015) -----
 BrTTG1_P8 (1015) -----
 BrTTG1_Tsuda (1015) -----
 BrTTG1_Y195-93 (1015) -----
 BrTTG1 (1015) -----
 BoTTG1-1 (1544) ATTGCACTTTCACTAGGGTTTTAGGTGGACTATAGTTTCTGATGAAATGCAACCAGTTTC
 BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
 BnTTG1-1 (1221) TTGGTGTACCAAATGCTCTACTATTTTATTATCTCTGTTTGTGTATAAACCAACCAGGA
 BnTTG1-2 (1222) TTGGTGTACCAAATGCTCTACTATTTTATTATCTCTGTTTGTGTATAAACCAACCAGGA
 BnTTG1.1 (1015) -----
 BnTTG1.2 (1015) -----
 BrTTG1_P8 (1015) -----

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BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
  BrTTG1 (1015) -----
  BoTTG1-1 (1604) TTTGTTATTCATCATCTCATGTTTGATATAAACATTTTATATTTTTTGTGCTGCATTTT
  BoTTG1-2 (1015) -----

  AtTTG1 (1027) -----
  BnTTG1-1 (1281) TAATAATAATGTTATTGCGGTGGTTTCTGGTGTGGATTGTGTAATCGGAGCTTTAGTAC
  BnTTG1-2 (1282) TAATAATGTTATTGCGGTGGTTAAAAAATAAAAAAAAAAAAAAAAA-----
  BnTTG1.1 (1015) -----
  BnTTG1.2 (1015) -----
  BrTTG1_P8 (1015) -----
  BrTTG1_Tsuda (1015) -----
  BrTTG1_Y195-93 (1015) -----
  BrTTG1 (1015) -----
  BoTTG1-1 (1664) CCGTTATAGTTGCTAACTATTTCACTTGGTGTGATGCAGGTGGGGAAGTGATCAAAAA
  BoTTG1-2 (1015) -----

  AtTTG1 (1027) -----
  BnTTG1-1 (1341) AACGCACCCTGTCTTAAAAAAAAAAAAAAAAAAAAAAAA-----
  BnTTG1-2 (1327) -----
  BnTTG1.1 (1015) -----
  BnTTG1.2 (1015) -----
  BrTTG1_P8 (1015) -----
  BrTTG1_Tsuda (1015) -----
  BrTTG1_Y195-93 (1015) -----
  BrTTG1 (1015) -----
  BoTTG1-1 (1724) TCGGAGATAGCATAGACCCGTGTAACCAGTGCCTAAGCTTAGTAGGGTTGGTTGGTGCA
  BoTTG1-2 (1015) -----

  AtTTG1 (1027) -----
  BnTTG1-1 (1377) -----
  BnTTG1-2 (1327) -----
  BnTTG1.1 (1015) -----
  BnTTG1.2 (1015) -----
  BrTTG1_P8 (1015) -----
  BrTTG1_Tsuda (1015) -----
  BrTTG1_Y195-93 (1015) -----
  BrTTG1 (1015) -----
  BoTTG1-1 (1784) AAGCACATTCTGGTTTCTTTGATTGCAATGCCTCTATGCATCTATGTGATCGTAACTAA
  BoTTG1-2 (1015) -----

  AtTTG1 (1027) -----
  BnTTG1-1 (1377) -----
  BnTTG1-2 (1327) -----
  BnTTG1.1 (1015) -----
  BnTTG1.2 (1015) -----
  BrTTG1_P8 (1015) -----
  BrTTG1_Tsuda (1015) -----
  BrTTG1_Y195-93 (1015) -----
  BrTTG1 (1015) -----
  BoTTG1-1 (1844) GACTTTATTGCTTGGTGTACCAAATGCTCTACTATTTAATCTCTGTTTGTGTATAAAC
  BoTTG1-2 (1015) -----

  AtTTG1 (1027) -----
  BnTTG1-1 (1377) -----
  BnTTG1-2 (1327) -----
  BnTTG1.1 (1015) -----
  BnTTG1.2 (1015) -----
  BrTTG1_P8 (1015) -----
  BrTTG1_Tsuda (1015) -----
  BrTTG1_Y195-93 (1015) -----
  BrTTG1 (1015) -----

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BoTTG1-1 (1904) CAAACCAGGATAATAATGTTATTGCGGTGGTTTCTGGTGTGGATTGTAGTTGGAGTA
 BoTTG1-2 (1015) -----

 AtTTG1 (1027) -----
 BnTTG1-1 (1377) -----
 BnTTG1-2 (1327) -----
 BnTTG1.1 (1015) -----
 BnTTG1.2 (1015) -----
 BrTTG1_P8 (1015) -----
 BrTTG1_Tsuda (1015) -----
 BrTTG1_Y195-93 (1015) -----
 BrTTG1 (1015) -----
 BoTTG1-1 (1964) AAATGGCATCTACTTGTTCATGGGTTACTTAGTTTCTAAACAAAAACAATTGTGTAAGATT
 BoTTG1-2 (1015) -----

 AtTTG1 (1027) -----
 BnTTG1-1 (1377) -----
 BnTTG1-2 (1327) -----
 BnTTG1.1 (1015) -----
 BnTTG1.2 (1015) -----
 BrTTG1_P8 (1015) -----
 BrTTG1_Tsuda (1015) -----
 BrTTG1_Y195-93 (1015) -----
 BrTTG1 (1015) -----
 BoTTG1-1 (2024) AGATAGATTACAGGTTCCAACCTT TAGGCACACATGAAAATAACTTCAAATGAAAAACA
 BoTTG1-2 (1015) -----

 AtTTG1 (1027) -----
 BnTTG1-1 (1377) -----
 BnTTG1-2 (1327) -----
 BnTTG1.1 (1015) -----
 BnTTG1.2 (1015) -----
 BrTTG1_P8 (1015) -----
 BrTTG1_Tsuda (1015) -----
 BrTTG1_Y195-93 (1015) -----
 BrTTG1 (1015) -----
 BoTTG1-1 (2084) AATCATCTGACTCCACCTTTTGGTATTACATTTGTTGCACTTTCATTTCTTTTACCT
 BoTTG1-2 (1015) -----

 AtTTG1 (1027) -----
 BnTTG1-1 (1377) -----
 BnTTG1-2 (1327) -----
 BnTTG1.1 (1015) -----
 BnTTG1.2 (1015) -----
 BrTTG1_P8 (1015) -----
 BrTTG1_Tsuda (1015) -----
 BrTTG1_Y195-93 (1015) -----
 BrTTG1 (1015) -----
 BoTTG1-1 (2144) CAAAAAGTAGAACAGAATAATCTACAAAGAGTCGTTTGGCTTCTTCTTTTATGTACATGG
 BoTTG1-2 (1015) -----

 AtTTG1 (1027) -----
 BnTTG1-1 (1377) -----
 BnTTG1-2 (1327) -----
 BnTTG1.1 (1015) -----
 BnTTG1.2 (1015) -----
 BrTTG1_P8 (1015) -----
 BrTTG1_Tsuda (1015) -----
 BrTTG1_Y195-93 (1015) -----
 BrTTG1 (1015) -----
 BoTTG1-1 (2204) TTCCCTGAACTCGATAACAAATTAAGAATCGTTACCTCAGTCCAGTTCTTTATCAAAT
 BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
BnTTG1-1 (1377) -----
BnTTG1-2 (1327) -----
BnTTG1.1 (1015) -----
BnTTG1.2 (1015) -----
BrTTG1_P8 (1015) -----
BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
BrTTG1 (1015) -----
BoTTG1-1 (2264) TCATCACAAGATATATATACTTGATGTTAAAAGTGGAAAATGATTCTAAATGATATTGTA
BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
BnTTG1-1 (1377) -----
BnTTG1-2 (1327) -----
BnTTG1.1 (1015) -----
BnTTG1.2 (1015) -----
BrTTG1_P8 (1015) -----
BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
BrTTG1 (1015) -----
BoTTG1-1 (2324) CCATCTATGATACAATATAACGTACGAATGGTAGAAGTACGTGAAATAGTTTAGTCTTGA
BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
BnTTG1-1 (1377) -----
BnTTG1-2 (1327) -----
BnTTG1.1 (1015) -----
BnTTG1.2 (1015) -----
BrTTG1_P8 (1015) -----
BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
BrTTG1 (1015) -----
BoTTG1-1 (2384) ACTCAAACCTCGAGTGTAAAGCTAACTTATCAGATTATGAAATCATTTTTTTCTTGAAGTA
BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
BnTTG1-1 (1377) -----
BnTTG1-2 (1327) -----
BnTTG1.1 (1015) -----
BnTTG1.2 (1015) -----
BrTTG1_P8 (1015) -----
BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
BrTTG1 (1015) -----
BoTTG1-1 (2444) AGCATAATCCAAATTTGTTGCTAACATTAGCAGTTTGATGTGGAGCTGAAGCAAATGCCTT
BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
BnTTG1-1 (1377) -----
BnTTG1-2 (1327) -----
BnTTG1.1 (1015) -----
BnTTG1.2 (1015) -----
BrTTG1_P8 (1015) -----
BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
BrTTG1 (1015) -----
BoTTG1-1 (2504) GTATAAACCTTGTGGAAGACATTTGCTATAGCATTGTGCTCCGATACCATGTACAACAT
BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
BnTTG1-1 (1377) -----
BnTTG1-2 (1327) -----

BnTTG1.1 (1015) -----
BnTTG1.2 (1015) -----
BrTTG1_P8 (1015) -----
BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
BrTTG1 (1015) -----
BoTTG1-1 (2564) AAAGCTAATGTGTTCAAACCTTTAACTGGCAAAGCTTGCTAAGATTATATGTTTTCGTCAAA
BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
BnTTG1-1 (1377) -----
BnTTG1-2 (1327) -----
BnTTG1.1 (1015) -----
BnTTG1.2 (1015) -----
BrTTG1_P8 (1015) -----
BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
BrTTG1 (1015) -----
BoTTG1-1 (2624) ATCAAGTTCGGAACCCACTAGCCAGAGAGAAATAGTTAAAGCGATTACAAGTTTTAAAAA
BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
BnTTG1-1 (1377) -----
BnTTG1-2 (1327) -----
BnTTG1.1 (1015) -----
BnTTG1.2 (1015) -----
BrTTG1_P8 (1015) -----
BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
BrTTG1 (1015) -----
BoTTG1-1 (2684) CCTAAATTAGGGAAGTCACACTAAAAATCTTTACAAAAGCGAAAATCACAATGTTTATCT
BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
BnTTG1-1 (1377) -----
BnTTG1-2 (1327) -----
BnTTG1.1 (1015) -----
BnTTG1.2 (1015) -----
BrTTG1_P8 (1015) -----
BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
BrTTG1 (1015) -----
BoTTG1-1 (2744) ACAAAAATATATTCGCCATATGTTGGGTATGAAATAAACCGTTTTTCCTTATGCTGACATA
BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
BnTTG1-1 (1377) -----
BnTTG1-2 (1327) -----
BnTTG1.1 (1015) -----
BnTTG1.2 (1015) -----
BrTTG1_P8 (1015) -----
BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
BrTTG1 (1015) -----
BoTTG1-1 (2804) TGCAAATGGGAATGATGTGTATTTGTGAAGCGAACCCTTTTTCCTTTCCACATATACAAA
BoTTG1-2 (1015) -----

AtTTG1 (1027) -----
BnTTG1-1 (1377) -----
BnTTG1-2 (1327) -----
BnTTG1.1 (1015) -----
BnTTG1.2 (1015) -----
BrTTG1_P8 (1015) -----

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BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
  BrTTG1 (1015) -----
  BoTTG1-1 (2864) TTGTTCCCTCCTACTTTCATATGTGTAAACCACGATCCTTTTTTAGTTTTTTTAACT
  BoTTG1-2 (1015) -----

  AtTTG1 (1027) -----
  BnTTG1-1 (1377) -----
  BnTTG1-2 (1327) -----
  BnTTG1.1 (1015) -----
  BnTTG1.2 (1015) -----
  BrTTG1_P8 (1015) -----
  BrTTG1_Tsuda (1015) -----
  BrTTG1_Y195-93 (1015) -----
    BrTTG1 (1015) -----
    BoTTG1-1 (2924) CATTATTACGATGTTACAATTATGATATAGGAAAGATTACATAGACGATTGACAAACCG
    BoTTG1-2 (1015) -----

    AtTTG1 (1027) -----
    BnTTG1-1 (1377) -----
    BnTTG1-2 (1327) -----
    BnTTG1.1 (1015) -----
    BnTTG1.2 (1015) -----
    BrTTG1_P8 (1015) -----
    BrTTG1_Tsuda (1015) -----
    BrTTG1_Y195-93 (1015) -----
      BrTTG1 (1015) -----
      BoTTG1-1 (2984) ACAATACTACCTGCCTTATGAAGACCTACGCCTAACTGCATCATCTGAGCCGTCCTATGA
      BoTTG1-2 (1015) -----

      AtTTG1 (1027) -----
      BnTTG1-1 (1377) -----
      BnTTG1-2 (1327) -----
      BnTTG1.1 (1015) -----
      BnTTG1.2 (1015) -----
      BrTTG1_P8 (1015) -----
      BrTTG1_Tsuda (1015) -----
      BrTTG1_Y195-93 (1015) -----
        BrTTG1 (1015) -----
        BoTTG1-1 (3044) AGATCCACGCCTGATCAGATTTACTTGCACCATGTTGAAGATCCCTTGCAAGTCTTCTCT
        BoTTG1-2 (1015) -----

        AtTTG1 (1027) -----
        BnTTG1-1 (1377) -----
        BnTTG1-2 (1327) -----
        BnTTG1.1 (1015) -----
        BnTTG1.2 (1015) -----
        BrTTG1_P8 (1015) -----
        BrTTG1_Tsuda (1015) -----
        BrTTG1_Y195-93 (1015) -----
          BrTTG1 (1015) -----
          BoTTG1-1 (3104) CTGTAGTCTCCATAATTGTTTAATAAACCGCTCACTCCGGACTTGAACCTGGATTTCTCT
          BoTTG1-2 (1015) -----

          AtTTG1 (1027) -----
          BnTTG1-1 (1377) -----
          BnTTG1-2 (1327) -----
          BnTTG1.1 (1015) -----
          BnTTG1.2 (1015) -----
          BrTTG1_P8 (1015) -----
          BrTTG1_Tsuda (1015) -----
          BrTTG1_Y195-93 (1015) -----
            BrTTG1 (1015) -----

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BoTTG1-1 (3164) GCAATCTGCAATAAATTGCATAGTCTGGGATTCGAACCCAGACCTGGGTGTAGATGCCT
BoTTG1-2 (1015) -----

    AtTTG1 (1027) -----
    BnTTG1-1 (1377) -----
    BnTTG1-2 (1327) -----
    BnTTG1.1 (1015) -----
    BnTTG1.2 (1015) -----
    BrTTG1_P8 (1015) -----
    BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
    BrTTG1 (1015) -----
    BoTTG1-1 (3224) TTAAACTTTAACCAATAGGCTACGGTGCTTCCACAAAATCCTTTTTTAGTTAAACTGTGA
    BoTTG1-2 (1015) -----

    AtTTG1 (1027) -----
    BnTTG1-1 (1377) -----
    BnTTG1-2 (1327) -----
    BnTTG1.1 (1015) -----
    BnTTG1.2 (1015) -----
    BrTTG1_P8 (1015) -----
    BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
    BrTTG1 (1015) -----
    BoTTG1-1 (3284) TTTTAATTGGGCATCTTTGGTAGTTTCTAAAGTAGTGTCAAATAAATACTTACTGTAAGA
    BoTTG1-2 (1015) -----

    AtTTG1 (1027) -----
    BnTTG1-1 (1377) -----
    BnTTG1-2 (1327) -----
    BnTTG1.1 (1015) -----
    BnTTG1.2 (1015) -----
    BrTTG1_P8 (1015) -----
    BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
    BrTTG1 (1015) -----
    BoTTG1-1 (3344) GTTTGTGTTCTTGATTATTCTTTTTTTGTCAAGTATAAAGTAAAAGATTCTTGTATTA
    BoTTG1-2 (1015) -----

    AtTTG1 (1027) -----
    BnTTG1-1 (1377) -----
    BnTTG1-2 (1327) -----
    BnTTG1.1 (1015) -----
    BnTTG1.2 (1015) -----
    BrTTG1_P8 (1015) -----
    BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
    BrTTG1 (1015) -----
    BoTTG1-1 (3404) GTCTTCCAGTTAGTATTCTTTTTTAATATTGTGAAAAGCATAGACTTATAAAAGTACA
    BoTTG1-2 (1015) -----

    AtTTG1 (1027) -----
    BnTTG1-1 (1377) -----
    BnTTG1-2 (1327) -----
    BnTTG1.1 (1015) -----
    BnTTG1.2 (1015) -----
    BrTTG1_P8 (1015) -----
    BrTTG1_Tsuda (1015) -----
BrTTG1_Y195-93 (1015) -----
    BrTTG1 (1015) -----
    BoTTG1-1 (3464) CATGTAAAGCTACATTTAATCTATGTGGAAGCATTTTTTGGAAGTCCTAGGATCCTATAA
    BoTTG1-2 (1015) -----

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AtTTG1 (1027) -----
 BnTTG1-1 (1377) -----
 BnTTG1-2 (1327) -----
 BnTTG1.1 (1015) -----
 BnTTG1.2 (1015) -----
 BrTTG1_P8 (1015) -----
 BrTTG1_Tsuda (1015) -----
 BrTTG1_Y195-93 (1015) -----
 BrTTG1 (1015) -----
 BoTTG1-1 (3524) CTCATTTTATTGAGTTTACACACAGAACTCAACAGTT
 BoTTG1-2 (1015) -----

14. BnTT2

AtTT2 (1) -----
 BnTT2-1 (1) AATCTATTCTCAACACAACGCTAAAGACAAGTCTACCAACCACACAACAACAAGAGAGAT
 BnTT2-2 (1) AATCTATTCTCAACACAACGCTAAAGACAAGTCTACCAACCACACAACAACAAGAGAGAT
 BnTT2-3 (1) AATCTATTCTCAACACAACGCTAAAGACAAGTCTACCAACCACACAACAACAAGAGAGAT
 BrTT2 (1) -----AT
 BoTT2 (1) -----

AtTT2 (1) -ATGGAAAGAGAGCAACTACTAGTGTGAGGAGAGAAGAGTTAAACAGAGGAGCTTGGAC
 BnTT2-1 (61) GATGAGAAAGAGAGAAAAGTAGTAAGGTGAAGAAAGAGGAGTTAAACAGAGGAGCTTGGAC
 BnTT2-2 (61) GATGAGAAAGAGAGAAAAGTAGTAGGGTGAAGAAAGAGGAGTTAAACAGAGGAGCTTGGAC
 BnTT2-3 (61) GATGAGAAAGAGAGAAAAGTAGTAAGGTGAAGAAAGAGGAGTTAAACAGAGGGGCTTGGAC
 BrTT2 (3) GATGAGAAAGAGAGAAAAGTAGTAAGGTGAAGAAAGAGGAGTTAAACAGAGGAGCTTGGAC
 BoTT2 (1) -ATGAGAAAGAGAGAAAAGTAGTAGGGTGAAGAAAGAGGAGTTAAACAGAGGAGCTTGGAC

AtTT2 (60) TGATCATGAAGACAAGATCCTTAGAGATTACATCACCACTCACGGCGAAGGCAAATGGAG
 BnTT2-1 (121) CGATCAAGAAGACAAGATCCTTAAAGACTATATCATGTTCCACGGCGAAGGAAAAATGGAG
 BnTT2-2 (121) CGATCAAGAAGACAAGATCCTTAAAGACTATATCATGTTCCACGGCGAAGGAAAAATGGAG
 BnTT2-3 (121) CGATCAAGAAGACAAGATCCTTAAAGACTATATCATGTTCCACGGCGAAGGAAAAATGGAG
 BrTT2 (63) CGATCAAGAAGACAAGATCCTTAAAGACTATATCATGTTCCACGGCGAAGGAAAAATGGAG
 BoTT2 (60) CGATCAAGAAGACAAGATCCTTAAAGACTATATCATGTTCCACGGCGAAGGAAAAATGGAG

AtTT2 (120) CACTCTCCCTAACCAAGCTGGTCTCAAGAGGTGTGGCAAAGCTGTAGACTTCGGTGGAA
 BnTT2-1 (181) CACACTCCCAAACCAAGCTGGTCTCAAGAGGTGTGGCAAAGCTGCAGACTTCGGTGGAA
 BnTT2-2 (181) CACACTCCCAAACCAAGCTGGTCTCAAGAGGTGTGGCAAAGCTGCAGACTTCGGTGGAA
 BnTT2-3 (181) CACACTCCCAAACCAAGCTGGTCTCAAGAGGTGTGGCAAAGCTGCAGACTTCGGTGGAA
 BrTT2 (123) CACACTCCCAAACCAAGCTGGTCTCAAGAGGTGTGGCAAAGCTGCAGACTTCGGTGGAA
 BoTT2 (120) CACACTCCCAAACCAAGCTGGTCTCAAGAGGTGTGGCAAAGCTGCAGACTTCGGTGGAA

AtTT2 (180) GAACTACTTAAGACCGGGGATAAAGCGCGGTAACATCTCATCTGATGAAGAAGAACTTAT
 BnTT2-1 (241) GAACTACTTGAGACCAGGCATAAAGCGCGGAAACATCTCATCTGATGAAGAAGAACTTAT
 BnTT2-2 (241) GAACTACTTGAGACCAGGCATAAAGCGCGGAAACATCTCATCTGATGAAGAAGAACTTAT
 BnTT2-3 (241) GAACTACTTGAGACCAGGCATAAAGCGCGGAAACATCTCATCTGATGAAGAAGAACTTAT
 BrTT2 (183) GAACTACTTGAGACCAGGCATAAAGCGCGGAAACATCTCATCTGATGAAGAAGAACTTAT
 BoTT2 (180) GAACTACTTGAGACCAGGCATAAAGCGCGGAAACATCTCATCTGATGAAGAAGAACTTAT

AtTT2 (240) AATCCGCTCCATAATCTCTTGGAAACAGATGGTCGTTGATAGCTGGGAGGCTTCCAGG
 BnTT2-1 (301) AATCCGCTCCATAATCTCCTTGGAAACAGATGGTCGTTGATAGCTGGGAGGCTTCCAGG
 BnTT2-2 (301) AATCCGCTCCATAATCTCCTTGGAAACAGATGGTCGTTGATAGCTGGGAGGCTTCCAGG
 BnTT2-3 (301) AATCCGCTCCATAATCTCCTTGGAAACAGATGGTCGTTGATAGCTGGGAGGCTTCCAGG
 BrTT2 (243) AATCCGCTCCATAATCTCTTGGAAACAGATGGTCGTTGATAGCTGGGAGGCTTCCAGG
 BoTT2 (240) AATCCGCTCCATAATCTCTTGGAAACAGATGGTCGTTGATAGCTGGGAGGCTTCCAGG

AtTT2 (300) CCGAACAGACAATGAAATAAAGAATCATTGGAACCTCAAACCTCCGCAAAGACTTCCAAA
 BnTT2-1 (361) GCGAACAGACAATGAAATAAAGAACCCTGGAACCTCAAACCTCCGCAAAGACTTCCAAA
 BnTT2-2 (361) GCGAACAGACAATGAAATAAAGAACCCTGGAACCTCAAACCTCCGCAAAGACTTCCAAA
 BnTT2-3 (361) GCGAACAGACAATGAAATAAAGAACCCTGGAACCTCAAACCTCCGCAAAGACTTCCAAA
 BrTT2 (303) GCGAACAGACAATGAAATAAAGAACCCTGGAACCTCAAACCTCCGCAAAGACTTCCAAA
 BoTT2 (300) GCGAACAGACAATGAAATAAAGAACCCTGGAACCTCAAACCTCCGCAAAGACTTCCAAA

AtTT2 (360) AACTCAAACCAAGCAACCAAACGTATAAAACATTGACGAACAACGA---GAATAATGT

BnTT2-1 (421) ATCTCAAACCAACCAACAGAAAAGTCGAAAACATTCCAACAACAACAACATGAATAAAGT
 BnTT2-2 (421) ATCACAACCAACCAACAGAAAAGTCGAAAACATTCCAACAACAACAACATGAATAAAGT
 BnTT2-3 (421) ATCTCAAACCAACCAACAGAAAAGTCGAAAACATTCCAACAACAACAACATGAATAAAGT
 BrTT2 (363) ATCTCAAACCAACCAACAGAAAAGTCGAAAACATTCCAACAACAACAACATGAATAAAGT
 BoTT2 (360) ATCACAACCAACCAACAGAAAAGTCGAAAACATTCCAACAACAACAACATGAATAAAGT

AtTT2 (417) ATGTGTTATACGTACAAAGGCGATTAGGTGCTCAAAGACTCTTCTCTTCTCGGATCTCTC
 BnTT2-1 (481) ATGTGTTATACGTCAAAGGCGATTAGGTCCCAAAGGCTCTGACATTTTCCAGAAATCAGAG
 BnTT2-2 (481) ATCTGTTATACGTCAAAGGCGATTAGGTGCCCAAAGGCTCTGACATTTTCCAGAAATCAGAG
 BnTT2-3 (481) ATGTGTTATACGTCAAAGGCGATTAGGTCCCAAAGGCTCTGACATTTTCCAGAAATCAGAG
 BrTT2 (423) ATGTGTTATACGTCAAAGGCGATTAGGTCCCAAAGGCTCTGACATTTTCCAGAAATCAGAG
 BoTT2 (420) ATCTGTTATACGTCAAAGGCGATTAGGTGCCCAAAGGCTCTGACATTTTCCAGAAATCAGAG

AtTT2 (477) TCTTCAGAAGAAGAGTAGTACTAGTCCACTACCTCTGAAAGAACAAGAGATGGATC---A
 BnTT2-1 (541) TAGT-----ATTGGTAGTACCAGTCTTCTTACTGTGAAGGAAAACGTGATTGATCATCA
 BnTT2-2 (541) TAGT-----ATTGGTAGTACCAGTCTTCTTACTGTGAAGGAAAACGTGATTGATCAACA
 BnTT2-3 (541) TAGT-----ATTGGTAGTACCAGTCTTCTTACTGTGAAGGAAAACGTGATTGATCATCA
 BrTT2 (483) TAGT-----ATTGGTAGTACCAGTCTTCTTACTGTGAAGGAAAACGTGATTGATCATCA
 BoTT2 (480) TAGT-----ATTGGTAGTACCAGTCTTCTTACTGTGAAGGAAAACGTGATTGATCAACA

AtTT2 (534) AGGTGGATCT---TCGTTGATGGGAGATCTCGAATTCGATTTTCGATAGGATCCATTCGGG
 BnTT2-1 (595) AGCTGGTTCTCCTTCGTTGTTGGGAGATCTTAAAAATCGATTTTGATAAAAATTCAGTCTGA
 BnTT2-2 (595) AGCTAGTTCTCCTTCATCGTTGGGAGATCTTAAAAATCGATTTTGATAAAAATTCAGTCTGA
 BnTT2-3 (595) AGCTGGTTCTCCTTCGTTGTTGGGAGATCTTAAAAATCGATTTTGATAAAAATTCAGTCTGA
 BrTT2 (537) AGCTGGTTCTCCTTCATTTGTTGGGAGATCTTAAAAATCGATTTTGATAAAAATTCAGTCTGA
 BoTT2 (534) AGCTAGTTCTCCTTCATCGTTGGGAGATCTTAAAAATCGATTTTGATAAAAATTCAGTCTGA

AtTT2 (591) GTTTCACTTCCCGGATTTGATGGATTTTGATGGTTTGGACTGTGGAACGTTACATCTCT
 BnTT2-1 (655) GTATCTTCTCTGATTTGATGGACTTTGATGGTTTGGGTTGTGGAACGTAATGTCTCT
 BnTT2-2 (655) GTATCTTCTCTGATCTGATGGACTTTGATGGTTTGGGTTGTGGAACGTAATGTCTCT
 BnTT2-3 (655) GTATCTTCTCTGATTTAATGGCTTTGATGGTTTGGGTTGTGGAACGTAATGTCTCT
 BrTT2 (597) GTATCTTCTCTGATTTGATGGACTTTGATGGTTTGGGTTGTGGAACGTAATGTCTCT
 BoTT2 (594) GTATCTTCTCTGATCTGATGGACTTTGATGGTTTGGGTTGTGGAACGTAATGTCTCT

AtTT2 (651) TGTTTCATCTAACGAGATTTTGGGAGAGTTGGTTCCTGCTCAA-----GGTAA
 BnTT2-1 (715) TGTTTCATCTGACGAGGTGCTAGGAGATTATGTTTCGACTGATACTTCTTGTCTGGGTAA
 BnTT2-2 (715) TGTTTCATCTGACGAGGTGCTGGGAGATTATGTTTCGGCTGATGCTTCTTGTCTGGGTAA
 BnTT2-3 (715) TGTTTCATCTGACGAGGTGCTAGGAGATTATGTTTCGGCTGATGCTTCTTGTCTGGGTAA
 BrTT2 (657) TGTTTCATCTGACGAGGTGCTGGGAGATTATGTTTCGGCTGATACTTCTTGTCTGGGTAA
 BoTT2 (654) TGTTTCATCTGACGAGGTGCTGGGAGATTATGTTTCGGCTGATGCTTCTTGTCTGGGTAA

AtTT2 (699) TCTCGATCTCAATAGACCTTTCACCTCTTGTGTCATCATCGTGGCGACGATGAAGATTGGCT
 BnTT2-1 (775) TCTTGATCTTAATAGACCTTTCACCTCTTGTGCTTCAA-----GAAGATTGTCT
 BnTT2-2 (775) TCTTGATCTTAATAGACCTTTCACCTCTTGTGCTTCAA-----GAAGATTGTCT
 BnTT2-3 (775) TCTTGATCTTAATAGACCTTTCACCTCTTGTGCTTCAA-----GAAGATTGTCT
 BrTT2 (717) TCTTGATCTTAATAGACCTTTCACCTCTTGTGCTTCAA-----GAAGATTGTCT
 BoTT2 (714) TCTTGATCTTAATAGACCTTTCACCTCTTGTGCTTCAA-----GAAGATTGTCT

AtTT2 (759) CCGGACTTCACTTGTGA-----
 BnTT2-1 (823) CTGGGACTTTAATTGTTAGACCCTATCATAAATCTTCATATATTACGTCTACCTCTGTAC
 BnTT2-2 (823) CTGGGACTTTAATTGTTAGACCCTATCGTAAATCTTCATATATTACGTCTACCTCTGTAC
 BnTT2-3 (823) CTGGGACTTTAATTGTTAGACCCTATCGTAAATCTTCATATATTACGTCTACCTCTGTAC
 BrTT2 (765) CTGGGACTTTAATTGTTAG-----
 BoTT2 (762) CTGGGACTTTAATTGTTAG-----

AtTT2 (778) -----
 BnTT2-1 (883) GAACAAAAGTATATATTTATATTTTGTGTTGAACGCTTCTAATTACAAGTAATATCTAAAA
 BnTT2-2 (883) GAACAAAAGTATATATTTATATTTTGTGTTGAACGCTTCTAATTACAAGTAATATCT----
 BnTT2-3 (883) GAACAAAAGTATATATTTATATTTTGTGTTGAACGCTTCTAATTACAAGTAATATCT----
 BrTT2 (784) -----
 BoTT2 (781) -----

AtTT2 (778) -----

BnTT2-1 (943) AAAAAAAAAAAAAA
 BnTT2-2 (939) -----
 BnTT2-3 (939) -----
 BrTT2 (784) -----
 BoTT2 (781) -----

15. BnTTG2

AtTTG2-1 (1) -----
 AtTTG2-2 (1) -----
 BnWRKY44 (1) ACGACCGATACATCAACGAGCCACAACCCAAAAACCCGGGTTCCGGATCAGCCCCGGATCT
 BrTTG2-1 (1) -----
 BrTTG2-2 (1) -----
 BoTTG2-1 (1) -----
 BoTTG2-2 (1) -----

AtTTG2-1 (1) -----
 AtTTG2-2 (1) -----
 BnWRKY44 (61) CTTCTAACTCCTTTACAAAGGCTCCTTTCTTCAAATCGTTTTTCAGAACTTCAGATCTCT
 BrTTG2-1 (1) -----
 BrTTG2-2 (1) -----
 BoTTG2-1 (1) -----
 BoTTG2-2 (1) -----

AtTTG2-1 (1) -----ATGGAGGTGAATGATGGTGAAAGAGTGGTAAT
 AtTTG2-2 (1) -----
 BnWRKY44 (121) CTCACCGTTGACGACTATAATGGAGGTGAAAGAGAGTAAAAGAGTGGTAATAGCAAAACC
 BrTTG2-1 (1) -----ATGGATGTGAAAGAGAGTGAAAGAAAAGGTAGTAGCAAAACC
 BrTTG2-2 (1) -----ATGGAGGTGAAAGAGAGTAAGAGAGTGGTAATAGCAAAACC
 BoTTG2-1 (1) -----ATGGAGGTGAAAGAGAGTAAAAGAGTGGTAATAGCAAAACC
 BoTTG2-2 (1) -----ATGGATGTGAAAGAGAGTGAAAGAAAAGCTAATAGTAAAACC

AtTTG2-1 (33) AGCAAAACCAGTTGCCTCAAGACCTTCTTCAAGTTCTGGCTTCAGGACATTCAGTACGCT
 AtTTG2-2 (1) -----
 BnWRKY44 (181) AGTTGCTTCAAGGCCTTCATTCTAGCATCAGGACATTCGCTAATCTTTAACTGATTC
 BrTTG2-1 (42) AGTGGCTTCAAGGCCTTCATGCTCTAGCGTCAGGACATTCAGTACCTTCTGGCTGATTC
 BrTTG2-2 (42) AGTTGCTTCAAGGCCTTCATTCTAGCATCAGGACATTCGCTAATCTTTAACTGATTC
 BoTTG2-1 (42) AGTTGCTTCAAGGCCTTCATTCTAGCATCAGGACATTCGCTAATCTTTAACTGATTC
 BoTTG2-2 (42) AGTGGCTTCAAGGCCTTCATGCTCTAGCGTCAGGACATTCAGTACCTTATGACTGATTC

AtTTG2-1 (93) TCTTACTGATTAGTTACCGTATCTCCGCAAACGACTTGCCACGAGATTGTAGACGCTGC
 AtTTG2-2 (1) -----
 BnWRKY44 (241) AGTTACCGTACCTCCTC-----ATGAGACTGTAGACGCTGCTATAAGACCAAA
 BrTTG2-1 (102) AGTTACCGTCTCTCCACAATCGAACTGTCACGAGACTGTAGACGCTTCTATAATACCAAA
 BrTTG2-2 (102) AGTTACCGTATCTCTCCC-----CATGAGACTGTAGACGCTGCTATAAGACCAAA
 BoTTG2-1 (102) AGTTACCGTACCTCCTC-----ATGAGACTGTAGACGCTGCTATAAGACCAAA
 BoTTG2-2 (102) AGTTACCGTCTCTCCACAATCGAACTGTCACGAGACTGTAGACGCTTCTATAAGACCAAA

AtTTG2-1 (153) TATAAGACCAAAGACTTTGAGATTCAATCAGCCAGTAGCAGCTTCGGTCTCATGTCCACG
 AtTTG2-2 (1) -----
 BnWRKY44 (289) GACTCTGAGGTTTTAAGCAACCAGCAGCAGCGGCAGC-----TTCGGTCTCATG
 BrTTG2-1 (162) GACTGAGAGGTTTTAAACAGCCAGCTTCAGCT-----TCTGTCTCATC
 BrTTG2-2 (153) GACTCTGAGGTTTTAAGCAACCAGCAGCGGCAGCAGC-----TTCGGTCTCATG
 BoTTG2-1 (150) GACTCTGAGGTTTTAAGCAACCAGCAGCAGC-----TTCGGTCTCATG
 BoTTG2-2 (162) GACTGAGAGGTTTTAAACAGCCAGCTTCAGCTTCAGCTTCAGCTTCAGCTTCTGTCTCATC

AtTTG2-1 (213) GGCTGAAGTAAAAGTATTGGAATGGAATGTCTTGTGATGATGATTCAGATAGCAGAAA
 AtTTG2-2 (1) -----ATGTCTTGTGATGATGATTCAGATAGCAGAAA
 BnWRKY44 (337) TCCACAGGTGGAAGGAAATGACAAAGGAAAGTCTTGCCTTGAT---TCAGATACCAAAAAG
 BrTTG2-1 (204) TCCGCGGTGGAAGGAAATGACAAAGGAAAGTCTTGTGATGAT---TCAGAGAGCAAAAAG
 BrTTG2-2 (201) TCCACAGGTGGAAGGAAATGACAAAGGAAAGTCTTGTGATGAT---TCAGATACCAAAAAG
 BoTTG2-1 (192) TCCACAGGTGGAAGGAAATGACAAAGGAAAGTCTTGTGATGAT---TCAGATACCAAAAAG
 BoTTG2-2 (222) TCCACGGGTGGAAGGAAAGTGGCAATGAAAATCTTGTGATGAT---TCAGAGAGCAAAA

AtTTG2-1 (273) CTACGTCGTTTATAAACCGAAAGCAAAGCTTGTCTCCAAAGCAACCGTCTCTGCATTGGC
 AtTTG2-2 (33) CTACGTCGTTTATAAACCGAAAGCAAAGCTTGTCTCCAAAGCAACCGTCTCTGCATTGGC
 BnWRKY44 (394) CTACGTTGTTTATAAACCTAAAGCAAAGCTTGTTCCCAAGCAACTGTCTCTGCATTGGC
 BrTTG2-1 (261) TTACGTCATTTATAAACCTAAAGCAAAGCTTGTCTCCAAAGCAACCGTCTCTGCGTTGGC
 BrTTG2-2 (258) CTATGTAGTTTATAAACCTAAAGCAAAGCTTGTCTCCAAAGCAACTGTCTCCGCATTGGC
 BoTTG2-1 (249) CTATGTAGTTTATAAACCTAAAGCAAAGCTTGTCTCCAGGCAACCGTCTCCGCATTGGC
 BoTTG2-2 (279) TTATGTCAATTTATAAACCTAAAGCAAAGCTTGTCTCCAAAGCAACCGTCTCTGCGTTGGC

 AtTTG2-1 (333) TAATATGCTTCAGGGGAATCGTCAACAAACTTGGAGACAAAGCGAAGCAGTATCCTATGG
 AtTTG2-2 (93) TAATATG-----GGGAATCGTCAACAAACTTGGAGACAAAGCGAAGCAGTATCCTATGG
 BnWRKY44 (454) TAATATGCTTCAGGGTAATCAACAGGTTTGGAGACAAAGCGAAGCAGTACCGTATGG
 BrTTG2-1 (321) TAATATGCTTCCAGGAAATGTCAACAGGCTTGGATAAAAAGAGAAAGCAGTAGCCTACGG
 BrTTG2-2 (318) TAATATG-----GGTAATCACCACAGGTTTGGAGACAAAGCGAAGCAGTACCGTATGG
 BoTTG2-1 (309) TAATATG-----GGTAATCATCAACAGGTTTGGAGACAAAGCGAATCAGTACCGTATGG
 BoTTG2-2 (339) TAATATGA-----CTTGGATAAAAAGAGAAAGCAGTAGCCTATGG

 AtTTG2-1 (393) GAAGAGTGTGAGCCAAGGTACACATCGAGCAGGTCTAATCTAGTCCAGAAAGTTCCATC
 AtTTG2-2 (147) GAAGAGTGTGAGCCAAGGTACACATCGAGCAGGTCTAATCTAGTCCAGAAAGTTCCATC
 BnWRKY44 (514) **GAAGAGTGTGAGCCAAGGTACAC**-----GCCCTAACCTAGTCCCTAGGGTTCCATC
 BrTTG2-1 (381) GAAGCGTGTGAACCAAGGCACGCATCGAGCGGTTCTAACCCTAGTCCCAGAGTTCCAAC
 BrTTG2-2 (372) GAAGAGTGTGAGCCAAGGTACAC-----GCCCTAACCTAGTCCCTAGGGTTCCATC
 BoTTG2-1 (363) GAAGAGTGTGAGCCAAGG-----
 BoTTG2-2 (378) GAAGCGTGTGAGCCAAGGCACACATCGAGCAGGTCTAACCCTAATCCCTAGAGTTCCAAC

 AtTTG2-1 (453) TTTTACGGAATCAGAGACATCTACTGGGGATAGATCTTCTGTGGATGGATAACAATGGAG
 AtTTG2-2 (207) TTTTACGGAATCAGAGACATCTACTGGGGATAGATCTTCTGTGGATGGATAACAATGGAG
 BnWRKY44 (565) CTTTAAAGAATCAGAGACATCGGCTGGAGACAGATCTTACGTGGACGGATAACAATGGAG
 BrTTG2-1 (441) CTTTAAAGAATCAGAGACATCCACTGGGGACAGATCTTACGTGGACGGATAACAATGGAG
 BrTTG2-2 (423) CTTTAAAGAATCAGAGACATCGGCTGGAGACAGATCTTACGTGGACGGATAACAATGGAG
 BoTTG2-1 (381) -----
 BoTTG2-2 (438) CTTTAAAGAATCAGAGACATCCACTGGGGACAGATCTTACGTGGACGGATAACAATGGAG

 AtTTG2-1 (513) GAAATACGGACAGAAGCAAGTTAAAGGAAGTGAGTGTCCAAGGAGTTATTACAAATGCAC
 AtTTG2-2 (267) GAAATACGGACAGAAGCAAGTTAAAGGAAGTGAGTGTCCAAGGAGTTATTACAAATGCAC
 BnWRKY44 (625) **GAAGTACGGACAGAAGCAAGT**CAAAGGAAGTGACTGTCCAAGGAGTTATTACAAATGCAC
 BrTTG2-1 (501) GAAATACGGACAGAAGCAAGTTAAAGGAAGTGACTGTCCAAGGGGTTACTACAAATGCAC
 BrTTG2-2 (483) GAAGTACGGACAGAAGCAAGTTAAAGGAAGTGACTGTCCAAGGAGTTACTACAAATGCAC
 BoTTG2-1 (381) -----
 BoTTG2-2 (498) GAAATACGGACAGAAGCAAGTTAAAGGAAGTGACTGTCCAAGGGGTTACTACAAATGCAC

 AtTTG2-1 (573) ACACCCGAAATGTCCGGTGAAGAAGAAAGTAGAGAGATCA---GTGGAAGGTCAAGTTTC
 AtTTG2-2 (327) ACACCCGAAATGTCCGGTGAAGAAGAAAGTAGAGAGATCA---GTGGAAGGTCAAGTTTC
 BnWRKY44 (685) ACACCCGAAATGTCCGGTGAAGAAGAAAGTAGAGAGATCA---ATGGGTGGTCTGGTCTC
 BrTTG2-1 (561) ACACCCGAAATGTCCGTGAAGAAGAGCGTAGAGAGATCATCAATGGGAGGTCTAGTTTC
 BrTTG2-2 (543) ACACCCGAAATGTCCGGTGAAGAAGAAAGTAGAGAGATCA---ATGGGTGGTCTGGTCTC
 BoTTG2-1 (381) -----
 BoTTG2-2 (558) ACACCCGAAATGTCCGGTGAAGAAGAGAGTAGAGAGATCA---ATGGGAGGTCAAGTTTC

 AtTTG2-1 (630) AGAGATTGTGTATCAAGGTGAACATAATCACTCAAAGCCATCTTGTCTCTTCCACGGCG
 AtTTG2-2 (384) AGAGATTGTGTATCAAGGTGAACATAATCACTCAAAGCCATCTTGTCTCTTCCACGGCG
 BnWRKY44 (742) AGAGATTGTGTATCAAGGTGAACATAATCACTCAAACCCTTGTCTCTTCCGCGCG
 BrTTG2-1 (621) AGAGATTGTGTATCAAGGTGAGCATAATCACTCTAAACCCTTGTCTCTTCCGCGCG
 BrTTG2-2 (600) AGAGATTGTGTATCAAGGTGAACATAATCACTCTAAACCCTTGTCTCTTCCGCGCG
 BoTTG2-1 (381) -----
 BoTTG2-2 (615) AGAGATTGTGTATCAAGGTGAGCATAATCACTCTAAACCCTTGTCTCTTCCGCGCG

 AtTTG2-1 (690) TGCTTCATCATCAATCTCTTCAGGGTTTCAAAACCACCAAATCGATTGCTTCTGAAGG
 AtTTG2-2 (444) TGCTTCATCATCAATCTCTTCAGGGTTTCAAAACCACCAAATCGATTGCTTCTGAAGG
 BnWRKY44 (802) CGCTTCATCATCATCTCTTCAGGGTTTCAGAGACCACAAAGAGAGCTAGCTTCGGAAGG
 BrTTG2-1 (681) GGCTTCATCTTCATCTCTTCAGGGTTTCAGACACCA-----TCTGAAGG
 BrTTG2-2 (660) CGCTTCATCATCATCTCTTCAGGGTTTCAGAGACCACAAAGAGAGCTAGCTTCGGAAGG
 BoTTG2-1 (381) -----G-----TTTCAGAGACCACAAAGAGAGCTAGCTTCGGAAGG
 BoTTG2-2 (675) GGCTTCATCTTCATCTCTTCAGGGTTTCAGACACCA-----TCTGAAGG

AtTTG2-1 (750) ATCAATGGGACAAGACCCTAACAAATAATCTCTATTCTCCTCTATGGAACAATCAAAGCAA
 AtTTG2-2 (504) ATCAATGGGACAAGACCCTAACAAATAATCTCTATTCTCCTCTATGGAACAATCAAAGCAA
 BnWRKY44 (862) ATCAATAGGACAAGACCCTAGTAATGTTTATTACCATCCTCTTTGGAGCAATCAAAGCAA
 BrTTG2-1 (726) ATCAATGGGGGAAGAACCTA-----ACCTCTTTGGAGTAATCAA-----
 BrTTG2-2 (720) ATCAATAGGACAAGACTCTAGTAATGTTTGTTCATCCTCTTTGGAGCAATCAAAGCAA
 BoTTG2-1 (417) ATCAATAGGACAAGACCCTAGTAATGTTTATTACCATCCTCTTTGGAGCAATCAAAGCAA
 BoTTG2-2 (720) ATCAATGGGGGAAGAACCTA-----ACCTCTCTGGAGCAATCAA-----

 AtTTG2-1 (810) TGACTCTACTCAAAACAGAACAGAGAAGATGAGTGAAGGTTGTGTTATTACACCATTTGA
 AtTTG2-2 (564) TGACTCTACTCAAAACAGAACAGAGAAGATGAGTGAAGGTTGTGTTATTACACCATTTGA
 BnWRKY44 (922) TGACTCATCTAAAAGCATAGCAGAGAAGATGAATGACGGTTGTGTAATAACACCATTCGA
 BrTTG2-1 (766) -----GAGAAGATGAATGAAGGTTGTGTTATAACACCATTCGA
 BrTTG2-2 (780) TGACTCATCTAAAAGCATAGCAGAGAAGATGAATGAGGTTGTGTAATAACACCATTCGA
 BoTTG2-1 (477) TGACTCATCTAAAAGCATAGCAGAGAAGATGAATGAGGTTGTGTAATAACACCATTCGA
 BoTTG2-2 (760) -----GAGAAGATGAATGAAGGTTGTGTTATAACACCATTCGA

 AtTTG2-1 (870) GTTTGCTGTTCCAAGATCGACAAATCAAAATCCCGAACTTCAGATTCCGGTTGCAAGA-
 AtTTG2-2 (624) GTTTGCTGTTCCAAGATCGACAAATCAAAATCCCGAACTTCAGATTCCGGTTGCAAGA-
 BnWRKY44 (982) GTTTGCTGTTCCAAGATCAGCGAACTCTACTGGTGGGACTTCAGATTCTGGTTGTAGAAG
 BrTTG2-1 (804) GTTCGCTGTTCCAAGAAGCAGCGAACTCAACTGGTGGAACTTCAGACTCCGGTTGTAGAAG-
 BrTTG2-2 (840) GTTTGCTGTTCCAAGATCGCGAACTCGACTGGTGGGACTTCAGATTCTGGTTGTAGAAG
 BoTTG2-1 (537) GTTTGCTGTTCCAAGATCAGCGAACTCTACTGGTGGGACTTCAGATTCTGGTTGTAGAAG
 BoTTG2-2 (798) GTTTGCTGTTCCAAGAAGCAGCAAACTCAAGTGGTGGAACTTCGGATTCCGGTTGCAAGA-

 AtTTG2-1 (929) --GTAGCCAATGTGATGAAGGAGAGCTTGATGATCCAAGCAGAAGCAAAGAAG---GAA
 AtTTG2-2 (683) --GTAGCCAATGTGATGAAGGAGAGCTTGATGATCCAAGCAGAAGCAAAGAAG---GAA
 BnWRKY44 (1042) TAGTAGCCAGTGTGATGAAGGAGAGCTTGATGATCCTAGCAGAAGCAAGAGAAG---GAA
 BrTTG2-1 (863) --GTAGCCAGTGTGATGAAGGAGAGCTTGATGATCCAAGCAGAAGCAAGACAAGCATGAA
 BrTTG2-2 (900) TAGTAGCCAGTGTGATGAAGGAGAGCTTGATGATCCTAGCAGAAGCAAGAGAAG---GAA
 BoTTG2-1 (597) TTGTAGCCAGTGTGATGAAGGAGAGCTTGATGATCCTAGCAGAAGCAAGAGAAG---GAA
 BoTTG2-2 (857) --GTAGCCAGTGTGATGAAGGAGAGCTTGATGATCCAAGCAGAAGCAAGACAAGCATGAA

 AtTTG2-1 (984) GAACGAGAAGCAATCTAGTGAAGCAGGAGTATCGCAAGGCTCAGTGAATCAGACAGTCT
 AtTTG2-2 (738) GAACGAGAAGCAATCTAGTGAAGCAGGAGTATCGCAAGGCTCAGTGAATCAGACAGTCT
 BnWRKY44 (1099) GAACGAGAAGCAAGCAAGTCAAACAGGAGTATCACAAGCTCAGTGAATCAGACAGTCT
 BrTTG2-1 (921) GAACGAGACGCAATCAAGTGAAGCTGGAGTATCGCAAAGCTCAGGGGAATCAGACAGTCT
 BrTTG2-2 (957) GAACGAGAAGCAAGCAAGTCAAACAGGAGTATCACAAGCTCAGTGAATCAGACAGTCT
 BoTTG2-1 (654) GAACGAGAAGCAAGCAAGTCAAACAGGAGTATCACAAGCTCAGTGAATCAGACAGTCT
 BoTTG2-2 (915) GAACGAGAAGCAATCAAGTGTAGCTGGAGTATCCCAAAGCTCAGGGGAATCGACAGTCT

 AtTTG2-1 (1044) TGAAGATGGATTAGGTGGAGAAAGTATGGACAAAAGTGGTAGGAGGCAATGCGTATCC
 AtTTG2-2 (798) TGAAGATGGATTAGGTGGAGAAAGTATGGACAAAAGTGGTAGGAGGCAATGCGTATCC
 BnWRKY44 (1159) TGAAGATGGATTAGGTGGAGAAAGTACGGTCAAAGTGGTTGGAGGCAATGCGTATCC
 BrTTG2-1 (981) CGAAGATGGATTCAAGTGGAGAAAGTACGGACAGAAAGCGTTGGAGGGAATGCGTATCC
 BrTTG2-2 (1017) TGAAGATGGATTAGGTGGAGAAAGTACGGTCAAAGTGGTTGGAGGCAATGCGTATCC
 BoTTG2-1 (714) TGAAGATGGATTAGGTGGAGAAAGTACGGTCAAAGTGGTTGGAGGCAATGCGTATCC
 BoTTG2-2 (975) CGAAGATGGATTCAAGTGGAGAAAGTACGGACAGAAAGCGTTGGAGGGAATGCGTATCC

 AtTTG2-1 (1104) AAGAAGTTATTACAGATGCACAAGTCTAATTGCAGAGCAAGGAAACATGTTGAACGAGC
 AtTTG2-2 (858) AAGAAGTTATTACAGATGCACAAGTCTAATTGCAGAGCAAGGAAACATGTTGAACGAGC
 BnWRKY44 (1219) AAGAAGTTATTACAGATGCACAGTGCAAAAGTGCAGAGCTAGGAAACATGTTGAGAGAGC
 BrTTG2-1 (1041) GAGAAGTTATTACAGTGCACGAGCTGAATTGTAGAGCAAGGAAACGCTGGAGAGAGC
 BrTTG2-2 (1077) GAGAAGTTATTACAGATGCACGAGTGCAAAAGTGCAGAGCAAGGAAACATGTTGAGAGAGC
 BoTTG2-1 (774) AAGAAGCTATTACAGATGCACGAGTGCAAAAGTGCAGAGCTAGGAAACATGTTGAGAGAGC
 BoTTG2-2 (1035) GAGAAGTTACTACAGTGCACGAGCTGAATTGTAGAGCAAGGAAACGCTGGAGAGAGC

 AtTTG2-1 (1164) GAGTGATGATCCAAGAGCTTTTCATTACAACCTACGAGGGTAAACATAATCAT---CATTT
 AtTTG2-2 (918) GAGTGATGATCCAAGAGCTTTTCATTACAACCTACGAGGGTAAACATAATCAT---CATTT
 BnWRKY44 (1279) GAGTGATGATCCAAGAGCTTTTCATTACAACCTATGAAGGTAAACACAATCA---CCATTT
 BrTTG2-1 (1101) GAATGATGATCCAAGAGCTTTTCATTACAACCTACGAGGGTAAACACAATCATCACCATTT
 BrTTG2-2 (1137) TAGTGATGATCCAAGAGCTTTTCATTACAACCTATGAAGGTAAACACAATCA---CCATTT
 BoTTG2-1 (834) GAGTGATGATCCAAGAGCTTTTCATTACAACCTATGAAGGTAAACACAATCA---CCATTT

BoTTG2-2 (1095) GAGTGATGATTCAAGAGCTTTCATTACAACCTACGAAGGTAAACACAATCATCACCATTT
 AtTTG2-1 (1221) GCTCTTGAGCCCTCCATCTTCCTCTACTCTTCCCTTTAACTCCCACAACTTTCTAAGCA
 AtTTG2-2 (975) GCTCTTGAGCCCTCCATCTTCCTCTACTCTTCCCTTTAACTCCCACAACTTTCTAAGCA
 BnWRKY44 (1336) GAACTTGAGACCTCCAACCTTCGCCTACTCTTCCCTTTACTCTACACAACATTCTAATCA
 BrTTG2-1 (1161) GCAACTGAGGCCTCCAACCTTCTTCTACTCTTCCCTTTAGCTCCCACAACTTTCTAATCA
 BrTTG2-2 (1194) GAACTTGAGACCTCCAACCTTCGCCTACTCTTCCCTTTACTCTACACAACATTCTAATCA
 BoTTG2-1 (891) GAACTTGAGACCTCCAACCTTCGCCTACTCTTCCCTTTACTCTACACAACATTCTAATCA
 BoTTG2-2 (1155) GCAACTGAGGCCTCCAACCTTCTTCTACTCTTCCCTTTAGCTCCCACAACTTTCTAATCA

 AtTTG2-1 (1281) AACAAATTTGA-----
 AtTTG2-2 (1035) AACAAATTTGA-----
 BnWRKY44 (1396) AGCCATTTGATGAGTCCCATTTGATGCTTCTTCTTCTTCAATCTTCATAGCACATTTGAT
 BrTTG2-1 (1221) AGCCATTTAA-----
 BrTTG2-2 (1254) AGCCATTTGA-----
 BoTTG2-1 (951) AGCCATTTGA-----
 BoTTG2-2 (1215) AGCCATTTAA-----

 AtTTG2-1 (1291) -----
 AtTTG2-2 (1045) -----
 BnWRKY44 (1456) TAATCAATCAATTTCTTGTTCCTTCCATTGTGAATTTATTTATTTTACATCAAAGTTGTAAG
 BrTTG2-1 (1231) -----
 BrTTG2-2 (1264) -----
 BoTTG2-1 (961) -----
 BoTTG2-2 (1225) -----

 AtTTG2-1 (1291) -----
 AtTTG2-2 (1045) -----
 BnWRKY44 (1516) GACAAGAAGATAATTGTTATTTGACAAACAACAGAAAAAAAAAAAAAGCAAATAAAAAAGAG
 BrTTG2-1 (1231) -----
 BrTTG2-2 (1264) -----
 BoTTG2-1 (961) -----
 BoTTG2-2 (1225) -----

 AtTTG2-1 (1291) -----
 AtTTG2-2 (1045) -----
 BnWRKY44 (1576) TGT'TTGATTTTAAAAAAAAAAAAAAAAAAAA
 BrTTG2-1 (1231) -----
 BrTTG2-2 (1264) -----
 BoTTG2-1 (961) -----
 BoTTG2-2 (1225) -----