

PVKW010023310.1 1293- : GGTACCAGTCCCATGGCAGAGCAAAACTCCTCAGTTGGGGCTGGAAGGATTGCTTAGC--AGTTAA--GGCATTG--CCTGCAAAAGCC--AAAGGACCCA-----GGTTGATTTCC
 PVKW010008284.1 55693 : TCAAAAGTGGACAATATATACTTTAAGAATAAGCAGCAGAGGGCTGGAGAGATGGCTTAGC--GGTTAA--ACGCTTG--CCTATGAAGCC--TAAGGACCCCGGTTTCG-A-----GGCTCGATTTCTC
 PVKW010002708.1 47966 : AGGTTCCACAGGCAAGCCACATAGAATAATTTATAAGGGCTGGAGAGATGGCTTAGT--GGTTAA--ACGCTTG--CCTATGAAGCC--TAAGGACCCCGGTTTCG-A-----GGCTCGATTTCTC
 PVKW010037800.1 1027- : ACTGAGACATATTTCCAGGTCCTAAAAATGTACTTCTGGGCTGGAGAGATGGCTTAGG--GGTTAA--ATGCTTG--CCTGTGAAGCC--TAAAGACCCAGTTTCG-A-----GGCTCGATTTCTC
 PVKW010008959.1 54713 : CATACACATACAACATTTAAAAAAAACAGCAGCTAGGGGCTGGAGAGATGGCTTAGC--GGTTAA--GCACTTG--CCTGTGAAGCC--TAAGGACCCCGGTTTCG-A-----GGCTCGATTTCTC
 PVKW010063615.1 2321- : AACAGTTTGGTTGAGACATACTAAAGAATGAAGGGAGGGCTGGAGAGATGGCTTAGC--AGTTAA--GCACTTG--CCTGTGAAGTC--TAAGGACCCAGTTTCG-A-----GGCTCGATTTCTC
 PVKW010012833.1 24156 : CCCTGTTCCAGGGGACAGCACTCAAAGCTAAACCCCAAGGGCTGGAGAGATGGCTTAGC--GGTTAA--ACGCTTG--CCTATGAAGCC--TATGACCCCGGTTTCG-A-----GGCTCGATTTCTC
 PVKW010073214.1 3916- : TCAGTTTTTTACATGACAGTTTTTAAAGCTTTTCCAGGGCTGGAGAGATGGCTTAGT--GGTTAA--ACAGCTTG--CCTGTGAAGCC--TAAGGACCCGTTTCG-A-----GGCTCGATTTCTC
 PVKW010009295.1 9881- : CTTGTACCCGTGGCCAGGAAGTAAAGAGAGGAAGAGGGCTGGAGAGATGGCTTAGC--GGTTAA--GCGCTTG--CCTGTGAAGCC--TAAGGACCCGTTTCG-A-----GGCTCGATTTCTC
 PVKW010048402.1 11816 : TAGTAAGAAAGTCGCTCAAAAAAATAAGGAGGCCATGGCTGGAGAGATGGCTTAGT--AGTTAGACATGGCTTG--CTGTGAAGCC--TAAGGACCCCGGTTTCG-A-----GTCCTGATTTCTC
 PVKW010000318.1 42511 : AGAATTTGATAGTTGTTTGTGATAAATAAACTACGACAAGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCACTTG--CCTAAGAAAGCC--AAAGGTTGTG-----GGTTGATTTCTC
 PVKW010010716.1 38950 : ATTGTCTTGGTCTGTTTTCGATAAAGATAAAAGTTAGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCATTTG--CCTGTGAAGCC--AAAGGTTCTCT-----GGTTGATTTCTC
 PVKW010020618.1 31532 : CTGCAAGAAAGATTATGCATAATTAATAAAATTTACTGAGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCATTTG--CCTGTGAAGCC--AAAGGACCCA-----GGTTGATTTCTC
 PVKW010043299.1 9047- : AAAATAAAATATTTTTCTTAACAGAGAGCTATGTAGGGGGCTGGAGAGATGGCTTAGT--AGTTAA--GACGTATG--CCTGTGAAGCC--TAAGGACTCC-----AGTTGATTTCTC
 PVKW010038770.1 14716 : CCACCCCTTAAGGAGACATAGAAGTTGTGTGTGGAGGGGCTGGAGATGAGC--TTTGT--GGTTAA--GGCGATG--CCTGTGAAGCC--TAAGGACCCA-----GGTTGATTTCTC
 PVKW010037008.1 3845- : ATCGGCTGTTTAGTTCCAGCAACAATTTATCTGTGGCTGGAGAGATGGCTTAGC--AGTTAA--GGCATTTG--CCTGTGAAGCC--AAAGGACCCA-----GGTTGATTTCTC
 PVKW010056162.1 5360- : ACAGCTATGTGAGAGATGGGAGCAAAAGGAGCATTTTTGGGCAAGAAATGGCTTAGC--GGTTAA--GGCG-----AAGCC--TAAGGACCGG-----GGTTGATTTCTC
 PVKW010084033.1 3312- : AAATAAATAGAAAAGAAAAAAGAAATTGGGAAAAAGGGCTAGGAGATGGCTCGCA--GGTTAA--ACCACTTA--TCTGCAAAACC--TGCCAGCTCA-----GGTTTACTTCTC
 PVKW010029088.1 1447- : ATCAATTGGAAACATTTGAGGTTAAAGGATAACCAGTGGGAGAGGATGGCTTAGC--AGTTAA--GCATTG--CCTGGAAGCC--AAAGGACCCA-----GGTTGATTTCTC
 PVKW010022691.1 32407 : CAGGAAGAAAGAATACTACGCACAAAGCCAAAGAAGGGCTGGAGAGATGGCTTAGC--AGTTAA--GGCGTTG--CCTGTGAAGCC--GAAGGATCC-----AGTTGATTTCTC
 PVKW010007034.1 12006 : GGTTCACAAATCTTATCAATCAAAATAATAGAATGGGGCTGGAGAGATGGCTTAGCAGGGTTAA--AGCGCTA--CTGTGCAATTC--TAAGAACGCC-----GGTTGATTTCTC
 PVKW010037817.1 14576 : AGGGAAAGGAAATGTGTCATCAAAAAGGGATATACGTGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGTACCTA--CCTCCTAAGCC--TAAGAACGCC-----CATTCGATTTCTC
 PVKW010007622.1 53680 : AGAATCTTTGAATTTTCTAATTAGAAAGAACAAATGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG--CTGCCCAAGCC--TAAAGAGCC-----AGTTCCAACTCTC
 PVKW010009699.1 36657 : TTTGGCTTCAGAGGGAAAGATAATTTAAGAAGGCTTGTAGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCACTG--CCTCCTAAGCC--TAAGAAATGCT-----AGTTCCAACTCTC
 PVKW010029164.1 13407 : ACAAAACACAGCAGGATGTGCAAAAGATGTACCAAGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCTCCTG--CCTGCTGAGCC--TAAGAAAGCT-----GATTTCCAACTCTC
 PVKW010093769.1 2826- : TGCCCTCGACTGTGTGTGAACGACATGACTCTCTCTTTGGGTTGGACAGATGGCTTAGC--GGTTAA--GGTGCTG--CCTCCTAAGCC--TAAGAACACT-----GATTTCCAACTCTC
 PVKW010058626.1 8874- : AAATAAATAAAATATTTTTTAAATAACATCATCGGCGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCGCCTG--CCTCCTAAGCC--TAAGAACGCTGGTTCC--AATCTCCAGAGGTTCCAACTCTC
 PVKW010038810.1 14115 : CATTACCACATCATTTTGTCTAAAGAATTGGCATCTAGGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCGCCTG--CCTCCTAAGCC--TAAGAAATGCGGTTTC--AATCTCCAGCGGTTCCAACTCTC
 PVKW010001600.1 11740 : GACTTTGCTGCCTTTCTTATGTGAAGGCAATTTGAGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCACTT--CCTCCTAAGCC--TAAGAACACTGGTTTC--AATCTCCAGCAGTTCCAACTCTC
 PVKW010071617.1 2076- : TGATTTTGGTAGTCCATCAGAAAGAGAGTTGGGAGGGCTGGAGAGATGGCTTAGG--GGTTAA--GGCACTG--CCTCCTAAGCC--TAAGAACACTGGTTTC--AAGTCCAGCGGTTCCAACTCTC
 PVKW010005913.1 19939 : ATTCATGGTCTATTTCAATTTAAAAAGTTTAGGATTGGGGGCTGGAGAGATGGCTTAGC--AGTTAA--GGTACCTG--CCTCCTAAGCC--TAAGAACGCTGGTTTC--AATCTCCAGCAGTTCCAACTCTC
 PVKW010021498.1 15139 : TTCTGCTCAGTTCAAAATCTTTTAAACTCTAAAAAATGGGCTGAGAGATGGCTAGC--GGTTAA--GGCCCTG--CCTCCTAAGAC--TAAGAACGCTGGTTTC--AATCTCCAGCGGTTCCAACTCTC
 PVKW010021740.1 21275 : ATGCTTTTCAATTTAGAACATTTTAACTAATAGGCCAAGGGCTGGAGAGATAGCTTAGC--GGTTAA--GGTTCTG--CCTCCTAAGCC--TAAGAACGCTGGTTTC--AATCTCCAGCGGTTCCAACTCTC
 PVKW010060547.1 8275- : TGCATGGAAGATGTAAAGTTTAAAGTTTATGGTTTGAAGACTGGAGATGGCTTAGC--GGTTAA--GGCACTG--CCTCCTAAGCC--TAAGAACAGTGGTTTC--AATCTCCAGCGGTTCCAACTCTC
 PVKW010005965.1 34278 : ATTAGCTCAGAAAGCTTTGGAAAAATATACCTTCTCTGGGCTGGAGAGACCACTTAGC--AGTTAA--ACGCTG--CCTGCTAAGCC--TAAGAACAGTGGTTTC--AGTCTCCAGCGGTTCCAACTCTC
 PVKW010021433.1 26562 : GGATTGAGCACATGTTTGGTATAAAATCCAGAGATGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCGCCTG--CCTCCTAAGCC--TAAGAACGCTGGTTTC--CATCTCCAGCGGTTCCAACTCTC
 PVKW010018455.1 14117 : TATTATTTATTCATATTTTGTCTACCTTGTGTACTGGGGCTGGAGAGATGGCTTAGG--GGTTAA--GGCGCCTG--CCTCCTAAGCC--TAAGAACGCTGGTTTC--AATCTCCAGCGGTTCCAACTCTC
 PVKW010027487.1 15863 : ACTCATACTGAAACCTGATCAAAACCTACGTTCTGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG--CCTCCTAAGCC--TAAGAACACT-----GGTTCCAACTCTC
 PVKW010014973.1 10597 : CTGGATAAAAAAATCAACAGCAAAATGGGCCACTGAGGGGCTGGAGAGATGGCTTAGG--AGTTAT--GGCGCCTG--CCTCCTAAGCC--TAAGAACACTGGTTTC--AATCTCCAGCAGTTCCAACTCTC
 PVKW010001443.1 36920 : CAAAGCCAGGGGAAAGAGCTGTGTAAAGAAGGGCGGGGGCTGGAGAGATGACTTAGC--GGTTAA--GGCGTCTG--CCTCCTAAGCC--TAAGAAATGCT-----GGTTCCAACTCTC
 PVKW010002988.1 23682 : GTCTTTTGTGAAGAGGTGATATTAAGAATGAGATCTTTGGGCTGGAGAGATGGCTTAGC--AGTTAA--GGCACTG--CCTCCTAAGCC--TAAAGACGCTGGTTTC--AATATCCAGTGTTCCAACTCTC
 PVKW010001440.1 80823 : AAATCAGTACAGAGGTTCTTCAAAAAAATCATAGAGGGCTGGAGAGATGGCTTACT--GGTTAA--GGCGCCTG--CCTCCTAAGCC--TAAGAACGCTGGTTTC--AATCTCCAGCAATTTCCAACTCTC
 PVKW010002157.1 47489 : ACAATGCTATTTCAATTGTCATAAAAGAGCCACACTGGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCGCCTG--CCTCCTAAGCC--TAAGAACACTGGTTTC--AATATCCAGCGGTTCCAACTCTC
 PVKW010020676.1 22144 : GTGTAAAAGAGTTAGGAAATTAATAAATATGATCCTGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG--CCTCCTAAGCC--TAAGAAATGCTGGTTTC--AATCTCCAGAGGTTCCAACTCTC
 PVKW010022582.1 28012 : GTATTATTAGATGTTTGTATTAAAAAATAAATGAAAGGCTGGAGAGATGGCTTAGC--AGTTAA--GGCTCCTG--CCTCCTAAGCC--TAAGAACAGTGGTTTC--AAGTTCAGTGTTCCAACTCTC
 PVKW010023134.1 13078 : TGAAACTGTTTCTCTCTGCAAAAGAGACTTGTCTGGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG--CCTCCTAAGCC--TAAGAACGCT-----GGTTCCAACTCTC
 PVKW010003325

PVKW010003511.1 48444 : ATCCTTCTGCCTTTACCATCAAAAGATCCAACCACAGAGGGCTGGAGAGATGGCTTAGG--GGTTAA--GGTGCCTG---CCTCCTAAGCC--TAAGAACT--TGGTTCC--AATCTCCAGCA--GTTCCGATCTC
PVKW010020066.1 15981 : AAGGTAAAGGGGATTATGGCAAGCAAAAGGATTGGGGAAGGGCTGGAGAGATGGCTTAGC--GGTTAG--GGTGCCTG---CCTCCTAAGCC--TGAACTACTGG--TTCC--AATCTCCAGCA--GTTCCATCTC
PVKW010003818.1 10792 : TTTTCTATGTTGCTTCAAACTAAACTCTTAATTTGGGCTGGAGAGATGGCTTAGC--AGTTAA--GGCATTG---CCTCCTAAGCC--TAAGAACATGGTTCC--AATCTCCAGCG--GTTCC--ATCTC
PVKW010002020.1 31758 : ATAGATAGCCTAGTGGCATTATAAAAGCTCTATGATTTGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCACCTG---CCTCCTAAGCC--TAAGAACG--TGGTTCC--AATTTTCAGCG--GTTCCATCTC
PVKW010009680.1 37424 : CAATTCTAGTGATGTGCTGAATTTAAAGGTTAAAATTGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCACCTG---CCTCCTAAGCC--TAAGAACG--AGGTTCC--AATCTCTGCAG--GTTCCATCTC
PVKW010004907.1 72306 : AGGGTGCAATTCTCTGCATTTTAAAGCTGCTTCTGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGTGCCTG---CCTCCTAAGCC--TAAGAAAG--TGGTTCC--ACTCTCCAGCT--GTTCCATCTC
PVKW010000122.1 79232 : CACATGAAGATAACATTTGAATAAGAACTGTAATTTGGGCTGGAGAGATGGCTTAGC--GATTAA--GGCGCCTG---CATCCTAAGCC--TAAGAAATG--T-----GTTTCTATCTC
PVKW010003178.1 7320- : TTGGCAAAAGCTTGCTTCAACATAAAAGTTTGGGCTGGAGAGAGATGGCTTAGC--GGTTAA--GGTGCCTG---CCTCCTAAGCC--TAAGAAAGAACGCT-----GTTTCCATCTC
PVKW010011546.1 32916 : CTATATAGTAAGACTCTTATCTCAAAAAATAAAATGGGCTGGAGAGATGGCTTAGC--GGTTAA--GATGCCTG---CCTCCTAAGCC--TAAGAAATCT-----GTTTCCATCTC
PVKW010011545.1 49799 : TTTCCCATTTGCAAAATCAACACTCAAAACCTCTATGGGCTGGAGAGATGGCTTAGC--AGTTAA--GGCGCCTG---CCTCCTAAGCC--TAAGAAATG--T-----AGTTCCATCTC
PVKW010005341.1 66668 : CCCTAGCAAAGGACACTGTTTATAAAACTTGAGGATGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCACCTG---CCTGCTAAGCC--TAATAAC--C---GTTTCCATCTC
PVKW010003492.1 33515 : TTCCTGGTTAGTCATTTCAAAATATCAAAAACCCCTGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG---CCTGCTAAGCC--TAAGAACC-----AGTTCCATCTC
PVKW010043804.1 16010 : AAATAAATAATAAAATATTTTAAAAAAGAAAAAAGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG---CCTCCTAAGCC--TAGGAACG-----GTTTCTATCTC
PVKW010032239.1 6177- : TGCATTGGACTTCTAATACTCAAGATAGAGGTATTTGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG---CCTCCTAAGCC--TAAGAACTC-----GTTTCCATCTC
PVKW010053339.1 11250 : ATAAAAGGAAAAATGAAGTAGAAAGTTTTCGATTCAAGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG---CCTGCTAAGCC--TAAGAACC-----GTTTCCATCTC
PVKW010022876.1 14867 : CACAGTAAAGATGGTAAACATTAAACATCTAATGAATGCTATGAGAGATGGCTTAGC--GGTTAA--GGCACCTG---CCTGCTAAGCC--TAAGAACC-----GTTTCCATCTC
PVKW010013669.1 21934 : GCGATTGGCACAATGTAAAGTTAAAGATGAGGAAGGGCTAGAGAGATGGCTTAGC--GGTTAA--GGTGCCTG---CCTGCTAAGCC--TAAGAACC-----GTTTCCATCTC
PVKW010021200.1 8934- : TGAACAAAAAGAGTCAAAAGTAAAGAGGGCTGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGTGCCTG---CCTGCTAAGCC--TAAGAACA--C-----AGTTCCATCTC
PVKW010033717.1 18451 : AAAACAGCAATAATATAAGTCAAAAGCACAAACGGTAGGCTAGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG---CCTCCTAAGCC--TAAGAATG--TGGTTCC--AATCTCCAGCT--GTTCCATCTC
PVKW010072702.1 6047- : GGGCTTATGGATGAGTCACTTCTGAAAACACACAGTGGGCTGGAGAGATAGCTTAGT--GGTTAA--GGCGCCTG---CCTACTAAGCC--TAAACACA--A-----GTTTCCATCTC
PVKW010035888.1 16699 : CCCCAAAGGTTTATGGGAGTCAAAAGCTACAACTCTGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG---CCTCCTAAGT--C-----GTTTCCATCTC
PVKW010000339.1 12536 : TCTTTTGAATGCATTTATTTATATAAGAATTTTTTGGGCTGGAGAGATGGCTTAGT--CTTTAA--TCCACCTG---CCTCCTAAGCC--TAAGAATG--TGGTTCC--AATCTCCAGCG--GTTCCAACTC
PVKW010001061.1 46164 : GAGTTCTAGCTCCAGACCCACATAAAAGCAGGATTGGGCTGGAGAGATCCTTAGC--GGTTAA--GGCGCCTG---CTTCTAAGCC--TAAGAAG--TGGTTCC--AATCTCCAGCG--GTTCCATCTC
PVKW010002728.1 90880 : ATTAAGCTGTTTCATAGTAGTTCAAGAAATAACTTTCAAGGCTAGAGAGATGGCTTAGC--AGTCAA--GGCGCCTG---CCTCCTAAGCC--TAAGAATG--TGGTTCT--AATCTCCAGCG--GTTCCATCTC
PVKW010083863.1 2646- : CCATGTACATGAGAACCCTGTCTCAAAAGCAACAAAGGGCTGGAGAGATGGCTTAGA--GGTTAA--GGCGCCTG---CCTCCT--AGCC--TAAGAACG--T-----GTTTCTATCTC
PVKW010002214.1 60035 : GAGTAAGACCCCTACCTCAGAAAAACAAAAAACAAGGGCTGGAGAGATGGCTTAGC--GATTAA--AGCGCCTG---CCTGCTAAGCC--TAAGAACA--C-----CTTCTAATTC--
PVKW010041582.1 1353- : TTTAAGTCCCCAAACAAACAAACAAAGCTTCATGCTGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG---CCTCCTAAGCC--TAAGAACA--TGGTTCC--AATCTCCAGCG--GTTCCATCTC
PVKW010008993.1 54935 : GGATATATCTCCACCAGAGACTCAAAGGCACCCGATGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCGCCTG---CTCCTAAGCC--TAAGAACA--TGGTTCC--AATCTCTAGCG--GTTCCATCTC
PVKW010015692.1 32576 : ACTAAGCAAGCACTTTTGTACTTAAAGATTAATTTGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGTGCCTG---CCTTCTAAGTG--TAAGACCA--T-----GTTTCCATCTC
PVKW010000763.1 11056 : AAAAGGCCCAGGCCTCCATGAGATAAACTGACTTCAGGGCTGGAGAGATGGCTTAGC--GGTTAA--AGCGCCTG---CCTCCTAAGCC--AATCTCCAGC-----AGTTCCATCTC
PVKW010003844.1 69255 : AAGACATGAAGCTTTGACTTTAAATGTCTTAAACTAGGGCTGGAGAGATGGCTTAGC--AGTTAA--GGCGCCTG---CCTCCTAAGCC--TAAGAATG--T-----GTTTCCATCTC
PVKW010017839.1 25636 : TGCTGAAGTCAGTTATTTGTTAAAAATCCCTTTGGATGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGTGCCTG---GCTGCTAAGCC--TAAGAAAA--C-----GTTTCCATCTC
PVKW010008100.1 7254- : ACCCTACTGACCATTGACTATCAAAAGATGTTGGGAGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGTGCCTA--GATGCAAGCC--TAAGAATG--C-----GTTTCCATCTC
PVKW010000959.1 59475 : ATTTCTAAACAAGTGTATATATAAAACTGACTACCTTTGGGCTGGAGAGATGGCTTAGT--GGTTAA--AGTGCCTG---CCTGCTAAGT--TAAGAATG--C-----GTTTCAATTCTC
PVKW010017384.1 32386 : GGGATTGAGGTTGTTGTGGAAAGAAAAAATCTGGGGCTTGTAGAGATGGCTTAGT--GGCTAA--GGCGCCTG---CCTGCTAAGCC--TAAGAACA--T-----GTTTCCATCTC
PVKW010000072.1 70081 : AGACTAAACAGCTAATCAAAAAATAAATAAATAACAGGGCTAGAGAGATGGCTTAGC--GGTTAA--GGGGCCTG---CCTCCTAAGCC--TAAGAACG--T-----GTTTCCATCTC
PVKW010009950.1 49916 : AGGACAATAGACTTACCTACCAAAAACGCCTCAGGAAGGGCTGGAGAGATGGCTTAGC--AGTTAA--GGCGCCTG---CCTCCTAAGCC--TAAGAACG--T-----GTTTCCATCTC
PVKW010021276.1 31331 : TTGCAAGGCATGAGGTGGCTTTATAAAAAACATGCTGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCGCCTG---CCTCCTAAGCC--TAAGCAGC--C-----GTTTCCATCTC
PVKW010016288.1 24488 : CTAACAAACCCTAAGTGAACAAAAGGATAAGGTTGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCGCCTG---CCTCCTAAGT--TAAGAACG--T-----GTTTCCATCTC
PVKW010020594.1 30665 : AGCAGGCCTGCTAGCTAATCCTTAAAGGCTGGATGGGGCTAGAGAGATGCTTAGC--GGTTAA--GGCGCCTG---CCTGCTAAGCC--TAAGAGTG--C-----AGTTCCATCTC
PVKW010005809.1 44239 : GACCAGAGTATTCAAAGTATCAAAAAGCAATAGATCAAGGCTGGAGAGATGGCTTAGC--GGTTAA--GGAGCCTG---CCTGCTAAGCC--TAAATAATG--T-----GTTTCCATCTC
PVKW010012181.1 22832 : TGGAAAGTAAACATGCTTTTAAAAATGACAAAAGATTGGGCTAGAGAGATGGCTTAGC--GGATAC--GGACCTA--CCTCCTAAGT--TAAGAATG--T-----GTTTCCATCTC
PVKW010055361.1 8127- : AAGCACACAATTGAGATCATCATCTAAAGATGTGGAGGGGCTTAGAGATGGCTTAGC--AGTTAA--GGCACCTG---GCTCCTAAGC--TAAGAACG--TGGTTCC--AATCTCCAGAA--GTTCTATCTC
PVKW010012381.1 29173 : TTTGACTTTCATGAAGCTGTTTTCGGATTTCATGTGGGCTGGAGAGATGGCTTAGG--GGTTAA--GGCGCCTG---CCTCCTAAGCC--TAAGAACA--C-----CGTTGATTCC
PVKW010020114.1 32730 : CTGGGGACTAACCACAGGGGTAAAAAAGAACTAGCATGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGCACCTG---CCTGCTAAGCC--TAAGAATG--C-----TGTCTAATTCTC
PVKW010039100.1 3904- : TGAAATTTGACTTGTAGCTGTTTAAAGGAAAGCTTGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCGTCTG---CCTCCTAAGCC--TAAGAACA--C-----GTTTCCATCTC
PVKW010016678.1 27329 : AGAATGAGCCCAGGTGCCAACAAAGAGCTTCATCTACAGGCTGGAGAGATGGCTTAGC--GGTGAA--GGCGCCTG---CGGCTAAGCC--TAAGAACG--C-----GTTTCCATCTC
PVKW010074169.1 745-1 : CAGGACTGTACTAATATATCTGATTAAAGTTATTCTCTCGCTGGAGAGATGGCTTAGC--GGTTAA--GGCGCCTG---CCTGCTAAGCC--TAGGAAC--C-----AGTTCCATCTC
PVKW010007510.1 48572 : GATAACCAGTTGCCTTAAGATAAAAATGGACAAAAATGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGTGCCTT--CCTACTAAGCC--TAAGAACA--C-----CATTTGATTCTC
PVKW010004064.1 53170 : AAGGAAGTGAAGATAGTGTATTAAAGGCAAGATATGGCTGGAGAGATGGCTTAGC--AGTTAA--GGTGCCTG---CCTGCTAAGCC--TAAGATCA--C-----CATTTCA--TCTC
PVKW010050067.1 10032 : TCTTACAAGAGGCCTTTCTTAAATTTGGCTGGTTCTGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCGCCTG---CCTGCTAAGCC--TGAGAATG--C-----CGTTTGATTCTC
PVKW010015517.1 27485 : TCATGTTTCAGGTTTGCAATAGAAGCCATGACAAGCAGGGCTGGAGAGATGGCTTAGC--GGTTAA--GGTGCCTG---CCTGCTAAGCC--TAAGAACA--C-----GTTTCCATCTC
PVKW010006524.1 33283 : CTTTCAATATTTTGCTAATGATAGAAAAGTATTTGAAGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCGCCTG---TCTGCTAAGCC--TAAGAATG--C-----TCTTTGATTCTC
PVKW010012167.1 18932 : AAATTTAAACCACATTCAACATTTAGAGCTAGACCAAGGCTGGAGAGATGGCTTAGC--GGTTAA--GACGCCTG---CCTGCTAAGCC--TAAGGATG--C-----TGTTTGATTCTC
PVKW010062332.1 3675- : CAAATCTAACATTATTTTGTATGCTTTAAAAATCAAGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCACCTG---CATGCTATGCC--TAAGAATG--T-----GTTTCCATCTC
PVKW010016493.1 41272 : TTCCTCCCAGTCTCTGATCTTAAAAATTCAAGTATCTGGGCTGGAGAGATGGCTTAGT--GGTTAA--GGCGCCTG---CCTGCTAAGCC--TAAGAACA--C-----AGTTCCATCTC
PVKW010023067.1 11395 : TGTACAAAGCAACATCAGTAAAAAACTATATTTGTTGGGCTGGAGAGATGGCATAGC--GGTTAA--GGCGCCTG---CCTCTTAAGCC--TAAGAAGG--C-----GTTTCCATCTC

PVKW010055985.1 3626- : TTGAAGCTGTTATTGGTATGAAGAAAGCAAGACCTCATGGGCTGGAGAGATGGCTTAAACGGTTAAAGGCGCTG---CCTGCTAAGCGCTTAAGAACGC---CCTTCGATTCTC
PVKW010064994.1 4711- : CCGCCTGGAATGCTGCTTTGGATAAAGCTGGCCATGGGCTGGAGAGATGGCTTAGCAGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010057200.1 2732- : TCCACTGGCTCATATCTCCCATTTGAAAGGTTCCCTG---GGGCTGGAGAGATGGCTCAGAGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010003456.1 60260 : GAATAACACAGATTTTGGGTAAGCTTAAAGAACTATTGGGCTGGAGAGATGGCTTAGCAGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010018189.1 15531 : ATCTAAGTAGGTTTCTCTTTTAAAACTGCTGATATGGGCTGGAGAGATGGCTTAGCAGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010056884.1 507-1 : AAATATTAGCACATCAAAATATCATTTAAAGCAATGTCAAGGCTGGAGAG---GGCCTAGT---GGTTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010008223.1 61938 : TTATTTTCTATCTACAGTTGTATAAAACATAGCATCAGGCTAGAGAGAT---GGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010010252.1 52163 : AAAGGGAACATTTGGGCAAACTAAAGGATAATATGGGCTGGAGAGATGGCTTAGCAGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010012863.1 11795 : TTCTGCTTGGTAGTCAACACAAAACATCTGGCTCTATGAGCTGGAGAGATGGCTTAGT---GGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010009466.1 61896 : GCAGAACTTGTCAACAGTTTATAAAAGTGCACCTGCAAGGCTGGAGAGATGGCTTAGT---GGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010022074.1 8511- : GAGGTGTACTTGGGACCCCTCATATCAAAACAGAGTCCGAGCTGGAGAGATGGCTTAGCAGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010047508.1 11272 : CCAACCATTTCTTTTCTTCC---TCCTTGAAGTACTAGATTTCAGCTTAGC---GGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010003663.1 4321- : TAATTATTTCTATGATCTTCTGATTAAAGACAATCTGGGCTGGAGAGATGGCTTAGCAGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010015580.1 24314 : TTAATTGTTGGCTTTGTTTATAATAAAATGGAATGAGCTGGAGAGATGGCTTAGA---GGTGAGAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010000402.1 17966 : AGTTTGATTCACTCCAAATATAAAGATAAGTATCATTAGAGCTGGAGAAATGGCTTAGC---GGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC
PVKW010006337.1 68742 : CTCTTTCACAAGTAAGTAAATAAAACATACCTTTTGTGCTGGAGAGATGGCTTAGCAGTTAAAGGTCCTG---CCTGAGAAGCA---CCTTGGATTCTC

140 * 160 * 180 * 200 * 220 * 240 * 260
PVKW010023310.1 1293- : TAGGACCCATGTTAGCCAGATGCG---ACAAAGGGGCGCATGTCATCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010008284.1 55693 : CAGGACCCACGTTAAGCCAGATGCG---AAAAAGGGGTCATGTCATCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010002708.1 47966 : CAGGACCCACGTTAAGCCAGATGCG---ACAAAGGGGTCATGTCATCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010037800.1 1027- : CAGGACCCACGTTAAGCCAGATGCG---ACAAAGGGGCGACACATCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010008959.1 54713 : CAGGACCCGCAATAAGCCAGATGCG---ACAAAGGGGTCATGTCATCTGGAGTTGTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010063615.1 2321- : CAGGACCCATGTTAAGCCAGATGTT---GCAAAGGGTGTGTCATCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010012833.1 24156 : CAGGACCCACGTTAAGCCAGATGCG---ACAAAGGGGTCATGTCATCTGGAGTTGTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010073214.1 3916- : CAGGACCCACGTTAGCCAGATGCG---ACAAAGGAGCGCACGTCATCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010009295.1 9881- : CAGGACCCACGTTAAGCCAGATGCG---ACATAGGTGGCATGCTCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010048402.1 11816 : CAGGACCCACATTAAGTCAGATGCG---ACAAAGGTGTGTGTCATCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010000318.1 42511 : CAGGACCCACATTAAGCCAGATGCG---ACAAAGCAGGCGTTGCACTCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010010716.1 38950 : TAGGACCCACATTAAGCCAGATGCG---ATGAAGGGGCGCATGTCATCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010020618.1 31532 : CAGGATCCATATTAAGCCAGATGCG---ACAAAGGGGCGCATGTCATCTAGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010043299.1 9047- : TAGGTCCCACGTTAAGCCAGATGCG---ACATGGGTACACACGTCATCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010038770.1 14716 : CAGGTCCCACGTTAAGCCATATGCG---ACAAAGGTACACATGCTCTAGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010037008.1 3845- : ---GACCCACGTTAAGCCAGCTGCG---ACAAAGGGGCGCATGTCATCTGAAATTCCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010056162.1 5360- : CAGGACCCACATTAAGCCAGATGCG---ACAAAGGGGTCATGAGCTCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010084033.1 3312- : CAGTACCCATGAAAGTTCAGATAC---ACAAAGTGTTTCATGTGTTCTTGGTTCTGTTTACAGCAACAAAGGTTCTGGTATGCACATTC--
PVKW010029088.1 1447- : CAGGATCCACATTAAGCCAGATGCG---ACAAAGGGTTACATGCTCTGGATTTCTCTTACAGTGCTGTAACCTCTGGGCGTGCACATTC--
PVKW010022691.1 32407 : CAGGACCCACATTAAGCAAGATGCG---ATAAGAGGCACATGTCATCTGGAGTTCTCTTGGCAATGCTGAGAGGCCCTGCATGCTCTCTTC--
PVKW010007034.1 12006 : CAGGTCCCATGTTTAGTCAGATGCG---ACAAGTGACCAAGTGTGCAATGCCACAGATGCGCATAAAGGATGCAAGCTCTGGAGTTCTCTTACAGCAAGTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010037817.1 14576 : CAGGTCCCATGTTTAGCCAGATGCG---AAAGTGATGCAAGGTCGCAATGCCGCACTTGACACAAAGGGGCGCATGCTCTGGAGTTCTCTTACAGCAAGTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010007622.1 53680 : CAGGTCCCACGTTTAGCCAGATGCG---AAAGTGACACAAAGGGCGCAATGCCGCACTTGACACAAAGGGGCGCATGTCATCTGGA---TGCAAGCTGCTGGCGAGTGCACTC--
PVKW010009699.1 36657 : CAGGTCCCACGTTTAGCCAGATGCG---AAAGTGACGCAAGGGTGCATGCTGCACTTGACACAAAGGGGCGCACATCTGGAGTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010029164.1 13407 : CAGGTCCCATGTTTAGGAGATGCG---AAAGTATGACGCAAGGGCGCAATGCCGCACTTGACACAAAGGGGCGCACATCTGAGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010093769.1 2826- : CAGGTCCCACGTTTAGCCAGATGCG---AAAGTGACGCAAGGGCGCAATGCCGCACTTGACACAAAGGGGCGCTCGCATCTGGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010058626.1 8874- : CAGGTCCCACGTTTAGCCAGATGCG---AAAGTGACGCAAGGGTGCATGCTGCACTTGACACAAAGGGGCGCACATCTGAGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010038810.1 14115 : CAGGTCCCACGTTTAGCCAGATGCG---AAAGTGACGCAAGGGTGCATGCTGCACTTGCCACAAAGGGGTCACATCTGGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010001600.1 11740 : CAGGTCCCACGTTTAGCCAGATGCG---AAAGTGACGCAAGGGCGCAATGCCGCACTTGACACAAAGGGGCGCATGTCATCTGGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010071617.1 2076- : CACATCCCACGTTTAGCCAGGTCG---AAAGTGACACAAAGGGCAATGCCCTCACTTGACACAAAGGGGCGCATGTCATCTGGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010005913.1 19939 : CAGGTCCCACGTTTAGCCAGATGCG---AAAGTGACGCAAGGGTGCATGCTGCACTTGACACAAAGGGGCGCACATCTGAGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010021498.1 15139 : CAGGTCTCACGTTTAGCCAGATGCG---AAAGTGACTCAAGGGTGCATGCTGCAATTGACACAAAGGGGCGCACATCTGGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010021740.1 21275 : CAGGTCCCACGTTTAGCCAGATGCG---AAAGTGACGCAAGGGCTCAGTGCGCGCACTTGACACAAAGGGGCGCACATCTGGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010060547.1 8275- : CAGGTCCCACATTAGCCAGATGTT---AAAGTGATGCAAGGGCGCAATGCCGCTGCTGCGCCACAAAGGGGCGCACATCTGGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010005965.1 34278 : CAGGTCCCACGTTTAGCCAGATGCG---AAAGTGACACAAAGGGCGCAATGCCGCACTTGCCACAAAGGGGCGCACATCTGGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010021433.1 26562 : CAGGTCCCACGTTTAGCCAGATGCG---AAAGTGATGCAAGGGCGCAATGCCGCACTTGACACAAAGGGGCGCACATCTGGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010018455.1 14117 : CAGGTCCCACATTAGCCAGATGCG---AAAGTGACGCAAGGGCACAAATGCCGCACTTGACACAAAGGGGCGCACATATGGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--
PVKW010027487.1 15863 : CAGGTCCCACGTTTAGCCAGATGCG---AAAGTGACGCAAGGGCGCAATGCTGCACTTGACACAAAGGGGCGCACATCTGGATTTCTCTTACAGCAAGCTGAGAGGCCCTGGTGCTGCCCATTC--

PVKW010014973.1 10597 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA TGCAAGGACGCAAAGCCGCACTTGACCACAA-GGGGGTGCA CACATCTGGATTTCGTTCAAG-AGCAGCTGAG-ACACTGCTGGCAGC---CCCATC---
PVKW010001443.1 36920 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA TGCAAGGGGCACAATGCCGCACTTGACCACAA-GGGGGCGCA CACATCTGGATTTCGTTCAAG-AGCAGCTGAG-AGGCTGCTGGCGCACCCCATC---
PVKW010002988.1 23682 : CAGGTCCCACATTT-TATCCAGATGC---AAAGTGA CCTAAGGGTGCAATGCCGCACTTGACCACAA-GGCACACACACATCTGGATTTCGTTCTAG-AGAAAGCTGAG-AGGCTGCTGGCAGC---CCCATC---
PVKW010001440.1 80823 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA TGCAAGGGGCGCAATGCCGCACTTGACCACAA-GGGGGCGCA CGCATCTGGATTTCGTTCTAT-AGTAGCTGAG-AGGCTGCTGGTCAGCCCATC---
PVKW010002157.1 47489 : CAGGTCCCACATT-TAGCCAGATGC---AAAGTGA CGCAAGGGGCGCAATGCCGCACTTGACCACAA-GGGGGCGCATG CACATCTGGATTTCGTTCTGAG-AGCAGCTGAG-AGACTGCTGGTGCA---CCCATC---
PVKW010020676.1 22144 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA TGCAAGGGGCGCAATGCCACACTTGACCAGAA-GGGGGCGCA CGCATCTGGATTTCATCTCGG-AGCAGCTGAG-ACGCTGCTGGCAAT---CCCATC---
PVKW010022582.1 28012 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CGCAAGGGGCGCAATGCCGCACTTGACCACAA-GGGGGCGCA CGCATCTGGATTTCGTTCTAG-AGCAGCTGAG-AGGCTGCTGGCGCGCCCATC---
PVKW010002134.1 13078 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA TGCAAGGGGCGCAATGCTCATTTTGACCACAA-GGGGGCGTGA CACATCTGGATTTCGTTCTGAG-AGCAGCTGAG-AGGCTGCTGGTCAGCCCAT-ATC---
PVKW010003325.1 68925 : CAGGTCCCTCGTT-TAGCCAGATGC---AGTGA CGCAAGGGGCGTAATGCCGCACTTGACCACAA-GGGGGAGCA CACATCTGGATTTCGTTCTGT-AGCAGCTGAG-AGGCTGCTGGCACACCCCATC---
PVKW010011606.1 31074 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA TGCAAGGGGCGCAATGCCGCACTTGACCACAA-GGGGGCGACACATCTGGATTTCATCTCTG-AGCAGCTGAG-AGGCTGCTGGCGTG---CCCATC---
PVKW010000576.1 12211 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CGCAAGGGGCACAATGCCGCACTTAACACAA-GGGAGCGAA CATGCTGGATTTCGTTCTAG-AGCAGCTGAG-CCGCTGCTGGCACACCCCATC---
PVKW010008987.1 58106 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CGCAAGGGTGCAATGCCGCACTTGCCACAA-GGGGGCGCA CACATCTGGATTTCGTTCTAG-AGCAGCTGAG-AGACTGCTGGTGCGCCCATC---
PVKW010011377.1 47950 : CAGGTCCCACGTT-TAGCCAGATGC---ACTGA TGCAAGGGGTGCAATGCCGCACTTGACCACAA-GGGGGCGACACATCTGGATTTCATCTTCAAG-AGCAGCTGAG-AGGCTGCTGGCGTG---CCCATC---
PVKW010018780.1 26-72 : CAGGTCCCACATT-TAGCCAGATGC---AAAGTGA TGCAAGGGTGCAATGCCGCACTTGCCACAT-GGGGGCGCA CACATCTGGATTTCATCTCGG-AGCAGCTGAG-AAAAGTCTGGCATG---CCCATC---
PVKW010024086.1 7120- : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CGCAAGGGGCGCAATGCCGCACTTGACCACAA-GGGGGCGCAGC GATCTGGATTTCGTTCTAG-AGCAGCTGAG-AGGCTGCTGGCGTGCCCATC---
PVKW010026760.1 19168 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA TGCAAGGGGCGCAATGCTGCATTTGACCACAA-GGTGGCGCATG CACTGTAGATTTCGTTCTAG-AGCAGCTGAG-ACGCTGCTGGTGCA---CCCATC---
PVKW010039861.1 8284- : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CACAAGGGGCGCAATGCCGCACTTGACCACAA-GGGGACTCA CGCATCTGGATTTCGTTCTG-AGCAGCTGACAAAGCTGCTGGCGTG---CCCATC---
PVKW010015303.1 22501 : CAGGTGTAACGTT-TAGCCAGATGC---AAAGTGA CGCAAGGGTGCAATGCTGCATTTGACCACAA-GGGGGCGACACATCTGGATTTCGTTCTGAG-AGCAGCTGAG-AGGCTGCTGGTGCGCCCATC---
PVKW010003511.1 48444 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CACAAGGGGCACAATGCCGCACTTGACCACAA-GGGGGTGCA TGCACTCTGGATTTCGTTCTG-AGCAGCTGAG-AGACTGCTGGCGTG---CCCATC---
PVKW010020066.1 15981 : CAGGTCCCAGTT-TAGCCAGATGC---AAAGTGA TGCAAGGACGCAATGCTGCATTTGACCACAA-GGGGGCGCACACATCTGGATTTCGTTCTGT-AGCAGCTAAG-AGGCTGCTGGCGTG---CCCATC---
PVKW010003818.1 10792 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA TGCAAGGGGCGCAATGCTGCATTTGACCACAA-GGGGGCGCA CGCATCTGAGATTTCGTTCTG-AGCAGCTGAG-GGCGTGCTGGTGCC---CCCATC---
PVKW010000020.1 31758 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA TGCAAGGACACAATGCCACACTTGACCACAA-GGGGGCGCATG CACATCTGGATTTCATCTTCAAG-AGCAGCTGAG-AGGCTGCTGGTGCA---CCCATC---
PVKW010009680.1 37424 : CAGGTCCCACATT-TAGCCAGATGC---AAAGTGA CGCAAGGGGTGCAATGCCACACTTGACCACAA-GGGAGCGATG CACTCTGGATTTCATCTCGT-AGCAGCTGAG-AGGCTGCTGGTGCG---CCCATC---
PVKW010004907.1 72306 : CAGGTCCAATGTT-TAGCCAGATGC---AAAGTGA AGCAAGCACTCAATGCTGCATTTGACCACAA-GGGGGTGCA TGCACTCTGGATTTCGTTCTG-AGAGACTAAA-AGACTGCTGGCGCACCCCATC---
PVKW010002728.1 79232 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA TGCAAGGGGCGCAATGCTGCATTTGACCACAA-GGGGGCGCA CACATCTGGATTTCGTTCTAG-AGCAGCTGAG-AGGCTGCTGGTGCGCCCATC---
PVKW010023178.1 7320- : CAGGTCCCACATT-TAGCCAGCTGG---AAAGTGA TGCAAGGGGCGCAATGCTGCATTTGACTACAA-GGGGGAGCATG CACTCTAGATTTCGTTCTAG-AGCAGCTGAG-AGGCTGCTGGC---CCCATC---
PVKW010011546.1 32916 : CAGGTCCCACGTT-TAGCCAAATGC---AAAGTGA AGCAAGGGGCACAATGCCGCACTTGACCACAA-GGGGGCGCACACATCTGGATTTCGTTCTAG-AGCAGCTGAG-AGACTGCTGGCGTGCTCATC---
PVKW010011545.1 49799 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CGCAAGGGGCACAATGCCACTTGACCACAA-GGGGGTGCA CGCATCTGGATTTCGTTTGG-AGCAGCTGAG-CAAAGTCTGGAAT---CCCATC---
PVKW010005341.1 66668 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CACAAGGGGCGCAATGCTGCATTTGACCACAA-GGGGGTGCA CACATCTGGATTTCATTTCAAG-AGCAGCTGAG-AGACTGCTGGTGCGCCCATC---
PVKW010003492.1 33515 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGGGA CTCAAGGGGCGCAATGCCACACTTGCCACAA-GGGGGCGCATG CACTCTGGATTTCATTTCAAG-AGCAGCTAAG-AGACTGTGGCGCG---CCCATC---
PVKW010043804.1 16010 : CAGGTCCCACGTT-TAGCTAGATGC---AAAGTGA CGCAAGGGGCACAATGCCACACTTGCCACAA-GGGGTTGCA CACATCTGGATTTCGTTCTAG-AGCAGCTGAG-AGACTGCTGGCAGC---CCCATC---
PVKW010032239.1 6177- : CAGTCCCACGTT-TAGTTAGATGC---AAAGTGA CGCAAGGGGCGCAATGCCACACTTGACCACAA-GGGGGCGCAGACATCTGGATTTCGTTCTAG-AGCAGCTGAG-AGACTGCTGGCGCGCCCATC---
PVKW010053339.1 11250 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CGCAAGGGGCGCAATGCCGCACTTGCCACAA-GGGGGTGCA CACATCTGATTTCGTTCTAG-AGCAGCTGAG-AGACTGCTGGTGCGCCCATC---
PVKW010022876.1 14867 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CACAAGGGGCGCAATGCCGCACTTGCCACAA-TGGGGCGCA CGCATCTGGATTTCGTTCTAG-AGCAGCTGAG-AGACTGCTGGTGCA---CCCATC---
PVKW010013669.1 21934 : CAGGTCCCATTGTT-TAGCCAGAAGC---AAAGTGA TGCAAGGGTGCAATGCCGTACTTTCCGCCAA-GGGGGCACACACATCTGGATTTCGTTCTAG-AGTAGCTGAG-AGACTACTGGCACACCCCATC---
PVKW010021200.1 8934- : CAGGTCCCACGTT-TAGCCAGACGC---AAAGTGA CGCAAGGGGCGCAATGCTGCATTTGCCACAA-GGGGGCGCACG CACTCTGGATTTCGTTCTAG-AGCAGCTGAG-ACACTGCTGGTG---CCCATC---
PVKW010033717.1 18451 : CAGGTCCCATTGTT-TAGCCAGATGC---AAAGTGA CGCAAGGGGCACAATGCCGCACTTGCCACAA-GGGGGCGCACG CACTCTGGATTTCGTTCTAG-AGCAG-TGAG-AGGCTGCGCATCTCTATCTG---
PVKW0100072702.1 6047- : CAGGTCCCACGTT-TGCCAGATGC---AAAGTGA TGCAAGGGGCGCAATGCCACACTTGCCACAA-GAGGGCGCATG CACTCTGGATTTCATTTCAAG-AGTAGCTGAG-AGACTGCTGGTGCA---CCCATC---
PVKW010035888.1 16699 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CGCAAGGGTGCAATGCTGCATTTGATCACA-GGGGGTGCA CACATCTGGATTTCGTTCTGAG-AGCAGCTGAG-ACGCTGCTGGAGCG---CCCATC---
PVKW010000339.1 12536 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CGCAAGGGGCGTAATGCCGCACTTGACCAATA-GGGAGCACATG CACTCTGGATTTCGTTTGG---CAGCTGAG-AGGCTGCTGGCACACCCATC---
PVKW010001061.1 46164 : CAGGTCCCACATT-TAGCCAGATGC---AAAGTGA CGCAAGGGGTGCAATGCCACACTTGACCACAT-GGGGACACACG CACTCTGGATTTCATTTGG-AGCA---SAG-AGGCTGCTGGAGCACCCATC---
PVKW010002728.1 90880 : CAGGTCCCACGTT-TAGCCAGATGC---AGTGA CACAAGGGGCGCAATGCCGCACTTGACCACAA-GGGGGCGCATG CACTCTGGATTTCGTTCTGAG-AGCAGCTAAG-AGGCTGCTGGTGCGCCCATC---
PVKW010083863.1 2646- : CAGGTCCCACGTT-TAGCCAGATGC---AGTGA CGCAAGGGGCGCAATGCTGCATTTACACAA-GGGGGCGCACG CACTCTGGATTTCGTTCTCT-AGCAGCTGAG-AGACTGCTGGCCCGCCCATC---
PVKW010002214.1 60035 : ----TCCCACGTT-TAGCCAGAAACA-AAAAGTGA TGCAAGGGTGCAATGCCACACTTGCCCAATA-GGGGATGCA TGCACTGGAGTTCTGTTCAAG-AGTGCTGAG-AGGCGCTGGCAGC---CCCATC---
PVKW010041582.1 1353- : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CACAAGGGGTGCAATGCCGCACTTGACCACAA-GGGGGGGCAAG CACTCTGGATTTCGTTCTAG-AGCAGCTGAG-AGGCTGCTGGTGCA---CCCATC---
PVKW010000899.1 54935 : CAGGTCCCACATT-TAGCCAGATGC---AGTGA CACAAGGGGCGCAATGCCGCACTTGACCACAA-GGGGGCGCACG CACTCTGGATTTCGTTCTGAG-AGCATCTGAG-AGGCTGCTGGTGCGCCCATC---
PVKW010015692.1 32576 : CAGGTCCCACGTT-TAGCCAGATGC---AGTGA TGCAAGGGGCGCAATGCCGCACTTGACCACAA-GGGGGCAAA CATATCTGGATTTCGTTCTGAG-AGCAGCTGAG-AGGCTGCTGGCGCG---CCCATC---
PVKW010000763.1 11056 : CAGGTCCCACGTT-TAGCCAGATGC---AAAG-----GGGTGCAATGCCGGACTTGACCACAA-GGGGGCGCACG CACTCTGGATTTCGTTCTAG-AGCAGCTGAG-AGGCTGCTGGCGTG---CCCATC---
PVKW010003844.1 69255 : CAGGTCCCATTGTT-TAGCCAGATGC---AGTGA CACAAGGGGTGCAATGCCGCACTTAACACAA-GGGGGCGCACG CACTCTGGATTTCATTTGG-AGCAGCTGAG-AGGCGCTGGCGCACCCATC---
PVKW0100017839.1 25636 : CAGGTCCCACGTT-TAGCCAGATGC---AAAGTGA CGCAAGGGGCACAATGCTGCATTTGCCACAA-GGGGGCGCATG TGTGCTGGATTTCGTTCTGAG-AGCATCTGAG-AGGCTGCTGGTGCA---CCCATC---
PVKW010008100.1 7254- : CAGGTCCCACGTT-TAGCCAGACGGA-AAAAGTGA CACAAGGGGTGCAATGCTGCATTTGCCACAA-GAGGGCGCATG CGTCCGGAGTTCTTTCAAG-AGCGCTGAA-AGGCTGCTGACATG---CCCATC---
PVKW010000959.1 59475 : CATGTTCCACATT-TAGCCAGACAA-----AGTGA CACAAGGGGCACAATGCCACACTTGCCACAA-GGGGGTGATG CACTCTGGAGTTCTTTCAAG-AGCAGCTGAG-AGGCTGTGGCACACCTATC---
PVKW010017384.1 32386 : TAGGTCCCATTGTT-TAGCCAGATGC---AGTGA CACAAGGGGCGCAATGCTGCATTTAACCACAA-GGGGGTGATG CACTCTGGAGTTCTTTCAAG-AGCAGCTG-----GCACACCCATC---
PVKW010000072.1 70081 : CAGGTCCCACATT-TAGCCAGATGC---AGTGA CAGCATAGGCGCAATGCTGCATTTGACCACAA-GGGGGTGAA CACATCTGGATTTCATTTGG-AGCAGCTGAG-AGGCTG-----GCACCCCATC---
PVKW010009950.1 49916 : ----TCCCACATT-TAGCCAGATGC---AAAGTGA CGCAAGGGGTGCAATGCTGCATTTGACCACAA-GGGGGCGCACG CACTCTGGATTTCATTTGG-AGCAGCTGAG-AGGCTGCTGGCACCTCCATC---
PVKW010021276.1 31331 : CAGTCCCACGTT-TAGCCAGATGC---AAAGTGA CAAAAGCACGCAATGCTGCATTTGACCACAA-GGGGGCACATG CACTCTGGATTTCATTTGG-TGCCGCTGAG-AGGCTGCTGGCTCG---CCCATC---
PVKW010016288.1 24488 : CAGAAACCACATT-TAGCCAGATGC---AAAGTGA CACAAGGGGCGCAATGCTGCATTTGACCACAA-GGGGGCGCACATG TGGATTTCGTTCTAG-AGCAGCTGAG---ACTGCTGGCGCGCCCA-----

PVKW010020594.1 30665 : CAGGTCCCACTTTAGCCAGATGCG---AAAGTGACGCAAGGGCAATGCCGCACTTGCCACAAA-GGGAGTGCACGCATCTGAAGTTTGTTCAC-AGCGGCTGAG-AGGCTGGTGCATGCCATTC--
 PVKW010005809.1 44239 : CAGGTCCCACTGTTTAGCCAGAGAGC-----AGTGATGCAAGGGGCAATGCCGCACTTGACCACAA-GGGGGCGCACACATCTGGAGTTGCTTCAC-AGCAGCTGAG--GCCATTCTCTATCTGTTTC--
 PVKW010012181.1 22832 : CAGGTCCCACTGTTTAGCCAGATGCG---AAAGTGATGCAAGGGGCGCAA-ACCACACTTGACCACAA-GGGGGAACACGCATCTGTATTTGTTCAC-AGCAGC-GAG-AGGCTGCTGCTGCACCCATTC--
 PVKW0100055361.1 8127- : CAGGTCCCACTGTTTAGCCAGATGCG---AAAGTGACGCAAGGGTGCAATGCTGCACTTGACCACAA-GGTGGCGCATGCATCTGGATTTCATTGCG-AGCAGCTGAG-AGGATGCTGCGCCCTTG-----
 PVKW010012381.1 29173 : CAGGTCCCACTGTTTAGCCAGACAC---AAAGTGATGCAAGGGGTGCAGTGCTGCACTTGCCGCAA-GGGGGTGCACGTGTTCTGGAGTTCAATCAG-TGCAGCTGAG-AGGCTGCTGCTGTGCCATTC--
 PVKW010020114.1 32730 : CAGGTCCCACTTTAGCCAGACAT---AAAGTGATGCAAGGGGCGCAATGCTGCACTTGCCACAA-GGGGGTGCATGTGTTCTGGAGTTTATTAC-AGCGGCTGAC-AGGCTGCTGCTGCACCCATTC--
 PVKW010039100.1 3904- : CAGGTCCCACTGTTTAGCCAGATGCG-----AGTGATGCAAGGGGAGCAATGCTGCACTTGCCACAA-GGGGGCGCATGCATCTAGAGTTCTGTTAC-AGCAGCTGAG-AGGCTGCTGCTGCACCCATTC--
 PVKW010016678.1 27329 : CAGGTCCCACTTTAGCCAGATGCG-----AGTGATGCAAGGGTGCAATGCTGCACTTGCCACAA-GGAGGCGCACACATCTGGAGTTCAATCAA-AGCAGCTGAG-AGGCTGCTGCTGTGCCCATTC--
 PVKW010074169.1 745-1 : CAGGTCCCACTGTTTAGCCAGATGCG-----AGTGAGGCAAGGGTGCAATGCCGACGTGCCACAA-GGGGGTGCAGGCATCTAGATTTCGTTAC-AGCAGCTGAG-AGACTGCTGCTGCAGCCCATTC--
 PVKW010007510.1 48572 : CAGGTTCCAGGTTTAGCCAGATGCG-----AGTGACACAAGGGGCGCAATGCTGCACTTGCCACAA-GGGGGCACACACATCTGGAGTTGGTTAC-AGTGACTGAG-AGGCTGCTGCTGCACCCATTC--
 PVKW010004064.1 53170 : CAGGAACCACTGTTTAGCCAGACCG-----AGTGATACAAGGGGTGCAATGCTGCACTTGCCACAA-GGGGCACACGCTGTTCAAGAGTTCAATCAG-AGTGGCTGAG-AGGCTACTGCGCTGCCCATTC--
 PVKW010050067.1 10032 : CAGGTTCCGCGGTTTAGCCAGACCG---AAAGTGACGCAAGGGTGCAATGCCGCGCTTGCCACAA-GGGGGCTCATGCTCTGGAGTTCTGTTAC-AGTGGCTGAG-AGGCTGCTGCTGTGCCCATTC--
 PVKW010015517.1 27485 : CAGGTCCACAGGTTTAGCCAGATGACA-AAAAGTGACA-CAAGGGTGCAATACCGCACTTGCCACAA-GGGGGCACATGCA--TGAAAGTTCTGTTAC-AGGGGCTGAG-AGGCTACTGCTGCACCCATTC--
 PVKW010006524.1 33283 : CAGTTTCCACGTTTATCCAGATGCA-AAAAGTGATGCAA-GGCACAATCCCGCACTTGCCACAA-GGGGGCGTATGTGTTCTGGAATTCATTAC-AGTGGCTGAG-AGGCTGCTGCTTGTCTCATTC--
 PVKW010012167.1 18932 : CAGATTCTCTGTTTAGCCAGATGCG---AAAGTGACACAAGGGCGCAATGCTACACTTGCCACAA-GGGGGCTCAGCATCTGGAGTTGGTTAC-AGTGGCTGAG-AGACTGCTGCTGCACATATTC--
 PVKW010062332.1 3675- : CAGGTCTCACATCTAGCCAGATGCG-----AGTGACGCAAGGACGCAATGCCACACTTGCCACAA-GGGGCACACATGCTCTGGAGTTTGTTCAC-AGCGGCTGAG-CAGCTGCTCA---CCCATTC--
 PVKW010016493.1 41272 : CAGGTCCCAAGGTTTAGCCAGATGCG-----AGTGATGCAAGGGGCGCAATGCCACACTTGCCACAAATGGGGGAGCAGCTGTCTGGAGTTCTGTTAC-AGCGGCTGAG-AGGCTGCTGCAACACAAATTC--
 PVKW010023067.1 11395 : CAG-----CGGTTTC---AAAGTGACGCAAGGGGCGCAATGCCACACTTGACCACAA-GGGGGCGCACGCATCTGGATTTCATTAC-AGCAGCTGAG-AGGCTGCTGCTGCGCCTATC--
 PVKW010055985.1 3626- : CAGGTCCCACTTTAGCCAGATGCAAAAAAGTGACA-CAAGGGGCGCAATGCCGCACTTGCCACAA-AGTTGCGCACGCACATCTGGAGTTCAATCAAGAGTGGCTGAG-AGGCTGCTGCGCCCATTCATTC--
 PVKW010064994.1 4711- : CAGGTTCCACGTTTAGCCAGACCG---AAAGTGACA-CAAGGGTGCAATGCTGCACTTGCCGCAA-GGGGTGCACCGCTCTGGAGTTCTGTTAC-AGC-GCTGAG-AGGCTGCTGCTGCAGCCCATTC--
 PVKW010057200.1 2732- : CAGGTCCCACTGCTAGTTACAGCG---AAAGTGACA-CAAGTATGCAATGCCACACTTGCCACAA-GGGGGCGCACGTGTCTGGAGTTCTGGAATTCATTAC-AGCTGGCTGAG-AGGCTACTGAGTGCACCATTC--
 PVKW010003456.1 60260 : CAGGGCCCATGTTTAGCCAGACCG---AAAAGTGACGCAAGTGCA-CAATGTCACAAATGCACATAA-GGAGGCGCACACATCTGGAGTTCAATCAG-AGAGCTGAA-AGGCCCTGCTGCATGCCCATTC--
 PVKW010018189.1 15531 : CAGTTCCGCCATTTAGCCAGACAC---AAAAGTGATGCAAGGCATGCAATGTTGCACATGTGCACAA-GGGGGCGTACGCATCTGGAGTTCAATCTAT-GCACCTGAA-AGGCCCTGCTGTGCCCTTC--
 PVKW010056884.1 507-1 : CAGATCCCACTTTAGCCAGATGCG-----AAAGTGATGCAAGGCTCAATGCCGAGCTTGCCACAA-GGGAGCGCATGCATCTGGAGTTCTTAC-AGTGGCTGAG-AGGCTGCTGCTGTGCCCATTC--
 PVKW010008223.1 61938 : CAGGTCCCACTTTAGCCAGAGAGC---AAAGTGACACTAGGTTCAATGCTGCACTTGCCACAA-GGGGGCGCAAGTATCTGGAGTTCAATCAG-AGCAGCTGAG-AGGCTGCTGCTGCTGCCCATTC--
 PVKW010010252.1 52163 : CAGGTCCCACTTTAGCCAGACACA-AAAAGTGACA-CAAGGGGTGCAATGACGCACTTGCCACAA-GGAGGTGCATGTTTCTGGCGTTTGTTCAC-AGTGGCTGAG-AGGCTGCTGCTGCAGCCCATTC--
 PVKW010012863.1 11795 : CAGGTCCCACTGTTTAGCCAGAGAGC---AAAGTGACGCAAGGGGTGCAATGCCGCACTTGACCACAA-GGGGGCGCATCAACATCTGGATTTCGTTTGA-AGCAGCTGAG-AGGCTGCTGCTGCAGCCCATC--
 PVKW010009466.1 61896 : CAGGTCCCACTTTAGCCAGATGCG---AAAGTGACGCAAGGACACAATGCTGCACTTGCCACAA-GGGGGCGCACGCTCTAGAGTTTGTTCAC-AGAGCTGAG-AGACACAGGCGACATCCATTC--
 PVKW010022074.1 8511- : CAGGTCCCGCCTTTAGCCGCACTT---AATGTTGACGCAAGGACGCAATGTTGCAATGTGCACAA-GGGGGCGCACAGTCTGGAGTTCAATCAG-AGTGGCTGAG-AGGCTGCTGCTGCTGCCCATTC--
 PVKW010047508.1 11272 : CAGGTCCCGCATTTAGCCAGATGCG-----AGTGATGCAAGGATGCAATGCCATACTTGCCACAA-GGGGGTGCATGTGTTCTGGAGTTCAATCAG-AGTGGCTGAG-AGGCTGCTGCTGCTGCCCATTC--
 PVKW010003663.1 4321- : CAGGTCCCACTTTAGCCAGATAC---AAAAGTGACACAAGCGTGCATGCTCACACATGCACACAA-GGGGGTGCATGCATC-----TGAC-AGCGGCTGAG-AGGCTGCTGCTGCTGCCCATTC--
 PVKW010015580.1 24314 : CAGGTCCCACTTTAGCCAGATGCG---AAAGTGATGCAAGGTGC-CAGTTCTGCACATGCACACA-GGGGCACACACTCTGGAGTTCAATCAG-AGCAGCTGAA-AGGCTGCTGCTGCCCATTC--
 PVKW010000402.1 17966 : CAGGTCCCACTGTTTAGCCAGATGCG-----AGTGACGCAAGGGTGCAATGCCACACTTGACCACAA-GAGGCGACACACATCTGGATTTCCTCAT-----CTGCTTCTGCTTCCC--
 PVKW010006337.1 68742 : AAGGTCCCACTCC---AAAAGTGACAC---GAGGCACTGCACTGAAAGTTCAATTCACACAGCTGAA-AAAGGCCCTGCTGCTGCTACTCTCTCTTTCTCAAAAAA-AAAAAAAAAAAAAAAAAAAA--

PVKW010007034.1 12006 : -TCTCTCT-CTACCTCTTC-----TCTCTCTCTC-----AAATTAAAAAAAAA-AAAAAA-----AAAAAAAAAAAAAAAA-AAA--AAA-AAAAA-AAA----
PVKW010037817.1 14576 : -TCTGTCT-CTCTGTCTCTC-----TCTCTTTCTC-----ACTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AAA-AAAAA-AAA----
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PVKW010009699.1 36657 : -TCTATCT-GTCTTCCTCTC-----CTTCTC-----TCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AAA-AAAAA-AAA----
PVKW010029164.1 13407 : -TCTATCT-GTCTTCCTCTC-----CCTCTCTC-----TCTGTGTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AGG---CA-TGTGC-CAA----
PVKW010093769.1 2826- : -TCTGTCT-TCCTCTCCCTC-----TCTCTCTCTCTCTC-----TCTGTCTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AG-ACCTCT-CTC----
PVKW010058626.1 8874- : -TCTGTCT-TCCTCTCCCTG-----TCTCTCTGTCTGCCTCTC-----TCTGTGTCTCTCT-CTAAAA-----AAAAAAAAAAAAAAAA-AAT---CA-TCGGC-CAG----
PVKW010038810.1 14115 : -TCTGTCT-GTCTTCCTCTC-----CCTTCTCTCTGTCTCTC-----TCTGTGTCTGTCTC-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AATTTG--GC----
PVKW010001600.1 11740 : -TCTATCT-GTCTCCCTCTC-----CCTCTCTCTCTATCTCTC-----TCTGTGTCT-----CAAAAA-----AAAAAAAAAAAAAAAA-AAA--AA-CCTAT-TGG----
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PVKW010005913.1 19939 : -TCTATCT-GTCTTCCTCTC-----CATCTCTCTCTGTCTGC-----TCTGTGTCTCTCT-CAAAAA-----AAAAAAAAAAAAAAAA-AAA--AA-AAGTT-TAG----
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PVKW010005965.1 34278 : -TCTATCT-GTCTTCTCTCTC-----CCTCTCTCTCTCTCTGCTGTTTCTAC-----TCTGTGTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--GA-AAAAA-GAA----
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PVKW010001443.1 36920 : -TCTATCT-GTCTTCCTTTT-----CCTCTCTCTCC-----TGTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AGA-AGGGC-GGG----
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PVKW010022582.1 28012 : -TCTGTCT-TCCTCTCCCTC-----TCTCTCTGTCTTTCTCTCTC-----TCTGTATCTCT-CAAAAA-----AAAAAAAAAAAAAAAA-AAC---G-ATAGC-AGA----
PVKW010023134.1 13078 : -TCTGTCT-TCCTCTCTCTC-----TCTCTGTCTCTCTCTCTGTG-----TGTCTCTCTCTCT-CTCAAA-----AAAAAAAAAAAAAAAA-AAA--AAA-AAAAA-AAA----
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PVKW010011606.1 31074 : -TCTGTCT-TCCTCTTTCTC-----TCTCTC-----TCTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AGG---AG-TTCAC-TAG----
PVKW010000576.1 12211 : -TCTATCT-GTCTTCCTCTC-----CCACTCTCTC-----TGTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AGA-GAGAG-ACT----
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PVKW010024086.1 7120- : -TCTGTCT-CCCTCTCATC-----TCTCTC-----TCTCT-CTAAAA-----AAAAAAAAAAAAAAAA-AAA--AGA-ATAAG-GTT----
PVKW010026760.1 19168 : -TCTGTCT-TCCTCTCCCTC-----TCTCTC-----TGTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AA-GACTT-ATG----
PVKW010039861.1 8284- : -TCTGTCT-TCCTCTCCCTC-----TCTTCTCTCTG-----TGTCTCTCT-CTCAAA-----AAAAAAAAAAAAAAAA-AAA--AAA-CTGTA-ATG----
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PVKW010003511.1 48444 : -TCTATCT-GTCTTCCTCTC-----CCTCTCTCTC-----TGTCTCTTT-CAAAAA-----AAAAAAAAAAAAAAAA-AGA---TC-CAACC-ACA----
PVKW010020066.1 15981 : -TCTGCCT-TCCTCTCCCTC-----TCTGTCTCTG-----TGTGTCTCTCT-CCCAAA-----AAAAAAAAAAAAAAAA-AAA--GGG-ATTGG-GGG----
PVKW010003818.1 10792 : -TCTATTT-GTCTTCCTCTC-----CCTCTCTCTC-----TGTCT-CAAAAA-----AAAAAAAAAAAAAAAA-AAC---TAA-ACTTC-TTA----
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PVKW010023178.1 7320- : -TCTGTCT-TCCTCTCCCTC-----TCTCTCTCTC-----TGTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AAA-AAAAA-AGG----
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PVKW010005341.1 66668 : ---CATCT-GTCTCCCTCTC-----CCTCTCTCTC-----TGTGTGTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--CAA-AAAAA-AAC----
PVKW010003492.1 33515 : -TCTATCT-GTCTCCCTCTC-----CTTCTCTCTCTG-----TCTGTGTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AAT-TATCA-CCC----
PVKW010043804.1 16010 : -TCTATCT-GTCTCCCTCTC-----CCTCTGTGCTCTC-----TCTATGTCTCTCT-CCAAAA-----ATTAATAGGTTTAA-AAA--AAA-TCAAA-AAA----
PVKW010032239.1 6177- : -TCTGTCT-TCCTCTCCCTC-----TCCCTCTCCCTCTCTCTCTCTCTCTCTCTCTCTCTCT-----TCTCTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--GAA-TAGAG-GTA----
PVKW010053339.1 11250 : -TCTATCT-GTCTTCCTCTC-----CCTCTGTGCTGTCTCTGTCTG-----TCTGTGTGTATCT-CTCAAA-----AAAAAAAAAAAAAAAA-AAA--GTT-CTCGA-TTC----
PVKW010022876.1 14867 : -TCTATCT-GTCTCCCTCTC-----CCTCTCTCTC-----TGTGTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AAA-AAAAT-CTA----
PVKW010013669.1 21934 : -TCTATCT-TTCTCCCTCTC-----CCTCTGTGCTGTCTGTCTCTC-----TCTGTGTCTCTCT-CAAAAA-----AAAAAAAAAAAAAAAA-AGG---ATG-AGGAA-GAG----
PVKW010021200.1 8934- : -TCTATCT-GTCTCTCTCTC-----TC-----TGACTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AAG-AGCTT-GGA----
PVKW010033717.1 18451 : -TCTTCTCT-CTGCTCTCTC-----TCTGTCTGTC-----TCTGTGTCTCTCT-CCCAAA-----AAAAAAAAAAAAAAAA-AAA--AAA-GGCAC-AAA----
PVKW010072702.1 6047- : -TCTCTCT-CTCTCTCTCTG-----CCTCTCCCTCTC-----TCTGTGTCTCTCT-CAAAAA-----AAAAAAAAAAAAAAAA-AAA--AAC-ACCAT-GCT----
PVKW010035888.1 16699 : -TCTATCT-CTATCT-TCTC-----CCTCTTT-----TGTCTCTCT-CCAAAA-----AAAAAAAAAAAAAAAA-AAA--AAA-CCTAC-AAC----

PVKW010023310.1 1293- : CAAGCTG--CTCAGTTCAT-GAGAGCCAGGAAGCAGAGAGAACACC-TTCTACCCAGGCTTTCTCCTTT-TCC-
PVKW010008284.1 55693 : AAAAGAA--TAAGCAGCAG-AGGTGCCGAGCTATTTTTGTGGCCAT--GGTCTTTACTTTTTGGTGTACTTT-GCC-
PVKW010002708.1 47966 : TAATTTG--AAAAAACAT-AAAATCAGGAAGGAGGCAAAAGGGAA-CCAAGAGTCGGATTTTCACAAAA-GAC-
PVKW010037800.1 1027- : AAATATA--TATGTTATGG-CTGGCCGAACACTTCATCCCCATTCTA--GGTAGAAACAAACACACACAC-CCA-
PVKW010008959.1 54713 : CATCTTA--AAAAAAAAAA-AAAAAAAAAAAAACCAGCACTGGAAC-ATATGAGCCATGACTGTTTCTGT-GGG-
PVKW010063615.1 2321- : CAGGGTC--TCAGGCATAC-AACACAAAGAGATCAAAAGGCACTTGT--AAGAGGTGCCAGCATTGATGACC-CCC-
PVKW010012833.1 24156 : CCCCAGT--CTGAGCATGC-AGGACAACACTCCATGTGTACCCCC-AGAACACACATGCACCTCAGAGC-AGC-
PVKW010073214.1 3916- : ACCTTTT--CCAGCTCTGC-CAGAACTTCCCTTTCCCTTGGTGAATGTATCCCAAGCTTGGAAATGGCACAC-CAT-
PVKW010009295.1 9881- : AGACCAG--GATGTATTTC-AGGGGCACACCTTC---AATGGCCGA-AAGCTCTCCCTTGAGGACTCACC-CCC-
PVKW010048402.1 11816 : TTAATCT--AGGAGGTGAA-GGTAGAAAAATTCTGTGCAGGCCATC-CTGGGACTACAGAGTGAGTTCCA-GGT-
PVKW010000318.1 42511 : TGCTATT--AACAGGCAGT-GGGACTTTTCAGTTTGGCGTACTGAA-ATAATACATTGGTAGAGTTTCTG-AGT-
PVKW010010716.1 38950 : AAGTTTA--TTTGTTCAC-AGTTCTGGAGGCTGGGAAGTCCTAG-GGCCTGACGTAGCATCTGCCGA-CCT-
PVKW010020618.1 31532 : CTGAAC--CCCAATAAAA-AAAAATCCTAACAA-GTTTTCTTTTT-TCTGGTAGGTAAGTTATTTTTTAA-AGC-
PVKW010043299.1 9047- : AGACAAG--GCACAGAAAT-CAGAGCCTTTTCTGGGTATTCTTTTTCTAAGTATCTCACATTTTCCAGC-CTC-
PVKW010038770.1 14716 : TGGGGTC--CCGGCCATGTGTAAACCACTAACTAGGTGGCCCTGGA-GAAGTCACTCTTGAGTCTCCCTT-TCT-
PVKW010037008.1 3845- : CAAGTCC--TCTCCCAAAC-CATGCTCTTTTACGCCACCACCATCTGCCTATCTGTTCCCATCTTTTTCCTTGGC-
PVKW010056162.1 5360- : AAAC--TCTAGCTAGC-CAGCAAAATGGAGGGGTAAACAAGAG-ACCATGCCCTCAAGAAACAACGTGAACC-
PVKW010084033.1 3312- : AGAGAGG--GCTCAGAAGT-TAAGGCACTTGCCATAAATACCCAAGT-TTGCCAGACATGGTGGCGCACAC-CTT-
PVKW010029088.1 1447- : TATTTTG--GTTCCTGCTT-CCAAGTCAGAAGACCACAGGAGATGATGGGGCACTTGCTAACTTCTAGCC-TCTG
PVKW010022691.1 32407 : GGAGTTT--TCTCATTTAA-TCTATTAGCATTAG---TGCACACCCTTTTGTACAACCTGTAGTTCTACA-CAG-
PVKW010007034.1 12006 : AAAAAAA-AAAAAAAAAA-AAAAAAAAAAAA---AAAAAAA-AAAAAAAAAGCAAGTGGC--GCAC-ACC-
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PVKW010007622.1 53680 : AAAAAA--GAAAAAATGT-AATGTCAATAGAGA---GTTGTAAC-ATATTATTGGTGTCTTTTCTTC-CAA-
PVKW010009699.1 36657 : AAAAAAA-AAAAAAAAAG-AAGGCTTGCATTTC---ACAAGAAG-GGTATAGTGTATATTCTATGTA-AAT-
PVKW010029164.1 13407 : GTGTGGT--GGCTCACATC-TGTCACTCCCAACC---TCAGGAG--GCTGAGGTAGGAGGATC--ACAA-GTT-
PVKW010093769.1 2826- : ATACAAC--CCTTGAGGGGGTGAAC--GAGTGAAT---CCCATACGCATTAGCATATAATACGTAATCA-AAA-
PVKW010058626.1 8874- : GTGTGGT--GGTGTAGGCC-TGTAACCCACGAC---TAAGGAG--GCTGAGGCAGGAGGATC--ACAA-GTT-
PVKW010038810.1 14115 : ATCTAGC---TTCTGTACA-CTAGTTGTGTCTAG---TGTAACA--AAAACCATATTCAATG---TTTG-TTT-
PVKW010001600.1 11740 : ATATCAC----CTCCCTC-CTATTTATTTGAC---ATTATG--TTATTCCTCAAAAATGA--ATAA-AAG-
PVKW010071617.1 2076- : GAGAAGA--GAAGAGAAAA-GGAGTTGGAAAGTC---TTCATAA--ACTATTAAAGCTTGTTT--GCCC-ATT-
PVKW010005913.1 19939 : GATTGGC--ATGCCAGTCT-GAAGATTATATAAA---TCCTTTC--TTATAATTGGTCAAAAG--ACTA-CAA-
PVKW010021498.1 15139 : AAAAAAA-AAAAAAAAAA-CTTAATAATTACTA---TTAAAGA--AACAGCACCAGCATATA--TGCA-TCA-
PVKW010021740.1 21275 : GTTCCAC--ATACTTGGGT-AAGAATAACTGGAC---ACAGTTATGATTTGGGCAGTTGCTCCTGGCCT-CGC-
PVKW010060547.1 8275- : GAGTCAG--TAACCTTAATG-ATATCCAAAAAAG---CGTGACG--TTTTTAGTT-----TTG-
PVKW010005965.1 34278 : AAATAAA--AAGAAATAT-ATACCTGCCTAAGA---ATCAAGG--GTGAAAATAAAATC-----TGGA-ATC-
PVKW010021433.1 26562 : GTGTAAA--GAATAGACAGGAGAAAGGAATCCAC---TCCCCC--TCATCTCTGTTTCTGTT--TCTT-GTT-
PVKW010018455.1 14117 : CTGTCCT--GCTCTTAAAT-TTAAACCATTTTCA---TATGTG--TGAATATGCTCCACTC---AAAA-TGA-
PVKW010027487.1 15863 : ATGTCTG--GGAAGGTCAT-AGGCTCTAAGAAGG---AATCTA--CTACTGCTGTTTGGCT---AAAT-AGA-
PVKW010014973.1 10597 : GAACATT--CTTCCACCG-CTAGCCTCAGTCAA---CACCTGG--ACCATGGTGTGAGAAG---GCCA-CAG-
PVKW010001443.1 36920 : GAAGGGT--CAATCAAAAT-TCAAAATATTCTGA---ATAACA--TATGAAAACCACTTTTT--TGAA-TAA-
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PVKW010001440.1 80823 : AAAAAAGC--TAATAGAACT-GGCACATGATTCTAG---CTATATC--ACTTTGGGTACATACCTAAAGG-AAT-
PVKW010002157.1 47489 : GATCAGC--CTGGGCTAGA-GTGAGACCTGAAA---ACAAAT--AAACAAATAGTCAAAC---AAAA-TAA-
PVKW010020676.1 22144 : AAAAAAA--AAAGCATGGT-CCTGAATATTTTGT---GCATGGT--TTAATCCTTAGGGCTAGCTTAG-TAG-
PVKW010022582.1 28012 : AAACATA--GAGAAAAAAA-TTAACCTGCCTGTAA---TTCCACC--ACTTAGACATAACTACT--GACA-ACA-
PVKW010023134.1 13078 : AAAAAAG--CTTGGCAAGC-CTGGTTCACTGAG---TTAGGAA--AAGAAAGCAGTCTTGAG--ACAG-GAA-
PVKW010003325.1 68925 : AAAGAAA--TAGCCCAAT-ATTAATAGTGGTTA---AGAGATG--GAAATATAACTTTTTA---TTTC-CTA-
PVKW010011606.1 31074 : GAAATAC--AATCAGACTG-CAGTATGTTCATGT---ATTAAAC--TTCTCAATAAAAAATGTT--AAAA-ATG-
PVKW010000576.1 12211 : ATGTATG--TGTGTTTAAT--AGCACAAAAGAG---TCATTGA--ATTGTAGTACAAGAAC---TAAA-TTT-
PVKW010008987.1 158106 : AGAAACC--TAGCTGAGCA-TTCAGCTTCAATTG---CTCTCCA--TTTCTTCTAGCTGATGTAATTA-TGT-
PVKW010011377.1 47950 : AAGAAAT--TAGAATATAT-AGAAGCAAAAAAG---GCAAAGGT-TTTTTTATGCCAGCATT--TAGT-AAC-
PVKW010018780.1 26-72 : TACAGAT--AACTAAAAT-AATATAAAAAGAAT---ACAAATAA-ACACTGAGGGAAATAAGTCAGT-ATA-
PVKW010024086.1 7120- : CAATTCC--CAAGCCACTC-ACATAAGCTGGATGCTCTTGCAACAGCAAGAGCTCAGTACACACATG-CAT-
PVKW010026760.1 19168 : TATAATT--TCAGTTATAT-TCTCAAAATTTGAA---AAGCAC---TGAAAAATTGTTATTCC--AAGG-CAA-
PVKW010039861.1 8284- : CAAGAGC--CAAATGCAC--GTGATGTGTACCA---ACGAATTA-GCAACATGACTTTTTTC--ACCT-GTG-
PVKW010015303.1 22501 : CAAGAAA--ATAGATGAAC-TTGAAGGTTATAC---TAAGTGAA-GTAACCCAGGCCATATG--TAAG-TAC-
PVKW010003511.1 48444 : AATCCAC--CTGTCCAAAC-ACTCTAGACTTTGT---TTAAGT--CTTTGGATAAAGAGACTC-CAGT-GAA-

PVKW010020066.1 15981 : AAAGACA--CAAAGCTAGG-TCTGTATTCAAGTA---AACACAGA-GCTGACTTGGAACTAG---AAAT-TCG-
PVKW010003818.1 10792 : ATTCAAT--CCAAGTACAC-TTTTGAATGATTT---TAAGGTTG-AAAAGTCACAACAAATG--TGAG-TTA-
PVKW010000020.1 31758 : ACTTTCA--CTGCCAATAA-GAAGTTGAATTTAA---AGAACTC-AAAGCTTTGAGTATCTTT-ATTG-TTT-
PVKW010019680.1 37424 : AAAATAA--TGATAGGGTG-CTTGTAATAATGAAT---TTTGTTT--TTGAGGCAGGAAAAACA--TGAA-TTT-
PVKW010004907.1 72306 : CTCTCTC--TCTTTTTTTT-AATATATAATATGC---TCTTGTTA-GTGGGAATTGTAGGGGT--AATT-AGC-
PVKW010000122.1 79232 : AATTCTG--TCACCAGACC-AAGTCAACACATAG---TATAAGTC-ATTAACCTTCTGCAACA---AATC-ACT-
PVKW010023178.1 7320 : TTGGGCT--GGAGATATGT-CTCGGTGGTTAAAG---GGACTTGC-TTGAAAAGCTTGACAACCTGAAT-TTG-
PVKW010011546.1 32916 : TCATCAT--GCCTGATTAA-AAAAAAATTAAGG---CTGGAGA--GATGGTTTTGCTATTAAAGGCATT-TGC-
PVKW010011545.1 49799 : ACAGAAG--GCTGAAATAT-GTGGATGGCATGAG---TTCAAGG--CCAGTCAAGTCTACATCATGAGT-TCA-
PVKW010005341.1 66668 : TTGAGGA--GGAGCCTTAT-GAATCTTACAATT---TCAGGAGC-TTACTTTGTGAGTTTGTGCTTACT-TCC-
PVKW010003492.1 33515 : AGGTAAA--TGTTGTAAGG-ATTTATCTAGATTA---TTATACAC-AAGATAGTGCATTTCTATTGCTG-TAT-
PVKW010043804.1 16010 : AAAAAA--AAAAAAGGA-AAAAAGAGAAGGAA---GGGAGGA--AAGAAAGGAAAGAAG-----
PVKW010032239.1 6177 : TTGGAGA---GGCGTGTCT-GCTTCGTGTTGGAT---ACTCAAC--AAGCTCAGGAAGAAGA---GAGT-ACT-
PVKW010053339.1 11250 : AAACCAC--CAGCTGAAAA-TTGTGCTCTCTTGA---TAATTAGT-ATCAGCATTGCCAACTGCCACTT-GCA-
PVKW010022876.1 14867 : ATGAAAA--CAAATACTGC-CAGGGTTGTGGAGA---AATAGGAA-CTCTCATTACACTGCTGGTGGG-AAT-
PVKW010013669.1 21934 : AAAATAA--GTCCAGAAAT-AAACCTTCTTATAC---ATAATAA--GATATTTTCAACAAA----GGTA-CTA-
PVKW010021200.1 8934 : GGGCTGG--GGATGTAGCT-CAGTGGTATGCTTAC---TTGCCTAACATGTATAAGGCTTTGGGTTAATC-CCC-
PVKW010033717.1 18451 : AGGTCTC--CAGGAACTT-TATCTGAACTCCT---GGAAGGCT-AGAATTAAGTATGAATAGGGTAG-AAC-
PVKW010072702.1 6047 : CATTCTT--ACATATCTGG-GAATTGACCACAGT---CAGTTGA--ATAGCAGCTGTTTGTTCAGTG-GCT-
PVKW010035888.1 16699 : TCTGGCC--AACCAC TTGG-GTCAAGGGTCTTCC---AGTCCTAT-TTCTCAACCTTGTTCGAAGGTGA-GTG-
PVKW010000339.1 12536 : TTGCATT--TTTGCA TTGG-TGGAGAAAGAACTT---AACAGTTA-ATGCTTTGCAGTAGCTG--GAGA-CTC-
PVKW010001061.1 46164 : TGGCCAA--GTAAGCCTGT-AACCCAGTCTCTGT---GGGAGGC--AGACAGGAGAATCAATGGGACTC-AGT-
PVKW010002728.1 90880 : AGGCCAG--GCATGGTGTC-ATACACATTTAATC---CAAGCACT-CGTGAGACTGAGGTAGGAGGACT-GCA-
PVKW010083863.1 2646 : TCTGAGC--TGGGTATGGT-GGCGCATGCCTTTA---ATCCCAG--CACTCAGGAGGCAGAAGTAGGAG-GAT-
PVKW010002214.1 60035 : TCGGAAG--GACAAGGAAG-GAGGGTTGCTGTGA---GTTTGAGG-GTAGCCTGAGATTACATAGTGAA-TTC-
PVKW010041582.1 1353 : CCACCAT--GCCTGGCTAA-AAAAAAAAAAGCTT---CACGCTGTGGGGAACAGAAACAGTCACCTGAGGGTC-
PVKW010008993.1 54935 : TAAACCA--ACATACTTGG-GAGAGAGTACTACC---TTTTTGACTGAGTGAACAAATGAGTACACTTT-GTT-
PVKW010015692.1 32576 : ATCTCAC--ATAATGTAGG-AGTTT TAGATAAA---AATAGGGT-ATAGATGCCAGTAACTC--CAAG-GTG-
PVKW010000763.1 11056 : CTTCATA--TTTTTCAAAC-AACAAGAGCTGTGAG---ACAGAGTT-CAGTGGTAGAGTGTTCATCTGCCCTACA-
PVKW010003844.1 69255 : CCAATCA--TTTCAGACAG-TTTCAGACCTGAAA---AGCCCCAG-AATCTCTCTCTTGATG---CATC-ATT-
PVKW010017839.1 25636 : AGAAGTA--AAAGCGTAAT-TGATT CAGGAAAG---AATGAGAG-CTCTAAGGTTATTTGGATAAAAT-CTC-
PVKW010008100.1 7254 : GGGATAG--GCAAAAAGGAC-CATGGCAAAC TTT---GAAAAGAA-GGATTCCAAGATGGGAA--AGGC-CTC-
PVKW010000959.1 159475 : GCATAAT--GGCAATGGGG-AACGTGTACAAACT---GTGTCAGC-TCCAGCTAAGCACATAT--CAAT-CCT-
PVKW010017384.1 32386 : GGGAGCA--GGGTGCATAG-AAATAAGCTTAATAT---AAGGAAAAAGCAAGAAAATGCCACTGCCTGCC-AAC-
PVKW010000072.1 70081 : ACAAAAT--CCAAATGTCT-AATCCTAACAAGAT---TTATATAG-TTAAGACAAGATATTGTCAGGCA-ACA-
PVKW010009950.1 49916 : GTTAGGG--GAAAACCTCC-AAGACTTAGATGAT-AATTAGAAGGTTCAATTGCCTCATGTGTACTATAA-TTT-
PVKW010021276.1 31331 : GCTTTCA--GCCTAAGAGT-GACCAATCCTATGT---GTCTACGT-GTGACCTTTGGCGATTCCCTCAA-CGT-
PVKW010016288.1 24488 : ATGGCCC--TAGCACCTGA-CCCAGGTATCTGTG---AGGCAAGACGCATTTGGCAATAGCTGCCTGCT-TTT-
PVKW010020594.1 30665 : TCAGAGA--TGACAAAACC-TCATGCTTCTTGCT---TCTGAGGCCACAGTCAGCTCTTGGCCAAATCT-GGA-
PVKW010005809.1 44239 : TCAATAA--AAATAAAGTT-GCATGTGTGTAATT---GGATGCTA-GTGATTTTGAACAAAACAATTCA-ATG-
PVKW010012181.1 22832 : TAATGAA--AGCATGATAA-GTGTGGAGGCCCTTG---AAACTTAA-TTTCATACCATGATTTTAAATAC-TTC-
PVKW010055361.1 8127 : TTTCTGC--TTAAACAAAT-AGTGGCACAAAGTA---GACAACAC-TAGCTGTCAAGAAAAGAGGGGGA-AAG-
PVKW010012381.1 29173 : TGTATAA--ATTACACAA-TCAAATTGAATAAC---AAGGTAGGTTGGATATGTCATAATTTCTGATA-TGC-
PVKW010020114.1 32730 : TGTGTAT--TGAGCACTTA-GTGTGTCCTGGGCC---CTTCATGT-GGCATTTTCATCCAACCTCTAAGAT-GAG-
PVKW010039100.1 3904 : CATAGGA--AACCTTAGTC-AGCCAATGGAGCTT---TCAGAGAGGAAC TAGAATGAGACAGACCCAGC-ATT-
PVKW010016678.1 27329 : GGAAAAC-AGTCACATCAC-GTCACGTGTGACTT---GGAGAAGG-CCACCAATGACCCAAAGAGGCCA-CCG-
PVKW010074169.1 745-1 : CCCACAT--GATTATCCAA-CCTGCTGGTTCTCC---ACCCTGGC-TGCCCATTAGGACCAGTGCATG-GCT-
PVKW010007510.1 48572 : TGTCCCTT--TTCAAGGGAA-GATTATAAATAATC---TTTTTTTA-TTTTTTTATTTTTTTTATA-GTT-
PVKW010004064.1 53170 : TGGCCTA--GGGACATGAT-TTAGTTACCCCAAG---TACCATGT-TCCAATGTGTCAAAAGCTTGGTA-AGG-
PVKW010050067.1 10032 : TAAACAC--ATTTTGGGAT-CAAAGACTGATAAG---GAAGATAC-TTGAGTGATTGTGGTT---CTAG-GCC-
PVKW010015517.1 27485 : GCAGTTT--TCTAGATTTT-TAAGACTTTATTTT--AATGAGAGAGGGGAAAAAGGGAGAGGAAAAACAT-ATG-
PVKW010006524.1 33283 : TTGGCTT--GGTCAGAGCC-ACTGGTTAAAGGAG---TTGTAAAC-TTATCCAGGACTTTTACTGGTGA-GGC-
PVKW010012167.1 18932 : GAGCTAC--CCAGATACAC-TGTCACTGTGGCAC---TGTTGGCACTGTGGCTGCTGTTGTCTTCCAGAT-TGA-
PVKW010062332.1 3675 : CAACAGT--GGAAGTGTAA-GTTCAAGTTAGGCT---TTAGAATC-TAATTCATTGTTTAAAATAAAAA-ACAG
PVKW010016493.1 41272 : CTTAACA--CTTAAGTGCA-CTTCCATTATCAAT---GTGAAGGT-TTGAGTGAGGCAGAAACCGCAGA-GTT-
PVKW010023067.1 11395 : AAAAAA--AAAAAAAAA-AAAAAAAAAAAAA---ACCAATAC-TGTTGCCCTGCTGCCAAACCAGA-AAT-
PVKW010055985.1 3626 : AAAAAA--AAGAAGAAGA-AGAAGAAGAAGAAA---GACTCCAG-AGGACACATCAAGAGAGTGAATA-TGC-

PVKW010064994.1_4711- : GGTGCAG--TGGGAATTGA-AAATTGTACCTGGA----GTGGGAAA-GGAGCGGAACTTGGAGAGGGTTC-CAT-
 PVKW010057200.1_2732- : GAATGAG--GGAAACCTGA-ACTTGTAGAGGGGT----CCTGCAGT-ACCACCAAGAGTAAACCTTGGG-CAT-
 PVKW010003456.1_60260 : TGTGCGT--TTCACTTTGT-ACATGAAGGAACTG----TATTTTG--GAATAAGTGACTTACTTCAGTGT-CCA-
 PVKW010018189.1_15531 : TATTACC--CCATAAGGTG-CTCCATATTTTGTC----CTAAATGC-CTCACTACTTAGCAGACAGTAAG-AAA-
 PVKW010056884.1_507-1 : TCATCAT--TACTATGAGG-CTTCTATCCGTGGT---ATACAGAA-GCACTCTAAAATCTTCATTGGCA-AGC-
 PVKW010008223.1_61938 : AAACACCTGTTTTGATGTT-GTTTGAGTTTTTTTTATAGTTTCTAT-TTCCTTATAACAGTCTTTCAGTT-TCA-
 PVKW010010252.1_52163 : AAAGCCC--TCATGATTTT-CAAGATTTCCAGTG---TAATTAGT-GCTTGGAAAATGTCAGAGGTAAC-AAT-
 PVKW010012863.1_11795 : AGCTATG--TCTCAGGCAG-CTTGGGACTCCTCT---GAGGAAAT-ATGGGTGAAACTCAAAGG-AACC-AAG-
 PVKW010009466.1_61896 : CCACAAT--GTAATTATGC-TTGCTGATAAGCA---TTAGAAAA-CTCTTAAATATTTTGTCTTTTAT-CTG-
 PVKW010022074.1_8511- : GGGTTCC--TCCCCAGTCC-TGATAGAGTGGCCC---TTTGCCCT-ATGGAAATAGTCCATGGCATTG-GTT-
 PVKW010047508.1_11272 : CAGATAG--GATACCAACT-TTCATTTGGCAGAA---ACAAAACC-CATACAAATCATTGGCCAAGGGA-GCA-
 PVKW010003663.1_4321- : TCAAAGT--ATCTTGAATT-CACACCCAGCTCCT---TCATAAAA-GCAGGTAATTGATTTATGATTCT-CAC-
 PVKW010015580.1_24314 : GCTGGGG--AAGGGTCTGT-GCCCATAAAAGAGA---ATGCCAC-CAGTAATGAAGTGGCTTCTTACC-AAC-
 PVKW010000402.1_17966 : AATGCAT--GACTTTATGA-AGAAAAGGGATTG---TTTGGTTC-ATGCTTAAATTAAAGAAGTAGAT-GTC-
 PVKW010006337.1_68742 : CCCATGT--TCAACTCTCT-AGGTCATGTAAG---CCAGACAC-ACAAAGTGACACAAGCATGCAAG-GTT-

Figure S14. *A. bullata*-specific Dip copies with long ($A_{>20}$) tails. Names of Dip_a copies are shown in red; all other sequences belong to subfamily Dip_b. Nucleotide sequences are highlighted as follows: **PASs**, **strong pol III terminators**, **medium terminators**, and **rudimentary terminators**.