**Transcriptome sequencing and annotation of   
the halophytic microalga *Dunaliella salina*\*#**

Ling HONG, Jun-li LIU, Samira Z. MIDOUN, Philip C. MILLER‡

**Data S1 Sequences of the genes identified in *D. salina* transcriptome**

Dihydroxyacetone kinase

TCCTGCATTTATTTATACGGCCATTAATTTTCACCAACCCGACCTCCACG

GAACCCCAGAGGTGTCCTGACTGGCAGGCTTTCAATAGAAGTTCAAAAAG

TCTTTATTATTGGGAGATTGCAAACCTCAATCTTTGCTGCAATTGGGCAC

ACTGTGCGTGTGAGTGAGAAACTCGTAAACAATAGCGCTTGCCCCGAGAG

TTACGCTTTTGGGTGTCGCAAGGCACCTGTCAAAAAGGGCTTCGCCAGAA

AGGAATTGAAGGACCGAAAGAGCAAGTCCGCATTTTCTGAGTCTCCAGCA

AAAGAAGCCATGTAAGCAACTGGCAACCCGTTCATTAAAAAGAAAAGGCC

CCATGAAGGACTGCATGGAAACTGACAGCACAAACTCTCACAGTGTACAC

ACTTCATTCAGGATGGGATTTGAATGTCCCCTCTTTGCAGTACAAGCAAT

CCACACCGTACACTAGCACCTGACACGAGAAACAAGCTCTGCGCCTTCCG

GCACATGCGTCTCATCGCACCATGCCCCATTCATACCCCTGCTGTTAATT

GGCAGGGGGACATAAATGTCATAACCTCTACTTCAGAGCGTTGGCTACGC

TGCGCATCCAGATTGACACAGCAATAGCTCCAGGGTCAGGCACGCTAGCC

AGCACTTCCGCAGGCACGTAGGAGGATCGACCTGCAGCGGCCTTCATGCT

CTTTGTGGCCTCCGCACCCTTCTCTGCTGCTGCTGCAGCCGCATCAGCAG

CCGCAGCGCCATTGGTCCCTCCCTTGGCCACAACATCCTCCAGGGCCTCG

CATGCTGGTATCCATGCATCCAGCATTGTACGCGAACCAGCGCGGGCGCC

ACCGTACTTCTGCATGGCTTCCACAGCAGCGCGGAGGGCGGGAGCAAACT

CCTTGGGGCCAGGTGACTCAGCCTTGCCCAGGCTAGCCGCAGCTGCAGCA

AGGGCCACATCATACAGCGCGCCACTGCTGCCACCCACAGCCGAGCGCAC

ACTGCCTCCCACGGCTTGCATGACTTTAGAGGCGGGGTCATTCAAGGGGT

ATGTGGCGTCCAGCTCCTTGAGGATGGCTTGAGAGCCGTARGCCAAGGTC

TCACCRCAGTCRCCRTCTCCAACCTTGGAGTCMAGCTCATCMAGRCCCTT

GGAGGCTTCKACRAGAGAGGTGGCTGCGGAGCGGATGGCCTTGTCCAGGA

TGGTGCCGTAGGGAGTGAGCTGGTCMGGGCGCTTGGTGGWGGGGCCTTCC

TGGCGGGAGCCAGGGGGCAGGGGCACAGGRGARAYGTCAGCCACRTGGCC

TGGGTGTAACCAGCCAGCAGTGTTGGAGGGGGCATCCAGCAGGGCAAGCA

TGTCGTCGCCCTCCTTGCCGGCTGGTAGGCGCATCACCGTCAAAGAGGCR

CCGCTCATGTCAACAGAKGTCATGTAAGGGCCCACATAGCAGCGCTCCAC

CTTGAYRTTGCGGGCCTTGAGCTGTGTGAGGGCTTCGWAGGTCATTGCAT

TCATYTCKAGGTTGGTGGATGCACCCAGGTTGTTCACCATGGCCACAGCG

CGCTCTCCATCCTTGAGCTGGAAGAAAGAGGAGTTGTACATCTTGTCGAT

CATGAGCTTCACAATGTCCTTAGCGGGCATTGCTGCAGTGGTGCTGGCAC

CAGGCTCACCATGGATKCCCAAGCCCACTTCCATCTCGCCCTCCTTGATA

CGATCAGAGGGGGGCTTGCCAGGCAGAGTGCACACGCGCAGCGCAACACC

CATGGTGCCGCATGCGGCAGCTGCCTTCTTCGCAGCTTCCACCACCTGCT

CCATGGGAGCGCCTGACTGCGCCACAGCACCAGCAATCTTGTTGACCAGG

ATAGTGCCTGCAATGCCGCGCCTGCCAGCCAGGCCAGGCTCATCGATGGC

CAGGTCATCGCCCACGGGCACCATCTCCACCTTCAAGCCCTCCGCCTTGG

CCTGCTCCGCTGCCAAGCCGAAGTGCAGGCGGTCACCAGTGTAGTTCATG

ACGATGAGCACGCATCCAGCAGGGCCGGTGGTGGCGCGGATGGCAGTGAG

GATGGCATGAGCTCCGGGGGAGGCAAACACCTCGCCAGACACGCCAGCAG

TCAACATGCCAGGGCCAACGAAGCCAGCATGGCCAGGCTCGTGGCCGGCA

CCACCACCCGCGATGACGGACACGTTCTTGCTCTTGTCGTGCTCCTTGTT

CAGGATGACCTTCAAATCAGGGAAGCCGTCCAGCTTGGTGAGCTGGGGAT

GCTGCATGATGAGTCCATCCAAAGCGTTCTGCACCAGGGTATCCGGGCTG

TTCATCAGCTTGGTGGATCCGGAAGCGGGCATTGCGGCAGGTGCGTTGGC

GATGGGGGAGCGCTTGGTGGTGGTGGGTGCCCTGGGCACGGAGAAGGAGG

GGACGGGAGCAGTCCTGCCAGCAGGGGAGTGCACCCTTTGTTGGGCGTAG

TGCATCGACTTGCTATGGAACAACTGCATTGCGTATATATATTGAGTTTT

TAGAATTGAGTTTTTTTTCACGGAGAAGGAGGGG

Glycerol kinase

>Contig435

TCCTGACCGAATGGCTTTTACATCTGCAACCTTTAACCCGGTCTGGTCGC

CTCAGCACTTCTTGATCAAGCAAGGCCAAAGGTGGAAAATTGGGGTCCGC

TCAATCAGATATATTCACACCAGAGCGATTGTTTTTGATTAGGAACAAAG

AAATGTGTAGTAAGCTTTCTGGAAAAATAACCTTGTTGAAGCACCAAAAC

AATCACAGCAAACATCCACGTCGCAGCCAATGCATTCAATGATTTACACA

AGGAAGCAGGCTACCAGCAAACGGATAGCGGCAGCATCCCTGCCTCTCCT

TTTCACCCCAATCAGCATCTTTATTCTGAGCAAGCCATGAATTRCTTTCA

CAAACMTCYRTGCTTKTGCACATCTKGACTGATAAWTGGAATWGGCTGTA

GTAGCAACWAAARCTYKCAYATGCAATCACCTGACCAAAGAATTGAGCGA

ATGCTTGCTGAGCAATTCATTCTTGTTTGTGATTGCTTGCACCACRTAAG

GAGAGGAAAAGGRCGTCTATCCCWYGRGAAAAAAAAGAGCAWGAAYRTCC

CTTTCACTCAAKGTGCATGCWCWGGAGCCCCACAGGCTGAGAKGCATGCA

CAGKAGGCCAGCAGGCAAATAAAYGGGACATCAMAAGCAAGATGAGCTAG

GAAGGCATTGAATTCCAAAGCACAGCCCCTTGCACACAATTCATTGTATA

AGTTACCAAAACAGACATTTCCCACGACCTGTGGCGTTTACAGAAACATT

CAAGAATATCTCGAGCATTCAACACGTAGCACTCATCCTAATGATTCCCG

GGAAAGCCCTCAAATTGCAAGCCGCTCCCCGAGAAAGGCCCTCTCCCATC

TTAGGAACAGAACCGTTCAAAGCACACAATACCTAGTACCATGCTCATTT

ATGTAACACAACATGTGTTGCTGGCAGCTATCTTGTCACTGGCCCACTAT

CACAACAGAGCCACGCGCTATTGCCACGTTATATTTGCTGAAAAGCAAGC

AAAGCTGCTGCACAGAGGGCAGTGTCCTGTGTGGATCCAGAGCAACCCCA

CAATTGTGCTGATTTGAAAGTGGAAGCATTAATCAGGCGCTCTCCATGAG

CACATGCCTCAACATATTTTAATCGAAAGGGGCAACTGCTTGCACCTCGT

GGTTGAAAAAAATGCCTTATGCTGTCCTGGCCCAGCAGCTGCTGTTTAGT

CCAGGGACAGATCAGCAAGCTCCAAGGATCTGGCGACAGCCTTTGACCAG

CGGCCATACCGCTTGTCTGCCTCGGTGTCTGTGATGGAGGGCTTGAAATC

AATGTTGTTGTAGGAGGCAGACGCAAACACAAGCTCCCGTGTCCACACCT

CCGCACCTAGGCCAGCTGCAAGGGCTGCACCCAATGCAGTGGTCTCCTGG

AACATGGGGCGCACCACCATCATTTGCAGCAGGTCCGCCTGGATCTGCAT

CAGCAGGTCACTCTTTGTGGCACCACCGTCAACACGCAGCAGGGGCATGC

CCTCAATCTCAGCATCCTGGCGCATGGCCTCCATCAACTCTCGCGTTTGG

AAGCAGATGGCCTCCAGGAGGGCCCGAGTGACATGTGCCTTTGTGCTGAA

GCCTGTGAGGCCCAGGATAACCCCACGGGCGCTGTCATCCCAATGAGGGG

CGAGCAGTCCCGAAAAAGCTGGCACAAAGTACACGCCACCAGTGTCAGGT

ACCGTGCTAGCTACCTCCTCGGCTTGTGTGTTGCTTTCCAAGATGCCCAG

GTTCTTTGCTAGCCAGCTGATGCCCAACCCCGCCACAGCCACAGCACCTT

CCAGGGCATACATGACAGGATCTTCAGGGCCAAGCTTGTAGGCTACGGTG

GTGAGCAGGCCATGGCGGGAGCGCAGACGCTGGGTGCCCGTGTTCAGAAG

CATGAAGCATCCGGTACCATAGGTGTTCTTGGCCATGCCCGCTTGGCAGC

GGTGCCCTAGCAGCGCTGCTTGCTGATCTCCCAGGCATCCAGAAATGGGG

ATGCCTTTCAAGGGGCCATACAAGTTGGCAACATATCCGTAAATCTCTGA

GTTGCTTGCGATGCGTGGCAGGGCGGAGGTAGGCATGTTGAAGAGGTGCA

GGAAGGGCTCGTGCCACTGGCAGGTGTTCATGTCCATGAGCATCGTGCGT

GCTGCATTGCTGACATCTGTTACGTGGATGCCCCCGTTCAGACCCCCCGT

GAGCTGGTAGATGAGCCAGGACTCCATGGTGCCAAAGTAAGCCTGGTCCT

GGTCCACAGCATCCCGCACCGCCTCACAGTTCTCATACAGCCACTTGAAC

TTGAAGGCGGAGAAGTAGTTGTTGATGGGCAGGCCAGTGACGGGACGGAA

GTAGTCCTTATCGCCCAGCTCTTCCTCCATGCGGTTGCATATTTCCGAGG

TTCTGCTGTCGAGCCAAACAATAGCATTGTGAAGAGGTTGGCCGGTTACT

TTGCTCCACACAACGGTGGTCTCTCGCTGAGTGGCCAACCCGAGGCCTCT

GATGATCACAGGGCCAATGCGAGCTTCAGCTTCCTTGAGAGCGTTTGCGA

GGCACTGCTTGGCAGTCATCCAAATGACTTGGGGATCATGCTCCACCCAT

CCAGGCTGAGGGTATATTTGCTGAAGCTGGACATTGTGTGAGGACACAGG

CTGGAAAGCTGTGTCGAACAGGAAGCATCTCGTCGACTGTGTGCCCTGGT

CCAGAGCAGCCACGACGTCCGTCATTGGCTACAGAGTCCCTACAGAAGCC

AAAAAAATCCAGTCCAAACTACGAACTTTTTGTGTGCACCGAATGCAGTC

GGTGGCACACAGAGAATGAAATATAAA

Glycerol-3-phosphate dehydrogenase (NAD+)

>Contig8392

TTTTTTCCTATGCCTGTGACATTTACAAACAAAGTAGGAGACCCAAACAC

ATGATCAAATAAGCCGATTAAAGTACGTTATAAGCTAGTGTCAGGCTTAG

TATTCGAAGGTTGAACATAAAATCACTCACCCATTCACTAAGCACACACA

TAGGCCTACTTACAGCTCCTGAAGTTCCAATAAAGCAGGGGGCAATGACA

GACTATTGCGGGTAATTAAACTAAGCACATCCCCCAAAACACACGTTATT

TGGAGCTGGCAACAGAAGTTAGCTGCCAATGGCATCATAGCCCTCAGATG

AGCCTCCCCACCCTTGACCCATCCCCTCAAAGCCCCAATGAATTGATCTA

CCTTTTGAGCCATACGGGCCATACTTTACTTACATGACCGAATCAAACAA

GATGAACCCCATGGGGCCCCCCCAGGCTGCACCTGTCATATGTAAGCACG

GATTCATCCTACACCTCATGTTTCCATTCTCCTTAGTAATTTCACTGACA

GCCATGCTTGACGCAAAATGGGGACCAACTGATGGTGTCGGGCAAGCCAC

AACTTCCAGAACAGGTACACCCACCCTGTACATCAGAGGAGACTGAGCCA

AACACATCCCTGTCCGTCGAGGTGCACCCATGCATGCATGGTAAACACCG

CTGCATGCTTTGCTGCTGCAATGCCAGCGCCAGCTCGCACAACCACAAGG

TCCCATCAGATTCTGTTCTGTTCAAAGCGGCAACACACAGCAACGACAAC

ACACTCCCCAATGCCCTGTGCAAGCCCTTGCACCCTYYTGCACAGCTTRA

CACGCTGCACACTCCGGGTTGCCTTGTCTGCATTGCTCAGCGCCCCCTGC

CCCACACCAGCAGGCCTGCTTTCCCACCACCAGCAAGTGGCCGTCTTAAA

AAAAGTGCTCCCCAGCAAGACACGTGCCATCCTCTTTGCCTGCTGACCAT

CGCAAAAAGCAGCTGCCCCTTATCGAAGCACCAGCCGGCTGTCTGATGCC

ACCACTGTCAGCAGCAACAGACCTTTCTCAGCAGCTGCTTTCACAGAGCA

TCAGCTGCCGTCTTTTGTGTCACCACTGCAGCAGCATTTGTTCCTTGTAG

ACAGCTCTTTTTAGGCAGCACCCTATGAGGCAGCTGCTCCTGTCAAAAGC

TGGGCCCAGGTGCTAGCCGAATGCAGTCCCAGCACCAGTCTTAATGCCAC

CATTGTCAGCAGCAACAGACCTTCTGGCTGCTCTTTTTTAGGCAGCTGCT

ACAGTCACAGCAGGCTTCATGGGCTCAGGTGCAAGGATGGGGTGAGCAGG

AGCTTCTGGGCCTGGGTGGACGAGGGGACCCGAGGTGAAGTTCTCCTGCA

GGTGCTTCACAGCAGCCGTGACGGCGGAGGTGCGCTGCTTGTCGTTCCAG

CCCAGCGCATTGCCCATGATCTCGGCGATGCGCGGCAGTGCTGCCTCTGT

GGCCTTGACATCTAGGAAGGCGAGGCGCGAGCGGCGATCAATGAAGTCTT

CGATGGTCATGCAGTACTCATGCTGGGCAGTGTACATGACCTCCGCTTCC

AAGATAGGGTGGCCAGCAATCAAGCGCTTGCCCAGGCCCTCCTCCTCAGC

CATGGCAATCACACGCATCGCGTTGTCGCCATAGGCCGTGGACAGATGGT

GGGCAATCTCTGTGTCCATGGCCACACTGGGCTTGCCGCTGCCGTCCTGC

TTTTTGTCGCTGTTCTTGCCAAAGTAGCGCTGCGGCATGCCATGCTGCTG

TGCGATCTCTGCCATCAGCGTGTAGGTGTAGTTGGTTGCCCCCAAGAGCT

TATAGTTGGCTGTCTGGCAGGGCTTCGCGCTCTTAGGCAGCTTCCCGGTG

GCCATGGCCAAGTCAATGGCTTGCTCCGCCATAGCGCGGTAGGTCGTCCA

CTTCCCGCCTGTCACATTCAGCAGGCCATCCTTGTCCTCAAAGATCACAT

GGTCGCGCACAACGTTTTCGGAGGAGGTGTTCTTCTTAGGGGCAGGCAGG

GGACGGATGCCGCACCAAGTGGACAGCACATCGCCCCGGGACACACGCAC

GTCTAGGAAATCGATGAGGGTGGCCAAGATGAAGTCGATGTCCTCTTCGC

TGGAGCGGGGTCGGGAGGTGGCCTTGATGGGGGTGTCGGTGGTCCCCGCA

ATCACATGGCCTTGGAAGGGCAGCATGAAGATCACGCGGCCGTCTTTTGT

CTTTGGAATAATCATGCCAGTCCGAGCTGACCCATAGAAGTCAGGCAGGG

TGACGTGCGCGCCTGAGCTTGCCATCACTGTTTGCTGTGCATCAGGCTCA

GAGTAGCGGCGCACATCATCTGCAAATGCGCCAGTGGCGTTGATCAGGAG

GCGGGCATACACGTCCGTCTCTTCTCCAGTAGCACGGTCACGGCACACTG

CGCCAATCACTTTGCCCTTATCATCCTTGATGAGCTGCTTGCACTCGGTG

TAGTTCATCACAGTGGCGCCCGCAGCTGCAGAGGAGCACGCTAGTGCCAC

ATTCATGCGGGCATCGTTGAACTGGCCATCATAGTACATGATCGATCCCT

TGAGTGACTTGCCCCCGATGTTCTTGGACATGGTGGGCAGGTAGGTGAGG

GTCTCCAGTGCGGTAAGGAACTTGGAAGGCACAAGGGTTGAAGTGCCTGC

CACCAAGTCATACATCTTCATGCCTGCCCAGTAGTAGGGGACCTCCCACC

AGTTGTAGCAGGGCGTGAGGATGGGCAAGGGGTGGGCCAGGTGTGATGCA

TTGGACAGCAGCATGTCCCTCTCATGCAGGGCCTCGTACACCAGCTTGAG

CTGGGCGTAGTCCAGGTTGAACACAGCCTTCTCCAGGTAGCGGACACCCC

CGTGCACCAGCTTGGTGGACCTGGAGGAGGTGCCTGAAGCGAAGTCCTCG

CGCTCGATGAGCGCGGTGTTCAGGCCCCGTGTCTGTGCATCGAAGGCACA

GCCAGCGCCCGTGGCCCCTCCGCCAATGACAAGGACATCAAAKGGGCTCT

CCCGCTTGCTGGCCATCAGGCGCTGGTACTGCTCGCTGCGGCTGGGCACA

TTGTCCACAGACAGCTCCCGTCCCGTGCTGGCAGCGTCCGCGCTGGCGGT

GTCCGGTCGCCACAAGCTCCAACCTGCCAGCGCTGACAACGAGCCCGCTC

CGCCCAAAAGCGGGAGGAGGCGCCGTGTGGCCATGTTAGAAATTTTATTT

CGAATTTAATCGGGAGTTATGAGTGGTCCCGGCGCGTTTCCAACACTTTG

TGAAATTTCCAGAGTAAATCACACGAATTA

Glycerol-3-phosphate dehydrogenase

>Contig9350

CTTCAGTGTGCCGCACATCTCAGCTCCAGCCACATCTTGCAAGATGTCCA

CATAGAAGTAGGATGTCTGGAAGAGCTTCCGAAAGATTGCTCCCATTTCT

CTGCTGGATGACGCAATGACTGCTTCACTCAGTTCCTTGTTGCCCAGATC

TGAGGCGATGTTCCCTCCTATGAGCACGCTGCAGTCCAAGTTCAGGTTCT

TGCGGATCATCTGACTGATCATCTGTGGTCCATCCCTACCCACACGCATG

CCCTTCACTAAACTGATTGCCACTGCTTCTCGCTTTACCTTGCCCATAAG

GCGGCGTGTGATGCTTTGCATGTGTTGGTGGGGTGGACAGAAGATCAACA

CATCTGCATCTGATGCAACCCATTCCAAGTCGCTGCTAGCAATGACCTTG

TCCCCTAAGTGCACGCCTGACAAGTACTTGGGATGGTGGTGCTCTGTGTT

CAAGATATCGATCAGGGAGCGGCCCTCAAACTCATCCAATGGATCTTGCA

CCCATACTTTTAGGCACGGGTCAAACTGGTCGTCTGCCTCGATGTTTTGC

GTTATTAAATGGATAGCAGCGCACGCAAAGGATCCAATCCCAATCATGGC

CACCTTGCTGCATTTCAAGGCCCTCGTCAAGTCGTCATGGTCATACACAA

ACCACTCCGCTGCCTCTGCCACAGCAGGCCGCTCCACCACACCGCCATAA

CCAATGAACAAGTCCGCTCCTTGAGATGATTGCACCGCCTCCATATCTGT

TGCACCATCTCCAATCATGACGACCGTGTTGTACGGGTGGTCCTCCCGGA

TCTTGGAGATGGCTCTGATTTTGCCCATGTTGAAGGCAGTGGGCTGGGAC

TCATCAAAGCCTGACAACCGGGTAGGCTGCCCTGTCTCATCATCCCATTG

CCAGTTCATGCGGTTTGCAAACACGTTCTCCCTGGGCACTCCGAGGTACT

TGGCAATGGGCATGATATCTTCCCGGAAGCCCCCGCTGATCATGTAGACT

GCCACACCTCGTTTCTGCAGGGTCTTGATTAAGTTCACAATGCCCTTGGT

CAGCCGCTCCTCAGGAGGGTGCTGCTGCACAAACCTCCGCACATCATCTG

GGGTGCAGTTGATGATGCGCAGCCGTTCCTCCAGTGTGTCGCTCAGATTC

ATGGACCCATCTTGGGCCTGGTCAGAAAGGCCAGAAATCTTGTCATGGCA

GCCCATGCTCATTGCCAGCAGGTCCAAACCGTCGCCTTGTGTAACAGTGC

AGTCCACATCGAGACACACACAATCGGCAGTTCGCCACGTAGACAGCGCA

TGGTCACTTGGATTGGTGTTGGGCATGGTGTTGAGCCTCCCGTGTGCCCT

AACCCTCCAGCTGCATCTCCAAGCCTGCAGGTGGACCCCAGGATTGTCCC

TGAGTGCACTGGTGGCCACCTGATGCAAGCTGGCGTGGGGCTGTCGTGGA

GGGCTCCCGAGAAGCAGCAGAGACGAGTGATGACGATGGGCAACGGCTTT

CTATTAATAGTTAATGAAATGTTGGCGCTTCAGCGGAGTGCTGAGCGGGG

TCAGGTCTGACTGATTTTCAATGACTG

>Contig9999

CCCTGAAAGGAAACGACGACACATGCTGTGCCTGGCTGCGTGCATATCCT

GATGGATGCAGCTTTCCAACACTTACATTGTGCGTCAACATCATCCATTC

ACAAGGTGCTAGCAGAAGCACAACAAGAATTTTAAGGCCAAGGTGAAACC

AAGACAGGAAAAACTAACGAGATCCCCTTCCCGTCAACCTGTGCACAAAT

GCTCCTGTAAAATCCAACCTTTGGTAACAAGCTTGAGATGCATTAAAATA

AATTGAAAGTGCCTATTTTGCCCAGAGGACAAAGTGACATTCTGTACGAA

GAGCCAAAACTTGCACACAAGCAAAACATCATGTTTCATCTTCAGACTTA

TTCTGTGCAGGAACTTGGGCACCTCAAATTAATGGATAAACAATGAGTGG

CATTGATGCGAACCAACATATTGCATTCCAAGGGCACGAGTTGAAATATC

CTGAGAGGACGAGATGATATATCCTGAATCAGAAGCCGAGACAAAAATAC

ACACATGAAGTTGATCCTGTACAGCATGCAAGCCTTCAATCCCGCTCACC

ATGAAGGCAGCAAGAAGCATGGCAGCTACAAAATTGTCCCGTCTCAAGGG

GAATGTGGTTCATTGATGCAGGGAATGTCGCCTGCAGACCCTTGACGCAC

CAGATTCATGCAAATAATGGAGGCCCACACAAAGAAAAGAAAGGAAGGAA

AACTATTCAGGCAGTGAATAAAGGCCCACGCAACATTAGTGCTGGACCTT

CCTTATGCAGGCGGCCTTCAGACTGATTTCTTCTGTTCTTGTGCTGTACT

TCAAGCTGGGATGGGGCTTTGCCGCGGGGCTCTTGCGGCAGGGATGATGG

TGGAATCATCATCATCTTCATTTGTCGTCTGTATGCCGTTTGCCTGACTG

TAATGGAGGATCTGGGAGGGATCTATCCTGCCATTGATGATGCGGTTGAC

TGTGGTGAACAGGGGATAGGTGGACTCCCAGCCTCGCACGCGCATCACCT

CTTGGACCTCATTGCTAGTGGCCACACCCTGTAACCTCTGACCGCCCAAA

ATCTCTTCTTCCAGCTTTGTCCAGGTCTTGGGGGCGCCAGACTTCCAAGC

ACGTGTCCAAGCTTCAGCGGTTGCATGGTTGCGTCCCCCCAAGCATGTGG

TGATCAAGTCTCCCAAACCGCAGCTCTCGAAAAAGGTCTCGTTTCGTGCA

TTGGGGTACAGGGTCTTTGCAAACTTGCGCATTTCTGTCAGGCCCTGCCG

CATGATGACTGCCTTTGCATTGCAGCCATAATCCAAGCCATCCACAATGC

CCACTGCTAAGGCCACGATATTCTTCAGTGTGCCGCACATCTCA

BLASTx result

|  |
| --- |
| DAK1 |
| |  | | --- | | GK | | |
| Glycerol-3-phosphate dehydrogenase |
| Glycerol-3-phosphate dehydrogenase (NAD+) |
| Glycerol-3-phosphate dehydrogenase (NAD+) |

Proline metabolism

Glutamate 5-kinase

>Contig3733

TGCTTGGCAGCACCACCTCAGTGCTCATCCTCCTCATGCATGCAGTGGGG

ATCAGTGAGCATGGCCAAGTTCTCCCTGTGTATTACCTCATCTGGCCCGT

TGTGTCCCAGTTCCTGCTCAAACTCCTTGGCAACCTTCCCCTTCACACGC

TCCAGCTCATCTGCGCTGTAGTTGACAAGGCCCCGCCCAAACTCGATGCC

CTTTTCATCCAATAAAGACACCGCGTCATGTGCACTGAARTCCCCATCCA

CCCCCACGATCCCAGCAGCAAACAAAGACTTTTTGCGCATTTGCACTGCG

CGCACAGCACCCTTATCCAGCGATAAGGACCCTCGTAAAGGTACCATGAG

CAGCCATCGTTTACGCCCTCTCAATGCGTTGGGCAGCGGATGGAATTTGG

TCCCCAACTTCTCGCCTTCTAAAACTTTGGGGATGGCCTCGGGATTGTTG

CTGTTGCATATTACCATTGTGCAGCCTGCGGCCACTGCGATGCGACCTGC

TGTCAGCTTTGTGGCCATGCCCCCTGTGCCCCATTGGGTGCCCTTCGTTT

TGGTGTCTGCATTGAGGTGCGCAAAGTCTTCCACATCAGAAATGGGCTGA

GCATTYGGGTCGTCCTTGGGGTTGGCAGTGTATAAACAGTCTACATCAGT

CATCAGGAACAGCCAGTCTGCTTCCACTAATGTCGCAACCTGGGCTGACA

GAGTGTCATTATCTCCAAAGCGAAGCTCACGCACGGCAACAGTGTCGTTT

TCATTCACAATAGGGACCACATTGTAATTGAGAAGCTCCGCAAAGGTGTT

CCGAGCGTTCAGRAACTGTTCCCGATCCGAAAGGTTATCAAGTGTGAGCA

GGACTTGGGCACACACCAGGCCTAAGGACGACAAGAAGTCATCATAGAAG

CGCATGAGGTGCCCTTGGCCCACSGATGCAAGGGCTTGCTTCTTGGCTAA

YTGTTGAGGACGTTGTACAAGGCCCAGCTTTTGGCAGCCCACACCCACAG

CACCGCTGGAAACCACAATGACYGCATACCCTTGGTCGTGCAGTGTCTTC

ACAGTCTCACAAATCCTTGCCAGGCTGCTGAGGTTCACTGTCATCTGCTC

CGTGCGCACCAAGCTTGAYGTGCCCACCTTCAGCACCACAGTGGTCTTGG

GAACCAATGACGGTTTGTGTGGCTTGGGCAGGCCAGGGCTAGAGTGTCGT

TTTATATCCATTTTATGTTGAGGKSYTACCAATGTTGTCAACATCTATCA

GCAAAAATCGAATTCATTTTTT

Glutamate-5-semialdehyde dehydrogenase

>comp193278\_c0

GCGGCCGCGAAGCCATTGGTAGTTCTAAAGTAATTGCTGCGGCAATGCAC

AAAGCGCTGCGTGATTCAGGCTTACCTGAAGACGTAATTACTGTAGTACC

GACACCAGATCGTGAGTTAATGGCGGATTTGCTTAAGCAAAGCGACTATA

TCGACTTGGTAATTCCTCGCGGTGGTGAAGGTTTGATTCACTATGTTAGC

GATAATTCGAAGATTCCGGTCATTCAGCACTATAAAGGCGTCTGTCACTT

GTATGTCGACAAAGATGCAGATTTAGACAAAGC

>comp331691\_c0

CCCTTGAAGAGCTGATCGAATTACCTGACCCAGTGGGTGAAAGCTACCTA

CTGGAAGAGCGCCCAAATGGAATGCGCGTGGATAAAATGCGGATTCCGTT

AGGTGTCATTTGTATGATTTATGAGGCGCGCCCCAATGTAACTGCGGATG

CCGGCGCCTTATGCTTTAAATCGGGTAACGCTGTCATTTTACGTTGCGGC

CGCGAAGCCATTGGTAG

>comp399924\_c0

TTTAGACAAAGCTTTAGCACTCCTGCTAAATGGTAAAACCCAGCGTACCG

GTGTGTGTAATGCACTGGAAGGCTTGCTAGTCCATGCGGACGTAGCGGCT

ACCTTCTTACCCAAAGCGGCTGCGGCTCTAGCAGAAAAGCAGGTGAAGGT

GCATGCGTGTAAAGCATCGATTCAGCACTTCGACGGTGCTGAGCCAATTG

CCGACACAGACTTCGGTGAAGAGTACTTAGCCCTTGAAATTGCAGTGCGC

δ-1-pyrroline-5-carboxylate synthetase

>Contig4118

GTCCACACACTTTCAGATTTACAGGTTTACATGGGGGGGCCTTCAGCCAA

ACTGTTCGGCTGATCCGCCTGTGACTGGTCCTCGTCAGCCAGCATAATGT

CCATGAGCTCAGAAATAAAAGAGAAAGCTTGTTGTTGTGCTGCAAGAGGA

GCAGAAGCATCCTGGACACTGACTTGTTGCAAAGAAGGTTGCTCCATTGA

AAAATCAGGAAAGCGTTGAACAGATAAGAATACTTTCTTCTCAGAGCACA

ATCGCCTGGGTCTCTGCACATCAAAAGGGCATGCGCCTCATCTTCAAGCA

CAGCGGTCACAAGGATACCCAACGTCCATTTAGCTCTGAAGCAATCACGG

ACACATTATTTCTTCTAAGAAAAGCAGTGAAGAATGCATTCAAGGTCAAA

AGACCAGATTCCAGTGATGCACTTGTTTTAAACATGACATTCCTGTCATG

CCACAAAGGTTCCCATGTCTCATCTGAAACTAGAGCTCAAMATCTTATGA

GATCCTACCACCGAAATTGAAAAACAAATGGATGAGGCAGGGATTGTGCT

GACCAGTTGCCCGTGTCCGAGTAAATGCTAATAAATGAATGTTAATAAAC

CTTGCAGCTGACCCTGGATCCTCAGTGCAGGACTCTATGGGTATAGGTGA

TATTCTGATCTTTGGCGACCACCTGCCCAGTGCCCCTCATCACCCACTTG

GAGGTCATCAGTCCCTCAACACCCACTGGTCCGCGTGCATGGATGCGGCT

GGTGCTAATGCCAACCTCTGCCCCCAGCCCAAAGCGGAATCCATCACTGA

AGCGCGTGCTGGCATTGTGGAAAACACACGCTGCATCTACGTTGGCAAGG

AAGGTAGAAGCCGCTGCACTATCGTTGGTGACTATGGACTCTGTGTGGCC

GGAGCCATTCGCATGGATGTGGTCGATAGCTTCCTGCATGTCGCCCACCA

CCTCCAGTGTCACCTCCTTGGAGGAGTACTCATGGCGGGCAGAGGGCGCA

GGCGGCAGGCCCAGCATGGCCACCACACGCTCACCACCTTTCACCTTGAC

CCCTGCCTCCTCCAGCGCCTTTTGCAGGACCACCAGACCCGAGGCTGGCC

CTGGCCCTGGGCTAGATGCCCAGGATGCATGCACCAATACCTTCTCTACG

GCGTTACAAGCAGCAGGGTAGTCCACCTTGGAGTCCACAACAATCTTCTT

AGCCATCTCCAGGTCGGCTGCAGCGTCYACATATACATGGCAGATGCCAT

CGGCATGCCCAAGCACCGGGATCTTTGTGTTCCGCTGGATGTAGGACACC

AGGGCATTTCCCCCGCGGGGAATGACCAGGTCRATGACGTCATCCAAGGC

AAGCAAGTCACTGATCTCCTCACGAGTGGTCACAAGGCTTATGAGGTCTG

GGCCCAGGGGCCCAATTGCATTCACGATGGTCCGGTGCAGGATGGCGTTG

CTGCGCGCAGCTTCCTTGCCGCCCTTGAGCAGCAGACCGTTGCCTGAGCG

CAGTGCCAAGGAAGCAATCTGGGGAAGGGCATCGGGCCGTGCCTSSAGAG

ATRRWKAGAAGGASASCAATGGGTGCMSTSAKCTTGTCCAGCACAWGSMC

KTGKRCAAYWTSSAKRMGCWGYAWSMACCWKSYRATGGSMTYMTCTTKSK

TTGCAATKGCCYGMATGMMARAMRYSAGMTGCTYSAGCWKGSCAKKCWCT

GWGTAGGTGGGTYMMACGCTGCAGMRARGTGYYAMTKAWARWRCCCTTTG

YCTGYWCCACGTCTGMKGCRTTCWCYRMGAGSATCTCMGYCYSCRCTGCC

AMRARKKCAWSAKCWAMKYGMWRTAYCAYRSYCTCAMSCAAATCAYWRMW

GGRMARRGCMTRCACCTTSYRWGAWGCTGMCSKKGMMCTCWRRGSMAWGY

MTYTGGGACAGCTTTGTGGCTCCTGGATTCCTTTCCTAGCTTGTCCAGTA

GATTGCAAGGAAGGAGAGGAGGTTCATTATAGAATCAAGGCAGGAGAAGT

GCAGAATGCGAGATCAGAGTGTGGGGTGGCATATGTAAGCGAGAGGAGAT

GAGGCAGCTTCATTGCGCAAGCAGTTGTTGATGACTGTATGAGCAACATA

TAGATTGTTGATTGTCAATTTTTTTTGGGGGCCAACAGCCAATATGCCGA

CACATGCTCTTTTAATTTCCTTCCTTGTATCTAACCATGCCACTGAGTAC

CATGCTTGCTCCCTGCCTCTTCAAAGAAAGGAACAAAGGTAAAAATTGAC

CCTCAAGCATGACTTGTGCTGATTTATGCTCCAAGGAAATTTGCTCGAGG

GGAAAGGACTTGGACTTCTGTCTCCAACCATCCACCGAGTCTCTTCGCTT

AATTGTCTTTGCAATGAATTCCTGGGCAGAAAGCCACAATTGGCTGGATG

TCACGAAAATTGATGCAGTGGGTGATCCAGGGAATGGACACTTTGTAGGG

CTCATGTCATGGCAGGCTTTGCAAATGTCCTATGACAGATTTTTAAGCTC

TTGTGATACAGAAAGGCCTGTCATCAGGGCTGTGAGTATACGCCGTCCAA

AGGGTATGGTGACGCTTTTTTTGGTAGCACCCTGGAGCTCAGCTAAGCCA

CTCATTGCTTGCACGCAGCAGCTGCAGCTCATCTGAGCCACTCAATGCTC

GTGCATCGATGCAAAGAACCACAAAAATATCATAATGCTCGAGAATCATA

CAAGTCACGCAGCAACAACAGCAGTGCACTGTGCACTCAGGCGAGAGGAG

AGCAGGGCATGCAGAGGACGAGGAGGAGCAGGCACAGCAGCTACTGGGGA

AGAGGAGATGCATCAGTGAGCTGATGGAGGTGAAGGGATTTTGAGTATTT

ATGAAGGACGAGAGGGTTCAGGATTCTGAGGGATCCTGAGGCAGCAAGGC

TTCATGGCCAGAATGCATTGGCAGGAAAGTCCTAGCTCCTTGTTTGATTC

CTTCTATGGGGTTGCTTGGAGCAACAGTGGCGCTTTCATCAGCAATCAGT

GGCACTTGCATACAACCGGCAAATCGGATTTGACAGTTCACCAAACAACC

GTTTTTCACCGTTTAGACGGATCGAAATTTGGAGAACACTGTAAAAAAAA

ACATACAAACCGAGCTGTAAATCGCACAGCGGACCGTCAACGGAACTTAC

AGCCCTGCCTGTCATGATGCCAAGGGCAGCCAGTGTCAGGCATAAGATAT

CCCGCTCTGACTGTATTCCTTTCTCTCCCACCAGCCTCTGCAATCTTTTG

GCGAGCAAGCTAGCACAGCAAATGAGCACAGGCAAAGGAACAAAGGGCCT

GTCATAGGGTTTATGACCCCTCCTTCGTATATGTAATGCATGCGCTATGA

AGATGGCTGAAGACACTTCTCTTGTTTTCCGCAAGCTCACAATCATGTAA

ACGAGCCGAAGATCTCATTCTGCATACCTTATAGCTCTTTGGTTGGGAAA

GATGTTAGCAAAGATGTCCATGTTCATAACAATGATTACGCCAGCATCAT

TCACATGTCTTCGGGCATTTTGCTTAATCACATTTGTTGGGGAAACATCA

CAGATGGCTTTACGCCTTCAGGAAACACAGAGTGCTGCCCACCTCGAAGA

TAATGAGGAGGACACCAATGGGTGCCGTGATCTTGTCCAGCACAAGGCCT

TGTGCAACTTCCATGCGCTGTATCAACCTTCCGATGGGCTCCTCTTGCTT

TGCAATGGCCCGAATGCCAGAGGCCAGCTGCTCCAGCTTGGCAGGCTTGA

GTATCAGACGCTGCAGCAAGGTGTCACTGATAGTGTCCTTTGCCTGCTCC

ACGTCTGCTGCATTCTCTGCGAGGATCTCCGCCTGCGCTGCCACGAGGGC

ATCAGCTACGCGCTGTACCATGGCCTCACGCTCACTGCTGGGCAGGGCCT

GCACCTTGCGTGAAGCTGCCCTGGCCCTTTGGGCCATGTCTCTACAACTT

GCAGCAGTACTGCTCATCGTCGTAGTCCAATTTTGTTCCGGGTTGAGGGG

AAACCCCAGAAATCTTTATACCGAATTCCTTTTTACTTTTATAAGTTCTC

TACTGGCACAACTGTACAAGTCGTTGACAGACCGTTGGCCCTGCGCGAGT

AAGGAAAAGGAAAATGTTCAATTCAGTTTTCTAA

1-pyrroline-5-carboxylate dehydrogenase

>Contig8843

TTTGGAAAACTACAATTTTACAATTTATGTTGCAGAACAAGACGGTGTGG

GAAACAAACCGACAGCAAAATGGCACTTTCTGGTGTTCTTTTGTGCAGTC

CGCAGTCCCAATGAGCTGTAGACTGTAGAAACTTATATCTAATCGTAATC

ATTGTAATCATCTAAATATCAAGAAGAGTGCTCTTCCAGGGTGGGTTTTT

TCAATCAGTTCCCAGTCAATACGCAGCAGGCTCAGCTGGTCTTCAGGCTG

CCCGCAGGTGGCGCTGGCCCAAAGTCCGTGATCACCTCGCGGTGGCAAGA

CCACACCAGACGGATTGCCTCTGGAGTGCCAATGCCTGCTCCTCGAGGAT

CACCAGCTGGGCCGAACCAGTGATTTTGGGGGGCGCCCGTGGTCCGTGCT

CTGATGCCGGCATATGTTGTACCGTTCACACTGTGGGCCAGCACATCTTG

TACAAAATTGATGTCGTTGGACACAACAGCAGCTGTTAGATGATTGGTCA

TCTTCTCCAGCGCGCCTAGCATCTTKGGCAGCTGCTCATCTGTGTATTCA

GTRACCACCTGGAAAGGACCAAATAGCTCTGTAGTGACAGCCTCGAAGTG

CTCGGGCTTCAGTGCCTCCTCCAAGGGCACAAACACAGCAGTGGGCTCAA

CYGCCCCATACACCTCAGGAATGGAGTGGCCTGTCAAGGGCTTGCCTCCA

AAGAGCACCTTGGCTCCTGRRATGYTGAGCAGCCGTGCCATGTGCTTCAT

GATRGCATCTGTCGTCCARGTCAGCACTGGGCCRATGGTGAGGTCTTGCA

GTGAGCGCCTGCTTGCTAGGGAAGCCAACTTGTCGTACAGSCCAGCCTTR

GCCCAGTTTGTGTGCATAAACAGCATGGACTGCGCGCTGCACTTCTGGCC

ACTGCACGCATACGCATCCTGGTCGCACTGCCATGCAACATAGTCCACGT

CACGCACGTCCGGTCCCAGCACCTTCCAATCAAAGCCCGCATCCTCCAGG

AATATCTTGCCCGCCTGCTGCAAGGCCAGCTTCTCAGCCACCTTCTGGCT

GCCCGTGAAAAGCGTGGAGCGTGGCTGTGCCTGCTTTAGTACTTCCCCCA

TGGTAGTCCCTGGGCCCGCTAGGAAGTCAACATCCGTCCTGGGCATTCCA

CAGTGATGCAGCAAGCGCAGCAGCTGCTCTGCCACAATGCACACCTTTTG

GTCTACATGCAGCAGTGGCTTGTTCCCCATGTACAGCGCTCCCATCAGCT

GCAGCGCAGGTATCTCCAAGGGAAAGTTGAAAGGTGTGATGAGGGCCACA

GGTCCGAAGGGCCACCGCAGCCCATTGCTAGTTTGCCCCCTGTGATCTCC

GGGGTTGGAGAAGCCCCGCGCCAGGAAGCGCACCTGGTCCCCACTGAAGT

TTTCGTAGAACTTTCTTGTGATCACCACCTCTGCCATGGCCTGGGGGTAG

CTCTTGGGAGATACACGCTGGATGAGACGTGCAAAGAAGTCAGACACCTC

GGGGCAGCGCAGCTGCTCTGCCATACGATGAGACACATCGCCGTACAGCA

GGTACCTATCTGGATTTTTGAGGGGGTTGTGTAGACCATGCTTGGGGACA

GCACGCAAGCTGGAAACGAAGGGCGCAATCTCGGAGACTTGGGTGTCTGG

TATGTTGAGGAAGCCTTGGTCACCWGTGAGTGGGTTGGGGAGCTGCCGCT

TGCTGGCAGCAGYACCCCACTCACCCCCAACTAAATTGTGCACAGTCAGG

GAYGRATCCTCAGCCCCACATGATGCCCAGCTCAAGCTGCTGCTAAACCT

CTTTGCAGCAAAGGAGGCAGAGGAGAGCACAGGAAAATTGAGCAGAGATC

CACGTAGTGCGAGCTGCATCCTCMCRYGCAGCTAAGAACAGAATTTCAAG

CACATCCAGATTTT

Pyrroline-5-carboxylate reductase

>comp207165\_c0

GCTGGCGGGTAACACCGTGGTGTTCAAGCCCAGCGACCAAACCCCGCTCA

CCGCGGATCTCACCCTGCAATGCTGGATAGAAGCCGGGCTGCCTGCTGGG

GTGATCAACCTCGTGCAGGGCGGTGTGGCCGTGGGACAGGCGCTCTCTGC

CCACCCCGGTATCGACGGTCTGCTGTTTACCGGCAGTGCCAAAGTGGGTG

GCATGCTGCAGCAGCAGTTTGCCGGGCAGCTGGATAAAATCCT

Proline dehydrogenase

>Contig7400

CGCAACAAYRSSKTSGWRAARTTGAAAAAACAAATTTTGATCATGCTGAT

CAAATCACAATTCCAAGCGAGACAACTGTCCGCTCCGCAACAATGCCGTG

GCGGCCTCAGCAGGTTGCACCGCTTGACAGTTAGAGCTTATGATACAGTG

GATGTGGAGCCGGAGAGGATACCACCTCCTGATGCCGGTCCAGGACGCTG

GGGTGCCCCTCCTCCCCCACCTCCCCCTCCTCAGCCCAACTTTAGAAGAT

CTTCGCAAGCACCCAGCAGACGCGAAGCTCTGTTTGGCTTCCTAGGAGCA

GGCATCGGGACAGCCATCACCGCTACCTACTACAACACTCAATACGACCT

CAGCGATGATTCCTATGAGAAAGCCCTAGATGCTCTCCTGGACGACCCCG

ACTTCTTGAGCACTGTGGAGGATGAGGTGCTGTACAAAGCCTACGGTAGT

CAGCTTGATGAGTTTGGAGAAAACCTGGAGAACATGCAGGCCCTAGACAA

GGAACTCATGAGCCTCAAGGATGACTTGGAACGCATCTCGACAGATGGGA

AGTAGAGCGCATCCCTKCGCYTGACTAGGCTTGAACRTGTGACAAAAATT

CCAARACAWTCTTGGAATTTTGTGGTGYGYGTTTTTGGGTTTTGGACTGC

AYTCCATGTGTTTAGTYTCCAAWGCATCTTGTACAAGATTTTTTTTTGTT

TCACAGCACACCTTTRTAYCATTYCTTCTTTCTTTTCCAATTCCAKTTTT

TCTTWTGCAWGAAKCTYGCCCATTGTTGCATCATGCCWGAATAATTTTGT

KTTGCTYGCCCKTGWRGGTTTTTTAMTTKKTTACGTWTTTGATKGAYASA

GGCGAGARYATCCAGAGCAATGTATGTRTARYAATGAGTGACGGTGACAR

MAAYKTWKYYAGTYYKAYWTWMARWKWYWGTRWTTSYMRWWYMMMATTGG

GCTTCACAATTTTGTAAGTAGCAAGAGCACTT

Ornithine--oxo-acid transaminase

>Contig3027

GGTGAGGTTAAGTAGGAGCCAGCTTAAAGATTAAGCTCCATGTCCCAAAG

AAAAACGACACATTTGTATGGACTCGTGCATCACAAAAGGAGGCCGAACT

TAATTAGCATGTATGCAGTTTATCTAATGCATACCAAGCCATGAAATGCA

TCTAAGGTCACAAGTCTTAATAAAACAAATTGGCTGAAAGATTCTCCAAA

AATCTTATTTGCATGCATTCAATGCATTGATTGCTGAAAGGCAAAGAAGA

CCGAAAATAGTGGCAAAATTGCTGCACACAAAAATGAGCTGTGCCCTTCA

CACAGCTTTTCAAGAAAAATCTGGCCCTCATTTCACATACTTCAAAAAGC

CTGCTMAAAAAAAAAMMAAYTCAGTCTTTCACAGTTGCARCAGCAGAGAC

AGGCCACAGCAAGATGTGGGTTCACTCAAGGGTTCCCAGCCTGACTCCTC

AAGTGGAAAAGCTAAGCAGCTTATGCGAAGCTCATCAATGTCTTCTTCAA

GATTGCGATGCACTCCTCTAGCTGAGGTTCCGACATGGTGAGGGGCGGTG

CCAGGCGAATGATATTGCCATGGGTGGGCTTGGCAAGAAGGCCATTCTCY

YTCAGGGCCATGCAAACGTCCCARGCTGTKGCCCCAGGACGCTCCGCAAT

GATAATGGCATTGAGCATGCCCTTCCCGCGCACAGCTGCAACATAGCCRT

TGGACTGAGAGGCRACATCACCCAAGGCATKCCTCARCTTGGTTCCCAGC

CGGTCAGCTGCCTCCGCAAGCCGTTCCTCTTCCAAAACCTGGAGTGCTGC

CTTTGCAACGTGCGCTGCCACTGGGTTTCCACCATACGTGGATCCGTGCT

GGCCACGCTTGATGGTGAGCATGATCTCATCACGYGCAAGCACTGCTGAC

ACTGGGTACACTCCTCCACTCAGGGCCTTGCCCAGCACTARCAGGTCCGG

CTTGACGGCCTCCCAATCGCTAGCCAGCATGCGCCCTGTTCGGCATAGCC

CAGTTTGCACCTCGTCAGCAATGAGGAGCGCATTGTGTTGCTGTAACAGC

TTGTGGGCGCCCGACAGATAACCGTCGTCTGGAACCACCACCCCAGCCTC

ACCCTGAATGGGCTCAACCATGAAGCCTACAATGTTTGGGTCATGCTCCA

GCTTTTGCTTTAGAGCACCCAGGTCGTTGTAAGGGATGATCTCATATCCT

GGCATGAATGGGCCAAAGCCCTCATARSATGATGGGTCAGTGGAGGAGGA

GATGGCGCTGGTAGTGCGGCCCCAGAAGTTGCCGGCAGCAAACAGCACCT

TGGCTTCGTTTTTGGGCACGCCCTTCACATCATAGCCCCATCTCCTTGCA

AGCTTGATGGCTGTCTCCCCTGCTTCCACTCCKGTRTTCATGGGGAGCAC

CTTGTCATAGCCAAAGAGGCGAGTAATGTATTCCTCGTACTCCCCAAGTG

CATCGTTGTAGAATGCCCTGGATGTCAGTGCAAGTTTGCTCACTTGGTCG

ATGAGTGCCTTCAAGATCTTGGGGTGGCTATGACCCTGGTTCACTGCCGA

GTATGCTGACAGGAAGTCAAAGTAGCGCTTGYTCTCAACATCCCACACGA

ACACACCCTCCCCCTTGGAGAGTACCACTGGAAGTGGCGCGTAATTGTGA

GCTCCGWATCTGTCCTCYTGGGCTATAAACTGTTTCTGRACTTCACTGAC

TGAGCTACCACTGCTTCCTGAGGCAAAACCTGAGACAGAGGTGGCCCATG

GCGACAGGAGACATGACCGCCCATGGCGGCTTGCCACAAATCTCGTTAGT

GCTTGCATTTATCAAAATTG

Polyamine biosynthesis

N-carbamoylputrescine amidase

>Contig10052

ACATGTCTTTGGTTGGGATTTAAGTGATGAGGCTTTCTCACTTGGCTGGC

CATGCTGGTCCTCTGCATGTTCCTATGCCTGCTGCGCAACATATAGCAAT

AACCAATTTTTTGTACTTTGCATCAACATTAGTACCAACATTAACATTAG

CAACCTCAACCTGTAGCATCAACATTAGACCTCATCCTGAATCTCAACTA

AACACCCACGATKMMMSGTGKWGACCCCTAACGTTAAACGTTAAAACTGT

TTCCATTTCTGGTTTACAGCAACAAGCGCGACGAGGGAGGCATGCTTGCC

CTGAAAAGCTCTGAGATGTGCTAGAGCCTCAGCAGGGACTGGTACAGGTC

TGGCCGCCGGTCTCTAAAGCAGCCCCAGGCCAGGCGCTTTGCAGCGCAAT

CGTCAAGGTCGAATTTGCCTAAGCAAAAGCCTTCCTGCAGCTTTGGGCAC

GGGTCTGGATTTCCACGCTGTATCTTGCTTGCCCCAACCTGAGACACAAT

TGCCCCATCTGGGCCGCATACAAAGCTCCCTCCATAAAACATGATTGAGC

TATTTGGGAAGGACTCCTTGCCAACACGATTGGATGCAACAACCGGCACC

ATGTTTGCAGCAGCATGCCCCTGCTGCACTCGAACCCAATGCGTATAACT

GTCTATGGTTGGGTCATGTGGCTCTGTCCCAATCGCAGTAGGATACAGAA

TGACCTCCGCTCCTTGAAGGACTAGGGCCCTTGCAACCTCAGGAAACCAT

TGGTCCCAGCATATAGCTACTCCAATGCGCCCAAATTGCGATTTGAAGAC

CTTGAACCCTGTATCTCCAGGAGCAAAGTAGAATTTTTCTTCATATCCAG

GACCTGAGGGGATGTGTGATTTTCTATACACACCCAATATGCTGCCGTCC

GCATCCACTACAGCCACTGAATTGAAGCAGAGGTTGTTGGCGCGCTCGAA

GAAAGGAACTGCTAACACGACGTTCAGCTCAGCCGCCAGCTGGGCGAACC

TGAGTATTTGAGGGTGGTTTTGGGCGGGAGTGCTCCATGCAAACAGGTCT

GCATTTGTCTCCTGGCCTATGTATTGGTACTCAAACAATTCCTGAATGCA

AATGACTTTGGCGCCTGCATGGGCTGCTGCACGGACGAGGCTCTCTCTGC

AAACTTATCATCATGGCACCTGCTTTGTCCACATTCTCCTGCCTGCTAGG

ACCGCAGCTGTGCTGGCATGCGGCAAGGCATACCGTCCTCATGCAGCTCT

CTTCCCCCTGACCCACAAACCGAACTGTTGGATCGTGTGAGTGTTATGTT

GCTTGAACACAAAATATGTTT

Ornithine decarboxylase

>Contig622

AGAAGGGGAGAAGGTCCCATGAAATTTTACAGTGTCTAGAATGTAAGAAA

CTATGGAAAACATTTCCACGAGGAATTTGTAAGTCATTTCCAGGGCAGCC

ACTGAACTGTGTAAGCAAATCAAGGTGCAGGCCTCTGAACAGGAGGGGAA

CTTTCAAAGAAAAGATGGAATTCTTGGGTCCGTAACTTCAAAGAATTGGT

GTTTTGTTCGGATTCAGGTGCAAGTGCAAACTCCTTTGTCGCATCAACCA

ACGGAAGTGGACCCCTACGCTTGTCCACACATACACACACATACGCGCAG

ACAGCCACGCAGCAAATCCATCCATAGAAAGGGGGCATCCATGCACACAA

GCATTTTGTACACTTCGGAACACACATTATTTATCATAACAAAATGGCAA

GCTAAACTCGGGCACAATGACAAAGCGCTCCTGCAAATCAGCAGCGCATG

CGAGCACCATCTAACGCGAACTCGCTCAATGCATTGGAGCATGAGTGGCC

AGCTTGCTCTGACGACACCTAGGGTCTGCTTGCTGGCCTACACGAAACCC

TTGCCTCTCACAAAGTATTGGCTCTCACAGTGCTTCACAGTGCATGCTTC

CTGTCAGCGAAACCTACAAAAAATGTGCTATGCACAGCATGAGAAATAAC

TGTTCAATTGTTGTAGTCCCAGCAACCCAGCAATTGCTCACTTCAGGACA

GCAGCATTCACACGAAAAGCTTTAATGTCCCACATTTCAGCTCTTCCCCG

CATATCTCATCTATGATAAGAAAGAGCAGATGAATGGCTCCTCACTCCAT

GTAAGAACCAAGTCAGATTTACATTTCTGTCCCCCGTATGTCCACCAACC

TCGAGCTAAGCCCCCCTGTACAAGGCAGCAACATTTATGAACCCCATCCT

CCCGGGCCCTAATGCAGACGTAGTTCTGAGGACTCTTCCTGGAGTGAGAA

AAGAGGAAAAGGGGGAAGGGGAGGGCTGCGCTGGTAGAGGCTTTGCTCAG

GAAGCAGACTAAGCAACCTGACACAGCACATTAGCTCACATGCAGCTCAC

CGAAACACATCCACAGGCAACCGGGGGCACACACATACGTGGCTAGGCTG

CTCAGGAGTCAGCAGAGCTCAGTCGATGCACAGCCATGTTGCCATATGAC

TAACACACATCCACACACTGGTCAGCCCAGGGCCAACAAAGTCAAAATTG

TCCGAAAAGGTGAGCAAGTGAACCTGCATTTTTCGTCGTAGTTGGAAGCA

AGAGGACCTCCATCGAAACACGCTCACTGGAGTCCCACACAAAAACACAC

ACTCTCATTCTCATACACACCCGTATGATGATGCAACATTTCTTGTCCCA

TTTGTCCAAAATCACGCGCTCAAGAGCCAGAGGCATGCCCCATGTAAGAG

GGCGCCTCATGCGGAAAAAGAAAACTCACGAGTGTGCCTCGTCCTCAGAC

ACCTCCATCGCATTGGCAGCACCTCCCCCAGCTCCATAGCCAAGCTCATC

CTCTGCGCCATCCACAGCGCTATCGCTGTAGACATACACCGTGGAGGGCG

AGGTAAACTCGATGCCATTGAAGTCGCATGCGCCCGCAACAGTGTAAGCG

CCCGAGTTGGTGAACATGAGCCAGTCCCCATTGCGCAGCTGTGGCAGATC

GTGGTCCTTGTACACACAGTCTGCAGAATCACAAGTGGGCCCCCACAGAG

TGGACTTGAAGGTGGTGGTGCTGGTGGGCTCTGGCAGCAGAGGCGTGCGT

ACGACCTGGTACTGCGGGTTCTGGCCATCGTACAGGATGCAGTTGAATGA

GCCATAGAGACCGTCCGTGATCCAGTAGTCCTTGTTCAGCACACCCGTGG

CCGCATCCACACGGTCACGGTGGCCGTACACAGGCGTGAGCAGCGAGGCC

GAGGTCTCTGCAAAGTACCGGCCTGGCTCAGCGATCACGCGCACGCCGCG

CTCTGGTGGGAAGTAGCGCGCCACAGCCTTGTTAATGGTGTTGGCGATCT

CACCAAACATCACGTTGCCGCATGCATCAAAGTGGCCTGTGAAGCCACCC

CCCACATCAAGCAGCTCCATGTTGTAGCCCAGGGCCTCAGCTTGGTCAAA

AATCGAGCGCGCGCTCTCGATTGCCCCAGTGAACGTGGCCAAATCCTTGC

ATGCCGACCCAACATGGAATGACACGCCCACAACGTTGAGCCCCAGCGAG

TGCGCGACATTCAGCAATTTGGGGGCATCCCCCACGTCTGCTCCATACTT

GATGCCCAGTGGCACGCGTGCACCAGGGTCATCAGCGCGGATGCGCAGCA

CGAGCTTGAAGCCTGGGTTCAAGGCTGCCACCTTGTGCAGCTCRCTYTCY

GTGTCGAAGGTGGTGTACTCCACACCATGCTCCTTGGCAAACAGGATGTC

CGAGGGGCGCTTGCAGGGGTGCGCAAAGATGATGTTGGAAGGGTGCACCC

CCAGCTTCAGCATTGTGCGCAGCTCGCCCTTGGATGCACAGTCAAAGCCA

GTGCCCAGCGCCATGAGCAGCCGCAGCAGGCCYGGCTCAGGGTTGCACTT

GACCGCGTAGTATGGCTTCACAGCAGGCATGGCTGCCTTCCAAGCCTTGA

ACAGGCGGGTTGTGTTACCCAGGTCCACGATGTAGAAAGTATCTTCAAAG

CGGTGGCGAGCAATCTCCTGGCATGCCTTGCGCTCCACACCACGAGGGCC

ACCACTGGGAAGATGCTCAGCCTTCAGGTCATGCAGCACAGCAGCCGCAG

CCACATTGCGGGTGGCCTGGTACTGCCAGCAGTTCTTGGTGATGCGAGGG

TCCACAGGTCCGTGGGAAGCATCCTGCTGCACTGCCAGCTCGTCAGCCTT

GACAACGTCGATGCTGCGCCGGAGCTGGCCGTGGGCCTGAACTGAAGAGG

CAACGCCTAGGTGTGCAGCCCTCTCTGCAAGGTCGATTAAGCTGACGTTC

GGGAGGCTGTGCCGTGCCAGGGGAACGCACTCAACAACGCTGGTTGCACC

AGCGCTGCTACCGATGCCGAGTCCAGGAGCCATAATGATGGGCAATGGGG

GGCTCTGTGCTAGTCGCTGTGCGCTCCTGTAAAGCAGTGCTGCTGAGCGC

CTGATGGTGCTCTACAAGCTGTGCAGGTGGCTGGGCTGCTGAAGCTGGGG

GGTGACAATGGGAATTTTGGGGACRGCGCGGAAGCCTTGTCCCTTTCCTT

TGGTTGCGGCCACTAGGAGGGCGGTTTTGTGAACA

spermidine synthase

>Contig6750

TTACGCATGTCGAAAAGGTGTTCCCATTGTCTGATCAGTGGCAGCCAACC

AATCCAAAACAAAAGGAAAAAGAGAAAGCTAGGTCTGATCAGTCCGAAGC

CTGCTTRTACTACTCAATGAAAGGTCAGGCTGCTCTCTAATGCATCTGCA

GCGAATTTAGGCATGGAGAAAGCTGACCGGTGTACGTCTGGTGTGTAATA

CCTTAGTGCAGGTGTCTCCACACTGTCSGGACAAGGGGGCACCTGCTGCC

TTGGCTGACGAGGGTCCATGAGCTCATGACCAGGCTCAGCTTTGACGCAA

AGCATCATGCCAATCTGACCACTTGGGTACGTAGGGATGGTTGTGTGGGC

GTAAGACACGCTGCCTCCCTCGAAAACACTTGCACACATGCCGGCAAGGG

ACTTGATGATGTCAAGGTGCAGCCATACRCTCTCTGCCTGGGTGCACACA

ATGCCTCCCGGCCGTACAGCCCGGTGAAGGGCCTCAAAGAAGGGCTTTTC

AAACAACACTTCAGCTGGTCCCACTGGGTCAGAGCTATCAACAATGATGG

CATCATAGCTGCWCTCTTGAGCATTTCGCACAAATTCTATGCCATCACAR

ATGTGAACTTGGCATCGGGGGTCATTGAAGCCAACTGCCATCTTTGGAAA

ATAYTTCTTGCTTACTTCTGGCACCATGCCATCAATCTCTGCCATGTGGA

TCTCTTCAATGGACTTGTAGCGCGCCATCTCACGCAAGACGCCGCCATCA

CCTCCACCCACAATCAGCACCTTTCTGGCAGGCGTCTTCAAGGCGCAAAG

GGGAAGGTGGGTGATCATCTCTTGGTAAGAAAACTCATCCTGCTCAGTTG

CCTGGATGACGCCATCCAACAACAATAYGTTGCCAAATGTCGCAGATCGG

AACACACAGACATCCTGAAACTGGGATCGACCTGTGAAGAGGACCTCCTC

AACTTTCAAGGACATGCCCATGCCAGGCCACATGGGACTGAGCTCAGTGA

ACCAGCCATCCTTGATTCCCTTYACWTCAGTTTGTGCCATGATTAYCCTT

CTCCTTGCTCCGATCCGTTTGGGGTAAAAAGTGGCGGCTTGGCCTTTCAA

AGCGTGTTTGGATAAATATGGAAGGCAGCCGTGCATGCAAACACGGCTGT

CTTTACAGCGGTGCTTTTCTGCTTGGCACCATC

S-adenosylmethionine decarboxylase

>Contig4585

TTTGCGTAACCTTAATTCACATCAAGTTCCTAAAGACATGGTATTGCTCT

AGAGCAGCTTACACTCATTAARAGCCGCRCASGGAAAGTKGTCAAGAGCA

TCCAWYAGTTGATCAGGCAAGCATACATTCTGCAMGATWTTTGRAAATAG

GCACGTAAGAGMARRACAAAATCACAKTAGATAAATACATCTTGCCCCAG

AAAAATTCCAGCTTGGGGGTGCAAGTGAGCTCAATCCGTGGTTGGCCTTC

TTAAAAAAAGGCAAAAAACTTCTATGAAGCAACGTGTCCGGAGTCTGCCC

CGAATAAATATCCGGAAAATTTTCCCCAACAGTGCTGTACACAACAAAAA

ATATGCACGTCCGCATTTGGCATTGTAAACTTGCATGCTGCTGCATCTAA

ATTTTGTCGATTGACATCACTACTTACTCCTACATGAAACTACAGAAACC

CCACAAGAGCCTTGCACAACAAGCATCGCATGTTAATTTTGACCATTTTC

AAAGCAGCTGACTCGATTGGCAGCAAGGAGAGCCAGAACAACCGCGCCAG

AACACACACCTGGCCCCCTACAGACCCCTTCCTTCCCAGTGACCTGACAC

ACAAGCGAGCTACGAGACAACCAGCAGAATCATCGACCTAGCCCATCACA

CTCATGGTACCCTCCAGATCTGGCTCAGAGTCAGAGGCGCAAGATGCGTT

GAGTGATCGTGAGGAGGTGCCATGCGACATCGCGCCCTGCATGGGACTGC

TGGGAGGTGACTGAGACTCACCCTCATCCAGTGCGCAGTAGAACACACTG

CCCCTCCCAGCCAGGTGCGTGCTACTAGTGCCCAGGCAGTTGTAACCAAG

GGGCACCTTGCGCAGCTTGCAGAACTCATTGTTGGTGCCGTCCGTGGTGA

TTGCCAGCACGGCTTTGCCAGGGCGGAAGATGCGCATGGCTTGGGCCACC

AGCATGCTGGGCTCCACTACATCCTCCAGGTAGCCTGACACCTCCACACT

GGCGTAGCTGCAGGTCTTCTCTGGAGTGACATGGATGGTGATGAAACCGG

TCTTAGAGATGCCATTCATGCTGTAGCCGCAGGGCTCGAACACATAGTCA

TCGATGAGCGCGCCTGGCTTGAGGTGTACAATGCCCGTGTCACGCGTGGT

GTCCGCAGCGCTCACAAACTTCTCGGTGCGGAAGAACTGCTGTGCTGCCT

CAGCCCCCAACTCTGTCATGCACACCTCCACATTGAAGGTGGGGCGGAGG

GGCATATCGCGGGGGCTGGTGGCCACATACACATGCCACTGCAGGCCTTC

ATAGGGGCTACCAATCACGCGCGCCTGGCGGCTGTCAACATCCAAGTGTC

CTGCCAGGTGCTCATCCAGGAACTTCACCTCCTCATCGAAGCCTGTGTGG

GGGGCAAGCTGCTGCTCGGGGAACAGGAAGCTGGCGCGGTTGTACTTGCA

GCGCGCAGGCTCGAGGCCCGCCGCCGCAGCCAGTTCCAGGAGCCGAGGCA

CGGAGCGCAGGAGCCGGGTGGTGCCGCACGTCTTGAGCACCCACTTGGTG

GGGTACACGAACAGGCTGCTCTCTGACAGCACGTACGCATCGAAGTCCRC

ATTGCTGCGCGAGGACACGATGGTGCACGCAGCCAGGGTCATCAGCTCAT

CGAGCTGGGCGCGGGGCAGGGCACGCAGACCATGGGCGGGTGCGCCACCC

CTGATGGCGAAGTCGATCTCCACGCGCTTCTCGCTGCCCTCGAACACGGG

CGCCGGGTGGACGTGGTCCATGTCCAAGAGGTACTGGGGTGGTTTGTGTG

GGTGTCTTCTGCTGCTGCAAGGTGAGTCCGTGCTGTTTGTGCGGTGCCTC

CTCCCTGCTGCCAAACTCTGCCAGTGCTGCTGCTTAGCTTGCTGATGCTG

CTGCCGCACTTGCTCTCAAGGGGTGTTGCCAATGTCAGCTGGGCCAGGTG

TTGGTGATGTAGTCCGGTGCAGAAGCTTCTCCAGCGCTAGCAAGCGATAC

AGCGAGGAACAGGGACTCTACTGGCTCTCTAGTGGACAGAGACTCGTACA

CTCGGGGCATTGGCGTCACAGTATGAGGGATGAATTAAAATTCATTCGCG

AACAGGGCGCGGCTAGAGCGTGTCTGCTCTCGTGTGCGCTTTTCAATCTT

TTAAAGTGAGCACAGCAGACTGGACGGGAGACTTTTTCTGACCAAGCACT

G

|  |
| --- |
| Phytoene synthase |
| 15-cis-phytoene desaturase |
| δ-carotene isomerase |
| δ-carotene desaturase |
| Prolycopene isomerase |
|
| Lycopene ε-cyclase |
| Lycopene β-cyclase |
| Lycopene cyclase CruP |
| β-carotene hydroxylase |
| Cytochrome P450, family 97, subfamily A (β-ring hydroxylase) |
|
| Carotene ε-monooxygenase |
| Zeaxanthin epoxidase |
|

>Contig4317

CGCCCATACTCCTTTAACACAGATGCATGAGACCACGTTTCACAGCAAGT

GCAAGCTAGGTGCACAGCCTCGAGAGGAAGAACTAAGCACGCTGCATAAA

GAAACAAAGCAGGGAACACAATCAAACAATGATGACAAAATTCTAGGCTC

AAATGAACGATTGGAGGACCAAGAGCTGAARCATTGCAAAGCACTATACA

AGGGGTTGCGCATCACTGTGAGGTGATCAAGTCAAAATGGCTATCAGCTA

GCCAGAAGGGGTSCTGGACCTTAGCCCCTCATGCCCCCTCATAGGAGTTG

CTCAAGGGAGCAGAACATATCAGGTAACCCTGTCCTATGTATGCATACAA

ACCACTGCGCAATTACATCAAGGCAAAAGAAGATGCAACAAGAATGCGCT

GCCAATGTTAGGCTTTGCATTCCGTGGCGGTCCGAGGAAGGAGGAGGGAG

GCAGTATGGGAGGCAAGGAAACCTCAATCAGGACATTGCGTTCACACTCT

TCACATTCCCATAAGTGCTGGATTTGAAAGCTCTCTCACTGACAAATCAC

AAGGTCAGCACCCCAACAAAAGCCCGCCATGCATGTCCGCTGGACTGTTG

CAGAATGCATGTGGGATGGGCAATGCAAGCGGCAAGGAGCCAACAGGTWC

ATTTATACCACTCATCAAAAACAGCAGAGCAGGWACRCACRGCGTGCCTG

GCGCCAGCATCCCTAGCAACGTGTTCCTGGGCAYGCAGYTCTACTTGGCA

GTCTTGCAAACAATTGATCTAATGTTACAAAGCTTGGTCGCGCGCCCACA

GCCTGCACTCATCTCTGAGCACTTGCATGTCTATCTGGCCAGCAGAGCTG

TTGTTGCCCCGCTTGTCCAGCACCCCCAGGGCTATAGTAGGCAGGTACAT

TAAGTGACCCTTGACCTTCCTAGGGCTACAGTGTGGGCGCTCAGGCCACA

GCAAAGCGCGAGCCACAACCGGACAGGGGCTGTGTTTACTTGTTCTTGGG

CACCAAAGCCCGGAACAAAGCCATAGGCAGCGACGCAAACTTCTTGGACT

TGGGCACATAGGCGCGCATGGAGAAGTTGTCATAGTCGTTTTTCTCGAGG

ACATCCAAGATCTGGCGGTACAAGATCAGCGCTGACCACACTGGCCATCG

CGCCTTCACATCCAAGTAGTCTACCCCRTCTTCTGCTTCTTGAAAGTAAT

CGCGTGCGCGCTTGATTTGGAACTTCATGAATGCTCGCCACCGCTCATCC

ACCTTGCCTTGCGATGGCTTGTGGATGCCTGCCTTCACCTCCTCTTCTGA

AATGCCRAACTGCTTGAGCTCATCCAGGGGCAGGTAGATGCGGTCACGCT

CTCTGATGTCCTCTCCCACATCTCGCAAGATGTTGGTGAGCTGGTTGGCT

GTTCCCAGAGCAAGAGCTGCCTTGTAGACCTTGTCAATAGGGCCCTTGTA

ATTGGGATCAATCCCCATAACTGGCATAGTCATCAGCCCCACAGTGCCTG

CCACACGGTAGCAGTACTCGTACAGCTCATCAAAGGTGTGATACCGCGAC

TTGAACAGGTCCATTCGCATGCCCTCAATCATGTCCCTGAAGGGCTGCAC

CTCCAGGGGGAAYTTGGAGATGGTGTCCGTCAGTGCCGCATCCAGCACGT

CATAGGGCTTGCCTTGRAACATGCTCTCAAGGCGCTCTTCCCATCTGTCC

AGGGCCTGAGGCGTGATCTTTGATGCATTGGGGCCATCCACCAGCTCATC

CGTGCGACGGCACCACACATAGATGGCCCAGATGCATCTGGCCTGCACTG

GGGTCATAAGCTGGGTGCCCAGGTAGAAGGTCTTGGCGTACTCGCTGCAC

ACCGCCCCGCATCGCTCATACGCTGCTTCCAAGCTACTGCCCTGCCAGCG

CAGTCCGCGTGGGTCGAGGAGTCCGGTGGAGGGGGGTACAGATTGGGCGG

TTTTTATGCATTGCAGCATCGCCTGCTCCTCYACCTGCTTTCCCGAGAGT

TGCTGTTGCTGCTGCTGCTCTTGCTGTTGCTGCTGCTGTTGTAGTCGCAT

CTTCTGACCGTGGTTGGGCTGCGGCATCGCGAGTGTGCAGTTCACTTGCA

CAGTGCTACAGAGCCTTCCCGTCCGGCGTGTTGCCCTGCGCCCGCCACCC

CTGATGCGGCATATCTGTGAAGGAGCAGTGGCTATGCTGCTGCTGGGAGA

AGTGGGGGAGGAGGAGGAGGAGGCTGTCCGCTGTGCTAGTCTCCGCGCAT

CCAGCATTGACAGAGTCATTCTCTATCTCAGTGCTGCGTGTGGCTTGCTC

TCTGCAGCTGCTTCCTCCAATGCGCAGCACGGCAACGCGACTGGACAAAA

AGTGAGGGCAATCACACTACAAGACCACCAGGTTCTGCATCTACCTACGA

CAAAGGATTGCTACTGCTTTATTTTATGAGTTGAGGATAGGTGTGAGCTG

ACGGGCACTCTCGGCCGCAAATTGAGGATTGAGACGGAAGAAAAGGGCTC

AGCTCATGACACTGGAGTTGATTGATGTAATCCAGAAATATTCTTCTTTG

GACGTGGCTGACAATGTGGTTGATCATGATTGGCTTCCCAGCTGAAGGAG

AGACGAAGGGCTGAA

>Contig8548

TGGTCTCCTTTGATTGGTTTCATTGTCACACAGTGCGGTACCTTCTTTCT

TTCACACACTACACCCTTCAGCAATGAAGTACATTAGCATTTCATGCTAA

ATTCAAAATGCTGGGGATGTCCCATGCCAAAGATGTCAAGCAAGCATTGG

TGTAACCAGTTCAGGATCAAATTCGCAGAAAAAAATCAGGGAAAGTCATT

ATTCTACAAGGCCACATTCTAAGCAAGTGATAACAACATAACAACTACTT

GGTTGTACTACAGGAGCACAGAGCAACGGAGCAGGGATGAAACGAGAGGC

TGTGCTCGCGCGAGCTTTTCGGTGCAACCCACTCCCGCACCCGCACAAAC

ATCGACCTCACCCCCTGCTGAGTCAATCCAGTGACATTGGAACGATAAAC

AACCAGCTAAAGTGAGCTCAAGAAAGCATACGAAACTCTGCATCAGGTAA

GTACAAYGCTGTCCGACCAGCAGCTCAGAATGCACAAGGACAGCGAGCCT

GCCCCCACTCAAACCATTCTCGGCGAGCCAGRGAAGCGAGCRCCTGCTCA

GCAGCTYAGAACCAAGGGAAGGTGACTGCCTGGTCCAGCACCTCAGAGCC

CCAAATGGCCTCAGACAGGACCTGGGCGGAGGCATTGCCTGCCAGCACTG

CACCCATGGCCAGCAGCACAGCAGCAGAGGCAGCGGCCAGAGCAGGCTGG

CTGGGGGCAGCGCTCTGGCTGCCAGTGCGTGTGCTAGCATCCTCGACCAC

CTGYTCGCAAGCCAGYTTGCCACTGAAAACAGCACCCTCCATAGATGCCA

AGTACTTCTGCTTGGTGTAGTCACCCGCWAGGTAGAAGTTTGARATGGGY

GTTTTTTGGCTGGGCCTGTACTTCTCCCGTCCAGCTGTGGACTTGTACAC

TGAGAGGGGTGTCTTGATGACCTTGGACTTTCGGATCTKGGCCAATGACT

GGTCAGCCCTGATCTCATTGGGGAACAGCTTCTCAAGCTCCTTCATGGTT

GCTTCYACAATCTCCTCATCTGGCCTGCCAATCCATTCAGCRGCRGGCGC

GAACACCAGCTCCAGCATGCTGGCTTTGTCATCTGAGTACTCCTTGCAGG

TGGTGCTCATGTCAGCATACACGCTGAGCAATTCTGAGCGCGAGAAGAGC

AGGTGGTCCACTGTGGACAGCTTGCGGTCGAACCAGATGTGGATGTTGAT

GACTGGCACCCCCTCCAGGCCATTCAGCTTCGAGAAGAAGTTCATACCCT

TCCAGGGCTGGGGCATCAGCTTCTTCATGATGTCCACTGGCATTGCAGAC

ATGTACGCATCTCCCTCAACAATCTCTCCGTTCAGSAGCTCGAAGTGCTT

GACGCTGTTGTCCTCATTGAGCACGATTTGCTTGATGCGTGCGTTCATCT

TTAGCTCTCCACCCCTGGAAGTGAAGTAGTCCACCATGGGCTGGCACAAG

CGCTCTGGAGGAGCACCATCAAGAAAGGCCATCTTGCTTCCATGTCGCTC

TTGCAAGAAGCGGTTCAGCGCTGTCAGCACGACAGTCATGGACAGCTCAT

CGGGGTTRATGAAGTTGAGGGCCTTGGCCATGGCAATGAAGACCTCATCR

TTTACTCGGCTGGGCACGCCCTGCTTCTGCATCCACTGAGTTACTGTCAG

TTCATCCTGCTCTTCCACATACTTCTGGCCGAAGATGATGGCCGGCAGCA

GGCCAACAGCAAACTGGATCTTCTCAGGCCACGACAGCATCTCATTGTTG

CGTAGGATGGCAATGACACCGTTCCATGGGGCTGGGATGTCTGGGAACTC

AAAGCGCGAGAACTCTCCAGGCTTGTCTTGCATGGCAAAAATCATAGAGT

GGCTCTTCCACTGTAACCTGTCAGAGATGTTGAGCTCCTTGAACAGCCGC

TGCATGTTGGGGTATGCGCCGAAAAAGATGTGCAGGCCAGTCTCATACCA

GTCCCCATCTTCGTCCTTCCATGCGGCCACCTTGCCCCCCAGCACATCGC

GGGCCTCCAGCACGACGGGGATGTGGCCAGCGTCAGAAAGGTACTTGGCA

GCGGATAGGCCAGCCAGGCCGGCTCCAGCAATGACGACACGCTGTGGCTT

TACTGGCCGGGGGGCATTTTGCAGCTTTGTGGACAGGGCCACGGCCTCCT

GGTACGTCTCCGTGCCATCGAACTGAGGAGCTGGGAAATCCCTGGCGTAC

ACCTGCAGGCGGGACCTGCCTACTTTCCGCTGCGTGCGCCTCTGCTGGAC

AGGCTTGCTGTTAAAAGAAGCGGCCTGCGCGTGTGCCCTGCCTTGCATAA

CCTGCATCCTTCTCGGATTGAGTTCCTTTTAAAATCGATTTTGT

>Contig9300

ACGTGGACCATTTTAGCAAAAAATTATTAAGTGAATTGGTGCAGAATCGG

GGCAAATATCACATTCAAACAGTTACGGGTACCTCTTTTGGCTGGGAGGT

GCCCCAGWGAGAGGGACTSKKATAGRAAGGTCCATTGGGCAAAATGTTGA

AAAGAGAAAGGACAAGCAGCGCATGAGCTCGCTTTTGCTACAGACCACTT

CGGAGAAAAGTATGTGGGGTGGTGTTTTGCTGCGAGCCAACGCCAAAAAG

GTAAATTCGTTTATTCAAAAGCTCTTCAAAGGAAAGGACACCTTGAGACC

AAAACCAGTTGCAGCCAGTAAGCCAGGTTTGACGCCTGGAATGTAGTTGA

AAAATAGCGCTTACGTCTTGCATCAAATGCACACAAACTGTCTCTTGTAT

GTGCAACCACATCCACTGTACATAGCCATTTTACCACCCGAGATAGAAGC

TGGCTGCTTGCATGATTGGGTGTGCGTAATAGGCGCCCAGGGTGAAGGCA

GTCACCGTAAAATATGGGGTCCGCAGAAACTCCTTGTAGTAATCAGCTGG

CAATACCTGGCGGCCCTCCCATATAGCTTGCAATGGGAAAGTGCTCGTCC

GCGCTYTGACGATCTCAAAGGCCTCKCCGTATTTGGCAGATAGCCGTCKG

TCACCATGCCAGCAGCCGAACAGGTGGTGAGCCATGAGGCCTGCTGAGGT

CACCAGCATGAAGCTATTCCCAATCCACAAMGTGTGCGCTGCGCACCAGA

TGAGCTGCCCTACCATTTGTGGGTGACGCGTGATTCTCATGATGCCTGTT

TCCCACATGTGGAGCTTAGGCTCATCCACTGCAGCTACCTCGAGAATGTT

GAAGGTGGATGGGTACAGGAAGTAGAAGGACACGAAGTTGAGAAACCACA

CCAGCTCGTGTACTCCCGTCACACCCCTAAGATCCCATAAGGGCATGCCA

TCATATCTATGGTTGATGAAGTACACGATTGCCACAATGGCCAGGGGCAG

GCTGGCTAGGGCAAATATCACTCGGTATGCTCGTGCGCCGATCAGCTGCT

CGCCACGAGGGCGCAGGCCTGCCAGCCCACTGTGCACCACCGCAAAGACG

AAGAGGATGAGGAGGATGGTTGCCTCGGGATTGTTGTTGCTGAAGCTCTC

GACTACGCCCAGGAAGTCATCTGCCAGACCTGCTCCTGGCTGGATCCAGA

CCAGGTAAATGAGGCCCAGGACGCCCGTCAGAAGCCCAAAAAACAGCGTC

CAGGACTTGGTGCTCTGCCGGGACGCATCGAAGGCAGCCGCATCCTCGCC

AACAAGCCCCAAATTCTGGGGCGGGGTAGACTCCTGCTGCTGCTCGTCGC

TGGCAGCCCGCGCACACAATACCTCCGCTCGTCTTCTGTCTTGTACTACG

GAAAATTCTAAGCCTTGGTGGTGGCGTTTACTGATGCATGGTAGTGTCTT

TGGAAGGGGCGAGCACTTGGAGACGAGTGGCTTGGCTCGAGAGGAAGTCC

GCAAGCCACTCAGCCCTTGTGTGCTGCCTTGCGCAGCGTAACACAAGCTC

GCCATACTTATTTTATTACAACGTGAGCCTCCGTACTTTAATTTTGCTCC

AAT

>Contig8517

CTTCATTTTTCAAAACTAAGCGTTTCAACCAACCTAAAGAAAAAGTTTGT

AAATTTTGGGGAAATTGAACTTCGGTGGGTCCACCACTGATTTCAGCGCT

GAACGTTACAACCTTCCTTGACAGAAAAGGAAAGAGGGATCATGCAATGA

GAAAAAACTCCCAAAACCAGTCCTGGAAAGGGGGGCCAGATTGGTCAAGA

GACCATGTGACCTCCCCACAACAAAGCCCAGACGCCGGGAGGGTCTGACC

CTGATGTACGCAGGTTTGTTTTCCGCATAGATATCTGCTCTTTTCCATTA

CATCATTGTTAGGCTGGATCAGTGAGCAGCCAAAACAGTGTCCAACTCAA

ATGACTTGCAGCACACTCTCATCACAGCACCCTCTGGGTGTGACATCACA

GGGGCGAAAATCTGTTCATGTGGAAATCAAACCACATTTTCTTAAGCTCA

AAAATTCAACAAAAGCTTTTGCAAAGTGGAGGCACTGGAATGCTGGACAA

AGAATACAGGAAGCTTTACACAGTGTTCAATGCTGTAGCTCGGTGACAGC

AGCAAAACCAATCTAAGCCTTTTTCTACAGTGGAATGGTTGGTGCAAGGA

TTGCTAGGAAAGAAAATGCTCACCACAGAATGCGGTATTTTTCCTTACTC

TTTCAAATGCTTGGAAGTGGCGCCTTGGATAGGGTCTGGATCAAGGGCAC

AGCCTTCATGATCTCACCGGCACACTGGCGACCTGACAGGGTGGCGCCCT

CCATGGAGTCGATGTAGTCTTGCTTGGTGTAGCTGCCAGCCAAGAAGAAG

TTGGGCACAGGCGTGGCTTGCTCGGGTCTGTAAGGGTCCATGCCTGGGGC

CTCTTGGTACAGCGACTGGCCGATCTTCACAACACTGTGCCACATCATGT

CTAATTTGCGTGCGCTGGGGAAGAGCTGGCGAACCTGTTTGTCAGCCTCC

TCAGCAATGGCCTCATTGGTCCATGGCATGTACGGGGCGGCAGGTGTAAT

TACGACTTGCATGAGCGACCCCTTGCCCTCATGGAAGTACTCCACAGGGC

TCACAAGGGCAAGGTCCGCAAAGCAGGAGAAAAATGCATCGGGGCTGTAC

AGCAAGTTGTTGATGCCTTGGGGCTGGGTGAGCTGCTTGACCTTCTCTGG

GTCTTGCATCTCAGTCACCCATCCATTGTATCGCAGCTGAACAGTGATCA

CTGGCACGCCATTGAGCGAGTAGATCTTGTCAAATTGGGGGTACTTCCTC

CATGCCTGCGGCAACAGCTGCTTTGCCCCTGGTACATCCAAGGCTGCTAC

ATAGGCATCAGCCTGCACGACTTTGCCATCGCGGCCCATGCGCATGCCAG

TCACCACAGGCTTGCCATCAGGGCCATCCTCAAACAGAATCTCCTTGCAA

CCCTGGCGCAARTGGATGCGGCCTCCCCTGGCTTCAATGTAGTCAGTGAT

GGGCTTCAGCAGCCTCTCAGCAGGGGATCCATTAAGCATACGCAGGACGG

AGGCGTCGGTCTTGGTTGCAAAGAATTGGAAGATGGTCAACATGCAGCGC

GCACTGATGCCCTTGCAGTCCAAGAAGCCCAAAGCGTAGGCAATGGGGTC

CCACATGCGCTTCATGGACTGCTCGGACCCGCCATGGCTCTTGAACCAGT

CCCAGAAGCTGATGTTGTCCAGGTTCCTTACGTCATTCATGCCCCCCTCA

GGGTCTATCAAGGAGCGCACGACAGGGCTGGTGCCCAGCGCCAACGCATT

GGCTGCCTTGTCACCCACAGAGAGCTGAGGGGTGGTGAAGAAGGCTTTCA

GKCCATGGAAYGGAGCCCCRATTTTCTGCCCTCCAASWTCAAAGCGGAAG

TCAAGCTCTCTGACGTCCCCGTCATTGTTGCAAAAAGTATGGGTGTGCTC

CTTCAATARCAAGTTCTCCAGTACACCACACTTGGCCATCAGTCGGAAAA

GGTTGTGGTAGCACCCGAAGAAGACGTGCAAGCCCATCTCAATGTGGTTG

CCATCTTTGTCTTTCCATGAGGCCACTTTGCCTCCTAAAAAGGGGCGCTG

GTCATAGATGTCTACCTCATGCCCTTGGTCTAGCAGCTCTACAGCTGTGG

ACAACCCAGCCAGTCCACTGCCCACAATGGCCACACGCATCTTGGGGGCA

CCTCGCTTTGGCGGGCCAGGCTCATCCGGGTACAAGGATTTGAGAGGCAC

GTCCTTCAGTGCCACCTTGCTCACATCCTGGGTGGTCCACTCCCTGGGTG

TGGTCTTAGGCGGAGCAGGGGGTGTGGCAATGGCTTGGGTGGTGCGCGCC

CTTCTTCTGGTGCGAGTGCTCTGCAAACAGCCACGCTTTGCGGGCACACT

CGAGGTACTCGCCATCCCATGGAGTCCCAACATCCCAGCAAATTCTTTAA

GAAATCTAATAGATACCGTGCCTGCAGGCGCGTCA

>Contig1382

AAAACATGATATGCGCATGACAAGTCAACTCAGTTTGTTCTATGTTTTGA

CCAACAATCAATTCAGAAAATAATAGGAATCAGTATGTACAACTCCTTTG

AAATTGAAATGAAGTCCCGTGCCAGAATTCAGGTGCAATAGAATGTGCAC

ACATCGTACTTTGGGTGCAGGCACACTCTTTCCTGGAATGCAATCACACA

TGTCACGGGTCCTTGTGACTTCAGCCACCCAAGTTGTCGGCAATGCTGAT

CAGGCATGAATAGAATCAATGTCACTGGCAACTGATTGAATCAATGATGA

ATGCACGTTTTGCACAAGTTCTTAAAACACCATGCCAGCTTTCAGCACTG

GCCAAATACAGATAAACCATCGATACAGAGCAGAGCWAMYATTTTCTWTG

CGWGAAACTTTACAACRATGWATCCAGGTCCAGTGCTTYAGAATCTATGC

ACGGTCCCTGAAGAATTGTAGGGTGCTGGTATAGGCATCGTCTACAGGTA

GAGGCAGGGCTGCCAAGTGGCCTAAGTCAACCATGACCCTGTGTGCACAG

CCAATCCCGCTCATGGCCACAGCATTAACGCCCTGGCCCGGAAAAGTTGA

ATCGCCAACGCAGTACAAACCCTTGATAGAGGTTCGATTAAACGGCATTC

CAATGATTCCCAGCGGTTTACGTGAGGGAACGGGTCCATAAGTGCCGCTG

TTCCTGCCTAGAAACCTCCTATGGGTCTTCGGGCTGCCCACCTCTTGCAT

ATCAATTGCTCCGCATAGGCCGGGCAGGACAGCCTCTAGGCGCGTGCACA

ACTCGTGCGCCTTCTCCTGTTTCTTTGTTGCGTATGCATCACCACTCAGC

CCCTGCCAATTGTCCATCCAATCTGATGTGAATGCATGCACCACGTGCTT

GCCTGCTGGGGCTACACTGGGGTCRATGAGGGAGGGCATGCTCAAGAACA

GCAGGCCAAAGGGCTCCTGTAGCTTTGCCCAGTCGTCCAAAATAATGTGG

TGCACGTCCATGGCCTGTTCATCGGGTCTTGGRAATWTCGAAGCATCCAC

ACCCATGTGCAGGGAGAAGAATGAGGGCGCACGCTTGTAMCGCRTCCTGA

AGAGCGYCTCACTCMKGGGCATGTTCTCCTCGCCCACCATGCGCTCAAAG

GTGTCCCACCTCGTGGCATTTGAGACTAAGGCCTTAGCTCGAAATTCTCT

GCCATCTGTCAGCTTCACCCCAACTGCCTTCCGTGCGCCATCCAAATCTT

CTGTCACAATGTTTCTCACATGCGCTCCATAAACCACAGCACCTCCGTGC

TCTACCACACCTTCAGCCAGGGCCTGCGGAATCTTGCCAACACCACCACG

GGGATAATTGATGTGGCCATAAAATCTGTCACTCAGTACCATGCCTGCGT

TGATGATGGGCGTGTGCGAGGCTGGAACTGTTGAGAAGACAAAGCACTCG

GCGTCGATCAGGCGCAGGAGCTCGGGGTCTTTGATGCACTTGGCAGCCAC

ATCACCTGTGTTGGAGGTCAAGTGAGGTACRAGACGCAGGCATGCCAAGG

GGTGCTTGGCGAACTGCTCAGCCTGGGCATAACAGCCATGCCACCTACTA

GGTACAGTGGTTCCTCCAAGGACTTGAGCTCCAGGGTATTCAAACAATTG

AATATGTCCCAGCATATTCCGTAGAACTTGTGGATGCCTTCTTCTTCATG

AGGGAACAAAGAAACAAGGTTGGCCAAGAACTCCTCCCTCGACCGACCCA

CAGTAAGCTTCAAGCCCTGGGGAAAACGTTGGCTTGCCGGTAAATGATAC

TTCACTTGTGTGGGATCAGGRATGGTTTCTAGCTGCTTCTTTACTGCCCC

CAGGGCTCGATGCGTGAGGTTTGTTGTCCCCTTGTTTCCAAATCCAAACA

TCATGCTGGAGCCCACATCAAAAGTGTAGCCCTGCCGCTTGAAATGGCTC

GCGCTTCCTCCTGGGATAAGATACTTTTCCAGAACAAGCACTCGCAGCCC

ACGAGCCACCATCTGTGCCGCGCTGGTGAGGCCGCCCACTCCACCTCCAA

TGACGATGGCATCATACTCCACATCCATGGGTSCAGACCTGCTCAACTCC

TGCAYKAAYRRMTGKAGAGGAAAAGTATCTCTGGTAACCGCAGAAGTGGG

ACCACATTGAGACCTCTCTACGCTCCTGCTCCGCTGTTTCAAAACGCGAG

CAAAATGACACCTCCTTTTTACATTGCACAACTCGCGGCCTCCGAGTTTG

GGCTGGACCCCCACCTGCGTGCGAGTATGTGTCGAAGGCTTTCGGTTAAC

CCGCGACCTTTGAACGAGTTCATGGGCCTCGTAGTGCAGCGAGTGTGCCA

TCCTACGGTCCTTGGCTCCTATCTGTCACTCAAGAGCCCCCAGGGATAAG

GATAAACGTGTCA

>Contig2348

GGGGAAAGCCAGTTTAATGCTTCACTGCACTTCACACAGTGTTATCCGCA

AGAAAAGCTACAAGGCTAAAAATCAGGGAGTGACAAATGCGAGAAGTAAC

AAGTCAAACATTGTGAAAAATTAAAACTATTTTAGTCTTACATGTGCAAT

TCCAGCACAGCCTTTATTCCTGTGAGCAAGGCCAGCTTCTTTGGCACATA

AAACGAGCGCGCAAACGTGCAAAACGTCAAAATGGTCTGATCGGCAACAA

AAAAGCAAGATTTGCTCAAAATTTGTGGCACAGACAGAAAATGCCTGCAT

AAATAAACATACAAGCGGTGTCGGTATTTTTGCATGCTTTTCACCAGTGT

GCGGGGCCAGCCTAGCTAGCATATRTCTTCAGGGTGCTACGATGCAGCAT

GCTACARGAGCCTGCTGCRCACTAATTATTCTAGGGCACCTTCTACACCC

CTGGGGGTGCCCACTGGTCAATCCTCTCCCCATGAAGAGGCAGCTTCATC

CCACAATTTGACTATGAGTTGTCGCGCACGTACTCGAGGAACTTGTTGAA

AGGCTTGTCCAAGGCGGGCCAGGTAGGCTCTAGTCCAATATCGCAAGCCA

CCCGATGCGCACAGCCAAAGCCAGAGAAGACAACTGCATTCACTCCTTGG

CCTGGGAAAGTTGAGTCTCCCACACAATAAAGTCCTTGCAGCGCAGTCCT

GTTGAAAGGCATGGACAACATGCCCAGAGGCGGCCTCGTTGGGATGGGAC

CATATGTGCCTGACGTCCGGTTCAAAAAGCGACGGTGCGTGCGCGGTGTC

CCCACCTCTTTGAAGACCACTCCTTGCTTCAATCCTGGAAACACAGCATC

AAGGCGGTCAATAAGCTGCGCAGAAATCTCCTCCTTCTTGGTCTCATACT

CTTTTACAGACAGGCCCTGCCAAGAGTCGATCCAGTCTGGAGTGAATGCG

TGTACRATGTGCTTGCCAGGAGGAGCCAGGGATGGGTCTAGCAGGGAGGG

CATGGACACAAAGAGTGTGCCATAYGCATCTTCTAGCTTTGACCAGTCAT

TTACRATCACATGGTGGCAGTCAACTGTCTCTCCTGAGCCCTCAAACACA

CTAGCGTCAACGCCCATGTGCATGGARAAAAATGAGGGCGCCTTCTTATA

CCGCTCCCTGAACAGCTTTTCACTGGATGGCAAGTTGTCATTGCCAATCA

TGGACTCAAACGTGTCCCACCGGGTGGCRTTGGAGATGATGCTCTTGCCC

CTGAATACACGCCCATCTGCAAGCTCCACGCCAACTGCTTTTGACTCTTC

GCCTTGCTTCTCCGTGAGGATGCGCTTCACGTTGGCCTTGTACACCACAT

GGCTGCCACGCTCTGTCAAGCCTTCTGCTAACACTTCAGGAATGCGGCCG

ACTCCACCCTTGGGGTAGTTGATGCCGCCGTAGTGCCTGTCACAAAAAAC

CATGCCAGCATTCATCATGGGCGTCAGCTCAGCAGAAACGGTGGACCAGA

TGTAGCACTCGAGGTCAATGAAGCGCAAAAGCTCAGGATCCTTGATGTAT

TTGCGCGAGATGTCCGCRACGTTRGAAGTGGCATACGTTGCGAGCGTGAG

GCACTCGATGGGGTGCTTTGCAAACTCTCGCAGCAGGTACCGGATTTCTT

CCAGGCTCTTGAGTTCCAGGGTATTGAGGGCATTGAAGATCTTCCAGGAC

TCATCATAGAATGCTTTGATGCCATCGCTCTCGTGGGGGAACCGATCGCA

CAGCTCYGACACAAAATCCTCATACTTCCTCCACACCTGGACATTCAGAC

CATTTGGGTGGGCTTCAGATGCAGGCAAATGGTAGTACACCTGCGTTGGA

TCTGGCACAGTYTCGATCTTCTTGTCCAGGGCGGCTAGGCAGCGGGTCAG

CAGGTTGGTGSTTCCCTTGTCTCCAAAGCCAAACATCATGGAGGAKCCRA

CATCRAAGGTGTAGCCCTCACGCTTGAAGTGCCCTGCGCTGCCGCCTGGG

ATRAGGTACTTCTCCAGGACAACCACGCGGGCACCCTTTGCTGCCAGCTG

GGAGGCAGTCGCCAACCCTCCCATGCCACTCCCCACAATGACTGCATCGT

ACTCCACGTCTGTTGGGGCATCTGTTRGCAAAGCCTTSACAACCTCTGCA

GGAGGATAWGCCATTGTGGTGGCAGCAGTGGTRCACCTCTGCAAGCGCTG

TTGTCTGCGGTTGCYGATTYTGCTAGGGCGGGCATTGTTCRGAGGGCCTG

GAGTGGGCCAGCTGCTGCTAGTCGGTGTAGAGGTGCTAGGGTGSGGAACG

RGCCTATGGACATGGTCCTGGCCAGARGCACGGAGACTTGCGACCCCTGC

GACCCCCCTTCCTGCCTGCGAGCCGCTGGCCTTCCCTGCCGGCAGGGTGT

GTGGCGTGGCAAACATTTGCCAGGCTGGTCTAATACCCTGGCCTCKTCTT

GRAAAGTAGAAAYGAAAGTTTRCAAAATTGCTCTATGCTGTAGCCACGCC

TGACACTGCAATCGTTGATTTTGTGGCGGTTCTTGTGGACGCAATGCCAC

TTCGCG

>Contig468

TAAAAATCCAGTAATAATCGTAGGGCGTCATGCAACAAATGCTGAGCAGT

CGAAGCACTMACGTRCYGAGTTGTTCCCCGCAGCTCCCAYCGTCGCAGCA

AGCKTACAGCATAAGCAGCGCACGCATTTGTAGTGCAGAACCCCTKCAAT

CATCGCATGAGGCCTTCAATCATGGCAGGAGGACTCCGAGCGTAACGCAG

TCCACACATACACATGGCAAGGAGGCGAGGAGGGCAAGGACCAGGGCCCA

GGCCCTGCTTCAGCAGAAGCCGGAGACCCCTTATTTCAGTCCYCCAGCTC

CTCCATCTGTCWCTGGGCCTGYGCAGTAYTACTACAGGGAGCCCTCAGCT

TGGCCCACGCAGCAGGAYGTCCCAGTGGCATACCAYGACCCGCAGAGCCA

ACCGACTGCAGACCTGCTGGTCGTGGGGTCTGGGCCATCAGGCCTGGCAG

TAGCAGAGCGTGTGGCTGCAGGCGGYTTCTCCGTCTGTGTCATTGACCTT

GACCCCTATGCCCCCATGATCCCAAATTATGGTGTCTGGGTAGACGAGAT

GCAGGCCATGGGCTTAGAGGAGTGCCTAGAAGTGGTGTGGCCCCAAGCCA

AGGTCTGGCTGGACAACGACAAGAGCGGGGAGCGGTTCTTGAGACGGGCG

TACGGGCGCATGGACCGGCCCATGCTCAAGAAGCTACTGCTACAGAAGTG

CGCCTCAAATGGTGTGACCTTCCTCACCAGCAAGGTGGCAGGCGTGAGTC

ATGGGGATGGCATCTCCACWGTGACCCTKTCAGATGGGCGCACYATGCAG

GGCACCATGGTGCTAGATGCCACGGGGCATGCRCGCAAGCTGGTCAACTT

TGACCAGAAGTTTGACCCAGGGTACCAGGGCGCGTACGGCATCACAGCAG

AGGTTGAGTCGCATCCCTTTGAGTTGGACACRATGCTGTTCATGGACTGG

AGAGACGAGCACACACACTCCAACCCAGCCATGCGGGCATCCAATGAGGC

RCTGCCCACCTTCCTTTATGTCATGCCCTACACCAAGAACAAGGTGTTCT

TAGAAGAGACGTCCTTGGTAGCTCGCCCAGCTGTGGGCTTTGATGAGCTC

AAGGAGCGATTGCAAGCCCGCATGGAATGGCTGGGCATTAAGGTGACAAA

GGTGGAGGACGAGGAGTACTGCCTGATTCCTATGGGTGGTGTTCTACCTC

AGCACCCCCAGCGYGTCCTGGGCATTGGAGGGACAGCAGGCATGGTGCAC

CCCTCAACCGGCTTTATGATGACGCGTATGCTTGGGTCCGCGCCCGTTGT

TGCGGACGCCATTGTAGATCAGTTGTCCAGGCCAACAGACAAAGCCACTG

ATGCAGGTGCCGCACGCCAACAGGTCTCTGAGCAAGAGGCAGAGGAGATG

GCTGCYGCTGTGTGGCGGGCTACTTGGCCAGTAGAGCGCATCCGGCAGCG

CGCATTTTTCTCGTTYGGCATGGAGATGCTGCTCACCCTCAACCTCCAAC

AGATGCGCGAGTTCTTCGCCGCTTTCTTCTCACTTTCYGACTTCCACTGG

CAAGGCTTCTTGTCAGCCCGCCTGTCTTTCACACAGCTCATCAACTTTGG

GCTGTCCCTGTTCTTGAAAGCAACATCTGCGACGCGCGCAAACCTGCTGC

GCTTGGGCATCCCAGGCCTGGTGCAAATGCTCCTTGTCCTGCTGCCCACC

GTGACGGGGTACTACAAGGAAGACAAGACAGTGAGGGACAAGAAGTTTGC

GCACGACCAGGCAGCTGCGGCTGCTGCAAAGCAGCAAGAGAGCGCGTCTG

CATCACCTGTTTCTCAAGGAGGCAACCCTGGTGCTTAATCAGATGGGGCG

TTTGCTTGGCTCGATCAGAGATAGTAAATGTTGCAGTGGRTGTTGTAGCC

TTAAAYKTGCATWGGARAGCGGGATGAATTTGGAAGTGGGCGTGAAGCTG

CCACATGTTTTAGTTGTGGCTCATGTCGTCTTCTCATTCACGCTCATGAA

AACGAACATGAACACTTGATGACATGAGAAAAGGTCGTGTTGCAGCGCAT

ATAATTTTCTCTTAATGCCTTTTTCACATTGAATCCTTGCAATGCCCATC

AGCTTCTTCAATGTGCCAACACTCATGAGCATAACCTTGTCAAAAAGGCC

TTSTCTTTCTTACCGWAAMTCTYTGCTCTCACTTGCGTGCCTCCTTCATT

TTCTTTTTTATGCCCTCTTCTGCCATCTCTTCTGGTGAGCATGGCACGGA

ACCAGGAACGTAGGGACCATTTTAAATTGTTGCACTTTTTTACTTGAAAT

TTCTGATGCACGCTTTCACGTGGAATGTATACTGCAATATTTTGTAGGCG

GATCATATTGTGGTCATGCTTACAACCCAAGCTGAATTCTGCTTTGTGTC

CACCTTGCAGACAGGTGAAGTGCTCAATTGATGTAAAATGGTACAAGGGT

TTAAAAAAAAAAAAAAAAAA

>Contig2259

TGCTGCTGCTGCTGCTGCCGCAGCCGCTCCAGCTGCTCCTGCTGCTCCTG

CCGTTGCTGCTTGAGCTGCTGCAGCTGCATCTGTAGATCCTCCACCTCCC

TCTCCTGCTTTCTGTCTACTTGAATCCTGCTTCCCTTCTCGCCCTTCTGA

CTCTGCCTTGTGCTCACAACATGCACACACTGCCCATCATCCGAGTCCCA

CGCATCCACCAGATTTTCCTGCTGCTGCTGTCGCCGCTGCTGCTGTTGCT

GCTGCTGCTTGGCGAGGAAGGGCGCAGGAGGCGAGGGGATGGACTGAGGG

GGATGGTACTCATAGTCCTGGCCTGAGCCAAACTCGAGCGCATCCAGCCA

TCGGCGGAAACGATAGCCAGCGCGGACCAGTGGGTCGTCATCCAAAGGAG

GTGAAGAGCGTGCAGGGGCCGAGCTGTTTGTGGGGCTGCTGACACTGCCA

CGCACAACTGCCCTCACAGGCGTGAGCAGGGTGTGCATGGCTGTGTAGTA

CATCAGGGCAAAGTAGTGGTAGAACCAGCCCGCAAGGGTACGTGGGCCCA

CCTGCAGCAGAACTCTGCTGATGGCCACTGGATTTGCGGCCATCATGCCC

AGCATTGACAGCGACAGCGGCACCAGCTGGATGGTGTCTTGCAGGAATGG

CCGCAGAACTCTGTCTCCCAAGACCTTCATGACATCGAAATTGCAGGCCA

GGACCTCATTGACGTGGTTGGCAGGGAGCTTGGTCCATTCAAGCATGGCA

GCCAAGCCCCTTGTCCCTGAGTTCTCGCTCTGCCCCTGCATGCTCACAGT

CAGCTCCTCCCACTGCTGTTGCCTTGCTTCCTGCACACTGCCTGTGCCGT

TGCTGCTGCTGCTGCTCATGCCATCACTGCTGCTGCCATCGCCGTTGCCG

TTGCTACTGCTGCTGCTGGCATTGCTGGGAGGCATCTGAGGGGCTGGGGG

GCCCTTCCGGAGCTGACCCACGCCCACGCTCATTGATCTTTGGAACAGCC

ACGAGGYTGAGAGGGAGGGCTGGTATGGGTGAATGGCAGCCAGGTCTGGT

TGGGACAGCGTGCCACAGCGCAGCGCGTCGTCACACGCACGCGTGAGCCG

CCCCAAGTGCCGCATCATCGCACCAAAGCCACCAAACGAYAGAGGGCTCT

GGGTGGCGCTGGCATCGCCAACCTGCATGATGTGGTCCCACTTGGGCTGG

AGAGGCCCATTGGAGTAGCAAGGGAAGCCACCAAACAGCACKCGCTTGAA

ACGCAGCTCAGACAGTGGCACGCCCTGGTAGTGTACAAGGTCCTCAAAGT

ATCTGTCTAGCAGGGCCTCAAAGTTTGGGCGTGCTGGCTCTGCGTCACTG

TACGCGAACATGTAAGTGGTGCGTGCCTTGCCGCCCTCCGCTGGAAATGC

TTCCCAAAAGAACTGCATGTCATTCTGTGCGTCCCCCAGCGTGTACAGAA

GGTCTGCATGGATGTTGTTCTCTGCTTGCACTCCCTCCGCACAGGAGCCC

ACCACCAGCACCATTCCATCAGGCTTTGAGCGCCCCCGCACCTGCTTCAC

GATATCACTGTAGTGGCCCATACAGTCCAGCAGCAGCCGGCAGCCCAACT

CCTTGGGCTGGCCCTTCCCACCACTGCCTCCGTTTGCAGCTGTTGCCGTT

GCTGCCACGGGCACAGCCCCATTAGGAGAAGGAGCACCGTTGCTGGTCAG

ACCATTAGCTGCTGCTGCAACAGCAGGTGCAGCGCCATTTGACGAGGGAG

CACCATTGCTGCTGGGAGCCCCATTGTTGCTGCTGCTGCTACCATTGCTG

CCATTGCTGCCCACAGAGGCCCCCGTTGGCGATTTGCTGGTGCGCAATCT

GCCGAGTCCATTGGGGCGGTTCACGTCTCCGGGGCCTAGTGGCTCGTCTT

CGATGCCCGCACCATGGCACATCAATTTGAGCTTCACGCCAACGCCTGGG

GTGACCTCTGCATTTTTGAAGGTYGYATTCTCCATGAGTGTGCCCCCTGC

CTCCACAAACTTGTTCTTGATGAGGTCCAGTAGGCGTTTGGGAGAGACCC

CTAGGTTGAGGCAGTCGTTCACCCACACCTCAGGGCCGCCTTTAAAGCCG

ACACGAATAGGGTTGAAGTTGGACACGATGCAAGCGTCCAGCTCTTCATT

GCTCAGCAGCCCCGTCTCTATCAAGCTCTTGAGTTCACCGCGGCTGATGT

TCCACTCTTGTGTGCGCCCCTCAATGAGTCGCTTGTCGAGCACACACACC

TTGAAACCTCTCTTTTGTAGCGTTGTGGCCAGCATGAGTCCCAAAGTGCC

TCCACATACGCAGACATCAAAGTCTAGGTCCTTCGGGTCCATTGCAGTAA

TGCCATCCCCAAGCATGCGCACCACACGGGGTCCAGGCTTATTGGGCTGG

TGCTTCTGATTGCGGAGGGCCCTCCAGTAAGCCTCTGTGACATCCAGGAA

GGCGAGTGGGTCCCCCTCTAAATTGTCCATGTTGTCAGCCAACACTTGTC

GCGCCAGGCCACTCCTCGCACTCTTGCTCCAACGTGGCTGCAGAAGGGCA

AATGGAGGCCTCTGACATAGGAATCCCGGACTTGCATTGGTGCTGGAGCC

TTTACTAGAGCACGCTCGGCGCGGGCGAGGTGCACTGTACACGGCATTGC

CAGCCCCGAGAGGATTCAAGCTTTCGCGTTGCAGGCCATTGGGCCCCAGA

TTAGTGTGCAGCATTCCAAAATGTTTAGGGTACAGTGGGTGTCGCGTACT

ACTGTTGA

>Contig1708

GATGTTGTACAGAAAGATGTTGTGAAAGTGGTCCACATTACAAAAYGRCG

CGCYTGTCCATTCTTGGACCAAACAAGRTTGCCCACACCCTTCAATTCAT

AAYTATCTGAGGAATGTTTGCTTRCAAAAGCAAATCAGTTGAGCGTGCTT

TTTAAAAACGCAGAATGTGGCAAACCCACTCACCCCTGGCTACAGGTCTC

GAAGCATTGGCAAAATGCTAGTGCCAAAACGAAATGAAGGTGATCCATGC

ATGATTAGAAATGCATGGAACACAACCAGCCAWGGCATTGGCCACCAGAA

CTGATGGCAAAGCAGGGCAAGCACTCRACAAAAAAACCGGASGAKGCKGG

RATCACRGAGSTTWGGGCCTAGACCAGCACACCAGAACACCCGCCCGACT

CCTAAATCAACTCAAGTTTACGCCTTGCAAAGATCCAATGTTCGTTAACA

AAAAGTGCATCCAAATACTTGGATATGCTTTCGGGGATAAAAGCCCACAC

ATTCTGTAATGCACCAGCACAAGATACACCAAGAACACAAGGGCTTGGGT

CATTGCAACTACTGCATTCAAAATGAAGAAAGTGTCTGTCAAGCCTCAGC

AAACACACACGAGAACGATGCTGCACACATGCATTATGTGTACTTCAGGC

ATCTTCGTGTGAGCATACACGCATGCATGCATRCATGCAKGCATGCAYRC

ATGCAATCACTCCATAACTCTCTCTCTCTCCCTCTCCGGATCCATTCAGC

TCTCAATCCGGGCATGGGCTCGCAACACTTCACTCCAACAGGTCATGGCA

CATCGAAAAAATTAAGTTTCTGCTTACTTTATTCTTCAGTTCAGTGYAGA

WTTCCCTCCTCAAGTTCTCGCTCCTCACATGTCCCCACTCCCAACCTACT

GCTGCTTTTCTGTAGACCTTGCCTGCTCAGATTGCTGCACTAAGCGCTCA

AGCTCGGCTCTTGCCCCAGGAATTGCATCCAGCTCTTGGACAGCCAAGAA

CAAGCCCCAAGGTGCACCATCGAATTTGCCTCCATGATGGATTTGATGGG

CCACAGCGATGCGCTTGAGTGCTGGCAGCTCGGCGATTGGGCCAACAGGG

AATCGCCTGTGTACAAGGCCATCATGCACAAACATGTACATAATGCCAAA

GAGAGTTATGCCCAAGCCAGCTCCGAAGCAAAGGCCTCCTGTCATGTTTG

GTGTCAGGAAGCCATACGCACACAACGCCATGGCGGGCACACCGTTTATA

ATGGCAAAGATGTCGTTTGCTTCAAAGGGGCCTGTCCGAGGYTCGTGGTG

GCTCTTATGCAGAGCCCAGCCACTGGGCAAGTCATGCCATAAGCTCTTGT

GAGCATAGCGGGCCCACATTTCCATTCCGAACACTCCTCCAGCCACAAGT

GCAACAGTGGCTGCCAACTCTCCCCAAGGCATCTCTCCCGCATCCCGCAA

GAGCCAGTAGAAGCGCATGTAGGTGGCAAGGATGGCCAACCCGCTGACAC

CCAACGACGCAGCTACAGCAGCCAGCTTGTATACCTGCTGTTCCCTATGG

CGCTGTTGCCTTCTCTCCATCACTGCTGCGCTGGGCTGCAGGGGCGCCTC

GGGATGTTGTGATGGCTCGTTGCTTGCAGTTGTTGCTGTGCTTTGGTCCT

GAGTCCGGCTCAATCCCTCCGATGRTGATGAGGRGCTGGGGAASGAGGAC

GCRCATACAGGAGGCGCCACCGGGAAAGGACGATGCACAAACAGGAGAGG

TTGGGCACGCTGAGCCCGCCCAGCAARTTTAAGTGKTGGGCCTGTTAGAC

CTGTTGTTGCGCACAAGGCCATCGTTCCAATTGACCTAGCACACGCACAA

CAATTTTATTAGTACTCCTTTTGTAATCAC

>Contig7531

CAAGTGCATCGGCGACCAGTTTGCACTGTTTGAGGCCACTGTAGCGCTGG

CGATGCTTGTGCAACGCTTTGAATTCCAGCTGGCGGTGGAACCCTCGCAG

GTGGGCATGGCCACTGGCGCCACCATCCACACTGCAAATGGAATGCCCAT

GCGCGTGGCYCGGCGCAAGCCTGCTGAGCTAAAGCAAGCGGAGCCTCAAG

TGGCAGGAGCAGTATAAGACTACTTTGTAGTAGTTTGAGGAGGCACACCA

ATAGGTGCGACACCACTGACTGTTGGGTCTTTCCTCAATGCRAGCGGGAT

GCTGTCCCRCAGACTTTTACTTCCRTGTTGGGGCCTGCATRGGGAGCTGC

GAGGCTTGRGTGCAAAGTAAGGAGCCAATGTGGCTTCTCACTTAACWTGG

TAGCATGACGCAYGGCWGGTGTTGCTTGAGGAGTGACAAGTTGCAGGTWT

GTGTGGAAATGGCTTGCCTTGCTTGCTGTTCCCTGGAATGATGCAGAGCA

TGTGCTGCTCACCTGCGCCTTGTTTTGCCTCACTAAGCCAACCAAACGTC

AAGCTTGTTTGGCATGACTGCACGGACCTGCGGCTGGATGATCGGGAGGA

GAAATCCGAGTTTTTTTGAGCTGTTCAGCTTGCCTGCGTAGGAGAACTCC

CCCCTTGGAACTCTTGTTTTGGAACTCTTGTTTACGCTCCATGGCATGGT

GTGACGCATGTAATTTGACGAAGTCATTTTGTTTTTGTTGGATTTTGGCA

GCATGAYGAYTGCCCTTGGTTTGTCCTGCTACCCACTGAATTTTGCATTT

TTGGCATTGTGTTTCCTTTCAAGGGTGACTTCACTAGGACATTCCATTCA

GATGGGGCACGTTCACAGGGCAGGTCCCTAGTTTTGCGCCTTTTTCTTGT

AATACCTGAGTCAGGCTGAAAAAAAAAAAAAAAAA

>Contig8493

GGAGGAGGTCCCTTGCGTGCTGTGAGAAGTGGTGGTCAGGAAAGAACAAA

AGAACAGGTTTTTGTCATAAGATATGACTTCTAGTTGCTAGGTAAACAAA

GGAAGATTACGCACGTAGTGAAACACACCAAAGCACCCTGCATCAACTAA

GGAAAACGCGTCAAGCTGAAATTGCCATGAATCGCTTTCGTTCACTTTGG

AAAGAAAATTTGGTAGTTTGATTAGAACATGAAAAAGATGTTACACTGCG

CTCCCGCAAAAACAATCCCGCAAACAAAAATTTAAATAGCTTTATGCAGC

TATTTCCAAATAGGTACGCATCACCAACCCTCCCTTTCTTAATGATCTTG

AGGTATGGTCATCCAGCACTCCTAACATAAATGACGCGGCCTTCAGCTGT

CAACCTACATAGGGAAACAAAAACAATTCTCAAACCGACCAATCAAGACT

TTGCCCTCAAGTGTACTCGAGGTTCACAAGACAAGGTTCCCGAAAAAAAA

CACTCACGGACGCGCAGCCCCTGCTGCGAGTTCAGCCCCTACTGTGTTGT

CATTGCCATTGCTGCTGTGCACATCTCCATTAGAGGCAAATGCAGGCATC

TTGCCATTCTCAGTGGGGGCAGACAAGATAGCTGGTTGCCGCCCCTGTGA

GGGCGGCACTTTGCGGGGGGTAACGGTCATGTACAGGCCATTGGTGGTGT

GGATGGTGGCACCTGTGGTCATGGCCACCGGTGGCGCATCCGGTGCTAAG

CTAAATTCATAGCGTCGGCAGAGCATGGCCAACGCTACGATGCTCTCAAA

CAGCGCAAACTGGTCGCCGATGCACTTGCGCTTGCCCCCCCCAAAGGGCA

GGTAAGCAAAGTTGGTGGTGACCTCATTCGGAATGGTGCCATCCAAGGGT

CCAAACCTGTCAGGATTGAAGGCATCCGGGTTCTCCCAGTGCTTCTCAGA

GCGGTGCATGTTCCACACACTGATGAAGATGTCCGAATTCTTAGGGACCT

TGATGCCATCAAATTCATCGTCCTCAAGCGCTCGCCGGATGAGGACAGGC

GGCTGAGGGTACAGCCGCATGCCCTCATTGATTACGCGGGTGGTGAAGCG

CAGCTTGCGCAAGTCCTCCATCGTCACTTTACGGTCACCCAACACCTCAT

CTACCTCTTGCTTAACCCTGTCTGCTATTTGAGGGTTGCCTGCCAACATA

TATAGCGTCCATGTCAGCACGGCAGCAGTGGTCTCATGGCCAGCCACCAG

CATTGTCATGAGGTCATCGCGGAGCTGCTTGGAGTTGATCTCATCCCCCG

AGGCGATAAGAAAGTGCAGAATGGATGGGTCCGCCTCGCTCAGAAACTCC

TCCACAAACTCCTCGTCTTCTTCTTCTACCAGCTTTTTTGACCTGGCAAT

GAGCTCATCCAAGGTGGTGTTCACGATCTGCAGCGCCTGTACGCAGTCGC

GCTGGCGTGGTATGATCTGCTTGGCGCCCGGAAGCTCCCAGTATGCGATG

GGCGCTGTGGATCGGTGTTCCGCTTCACGCAGCACTGTGTACACTGCCTC

GATGACAGGGTCGTCGTGTGTGAGCGAGTCAAAGTCATAGTTGAACACAG

CTTTTCCGATGATGTCAAGGGCCAACCGGGAGAAGAAGTTCTCCATGTTC

ACAGACTTCCCCTCCTTGACGGCCTTGTCCAGGTTGTTACAGCCGTGGAG

GGTGCAGTCCCCAAACATGTCCACCATCGATGCTACATACTTCTTGTGGA

GGGCGGGCACGATGGTGCGGCGGCGGATCTTCCAGGTCTCACCATCTGCA

GGGATGAGGCCAGTGCCCATCACAAAGTCCAAGATCTCGCTGAGAATGCC

CTTGGAGTAATTGACAGAGTTGTTGGACAGTATCTGCTTGGCGTAGGCGG

GGTCACTGATGACAACGAAGCTCTTGGGCCCAAACGACAGGTTGAAGATC

TTGCCATATGCGCGATACAGGTTGTACAAGGGGATGAAAACAGGGGCATC

CACAATCTCCCGGATGTCGCCTCGTGCTACGGGCATCTTTTTGGCAGCCT

CTGCCCTCCACAAACGCCCAAGGCGAGCAAGCTGGAGGGCCAGTGCGCGT

CCTAGGCCAGTGGGGTCAGACGCCAGAGCCTTGCGCACTGGCCGGGTCAG

CTTTTCCTTGGTGCTCCCCTTGTCCCCATACTCGCCCGCAAGGATGCGTT

CTTCGAGGCTTTTTTGATGCTGACTTGGCTGCAGTGCTTGGCATGGGCGG

CCTCGCAAGTGCTGCTTGTGCTGTGGGATCGGGCGGGTAAGCGAGGAGGT

GTGCTTCGGGTAAACCACCTGGCCCGAAACACAGGGGATTGACGGGCTCC

CTGAGTGCTGCCCAGCGTGCTGAACAGCAACACCACTCCTGCTGCTCGTC

AGCATGGCTCAGTCCAGCTGCTCGGCGAGTCTCTTTCTACAAGAGCATCG

AAAACACTGCCGCTTCCCGAACGTGAGGCAATGATTTACTTTATCACTGC

GAATTACTTGTAAT

>Contig4317

CGCCCATACTCCTTTAACACAGATGCATGAGACCACGTTTCACAGCAAGT

GCAAGCTAGGTGCACAGCCTCGAGAGGAAGAACTAAGCACGCTGCATAAA

GAAACAAAGCAGGGAACACAATCAAACAATGATGACAAAATTCTAGGCTC

AAATGAACGATTGGAGGACCAAGAGCTGAARCATTGCAAAGCACTATACA

AGGGGTTGCGCATCACTGTGAGGTGATCAAGTCAAAATGGCTATCAGCTA

GCCAGAAGGGGTSCTGGACCTTAGCCCCTCATGCCCCCTCATAGGAGTTG

CTCAAGGGAGCAGAACATATCAGGTAACCCTGTCCTATGTATGCATACAA

ACCACTGCGCAATTACATCAAGGCAAAAGAAGATGCAACAAGAATGCGCT

GCCAATGTTAGGCTTTGCATTCCGTGGCGGTCCGAGGAAGGAGGAGGGAG

GCAGTATGGGAGGCAAGGAAACCTCAATCAGGACATTGCGTTCACACTCT

TCACATTCCCATAAGTGCTGGATTTGAAAGCTCTCTCACTGACAAATCAC

AAGGTCAGCACCCCAACAAAAGCCCGCCATGCATGTCCGCTGGACTGTTG

CAGAATGCATGTGGGATGGGCAATGCAAGCGGCAAGGAGCCAACAGGTWC

ATTTATACCACTCATCAAAAACAGCAGAGCAGGWACRCACRGCGTGCCTG

GCGCCAGCATCCCTAGCAACGTGTTCCTGGGCAYGCAGYTCTACTTGGCA

GTCTTGCAAACAATTGATCTAATGTTACAAAGCTTGGTCGCGCGCCCACA

GCCTGCACTCATCTCTGAGCACTTGCATGTCTATCTGGCCAGCAGAGCTG

TTGTTGCCCCGCTTGTCCAGCACCCCCAGGGCTATAGTAGGCAGGTACAT

TAAGTGACCCTTGACCTTCCTAGGGCTACAGTGTGGGCGCTCAGGCCACA

GCAAAGCGCGAGCCACAACCGGACAGGGGCTGTGTTTACTTGTTCTTGGG

CACCAAAGCCCGGAACAAAGCCATAGGCAGCGACGCAAACTTCTTGGACT

TGGGCACATAGGCGCGCATGGAGAAGTTGTCATAGTCGTTTTTCTCGAGG

ACATCCAAGATCTGGCGGTACAAGATCAGCGCTGACCACACTGGCCATCG

CGCCTTCACATCCAAGTAGTCTACCCCRTCTTCTGCTTCTTGAAAGTAAT

CGCGTGCGCGCTTGATTTGGAACTTCATGAATGCTCGCCACCGCTCATCC

ACCTTGCCTTGCGATGGCTTGTGGATGCCTGCCTTCACCTCCTCTTCTGA

AATGCCRAACTGCTTGAGCTCATCCAGGGGCAGGTAGATGCGGTCACGCT

CTCTGATGTCCTCTCCCACATCTCGCAAGATGTTGGTGAGCTGGTTGGCT

GTTCCCAGAGCAAGAGCTGCCTTGTAGACCTTGTCAATAGGGCCCTTGTA

ATTGGGATCAATCCCCATAACTGGCATAGTCATCAGCCCCACAGTGCCTG

CCACACGGTAGCAGTACTCGTACAGCTCATCAAAGGTGTGATACCGCGAC

TTGAACAGGTCCATTCGCATGCCCTCAATCATGTCCCTGAAGGGCTGCAC

CTCCAGGGGGAAYTTGGAGATGGTGTCCGTCAGTGCCGCATCCAGCACGT

CATAGGGCTTGCCTTGRAACATGCTCTCAAGGCGCTCTTCCCATCTGTCC

AGGGCCTGAGGCGTGATCTTTGATGCATTGGGGCCATCCACCAGCTCATC

CGTGCGACGGCACCACACATAGATGGCCCAGATGCATCTGGCCTGCACTG

GGGTCATAAGCTGGGTGCCCAGGTAGAAGGTCTTGGCGTACTCGCTGCAC

ACCGCCCCGCATCGCTCATACGCTGCTTCCAAGCTACTGCCCTGCCAGCG

CAGTCCGCGTGGGTCGAGGAGTCCGGTGGAGGGGGGTACAGATTGGGCGG

TTTTTATGCATTGCAGCATCGCCTGCTCCTCYACCTGCTTTCCCGAGAGT

TGCTGTTGCTGCTGCTGCTCTTGCTGTTGCTGCTGCTGTTGTAGTCGCAT

CTTCTGACCGTGGTTGGGCTGCGGCATCGCGAGTGTGCAGTTCACTTGCA

CAGTGCTACAGAGCCTTCCCGTCCGGCGTGTTGCCCTGCGCCCGCCACCC

CTGATGCGGCATATCTGTGAAGGAGCAGTGGCTATGCTGCTGCTGGGAGA

AGTGGGGGAGGAGGAGGAGGAGGCTGTCCGCTGTGCTAGTCTCCGCGCAT

CCAGCATTGACAGAGTCATTCTCTATCTCAGTGCTGCGTGTGGCTTGCTC

TCTGCAGCTGCTTCCTCCAATGCGCAGCACGGCAACGCGACTGGACAAAA

AGTGAGGGCAATCACACTACAAGACCACCAGGTTCTGCATCTACCTACGA

CAAAGGATTGCTACTGCTTTATTTTATGAGTTGAGGATAGGTGTGAGCTG

ACGGGCACTCTCGGCCGCAAATTGAGGATTGAGACGGAAGAAAAGGGCTC

AGCTCATGACACTGGAGTTGATTGATGTAATCCAGAAATATTCTTCTTTG

GACGTGGCTGACAATGTGGTTGATCATGATTGGCTTCCCAGCTGAAGGAG

AGACGAAGGGCTGAA

>Contig8548

TGGTCTCCTTTGATTGGTTTCATTGTCACACAGTGCGGTACCTTCTTTCT

TTCACACACTACACCCTTCAGCAATGAAGTACATTAGCATTTCATGCTAA

ATTCAAAATGCTGGGGATGTCCCATGCCAAAGATGTCAAGCAAGCATTGG

TGTAACCAGTTCAGGATCAAATTCGCAGAAAAAAATCAGGGAAAGTCATT

ATTCTACAAGGCCACATTCTAAGCAAGTGATAACAACATAACAACTACTT

GGTTGTACTACAGGAGCACAGAGCAACGGAGCAGGGATGAAACGAGAGGC

TGTGCTCGCGCGAGCTTTTCGGTGCAACCCACTCCCGCACCCGCACAAAC

ATCGACCTCACCCCCTGCTGAGTCAATCCAGTGACATTGGAACGATAAAC

AACCAGCTAAAGTGAGCTCAAGAAAGCATACGAAACTCTGCATCAGGTAA

GTACAAYGCTGTCCGACCAGCAGCTCAGAATGCACAAGGACAGCGAGCCT

GCCCCCACTCAAACCATTCTCGGCGAGCCAGRGAAGCGAGCRCCTGCTCA

GCAGCTYAGAACCAAGGGAAGGTGACTGCCTGGTCCAGCACCTCAGAGCC

CCAAATGGCCTCAGACAGGACCTGGGCGGAGGCATTGCCTGCCAGCACTG

CACCCATGGCCAGCAGCACAGCAGCAGAGGCAGCGGCCAGAGCAGGCTGG

CTGGGGGCAGCGCTCTGGCTGCCAGTGCGTGTGCTAGCATCCTCGACCAC

CTGYTCGCAAGCCAGYTTGCCACTGAAAACAGCACCCTCCATAGATGCCA

AGTACTTCTGCTTGGTGTAGTCACCCGCWAGGTAGAAGTTTGARATGGGY

GTTTTTTGGCTGGGCCTGTACTTCTCCCGTCCAGCTGTGGACTTGTACAC

TGAGAGGGGTGTCTTGATGACCTTGGACTTTCGGATCTKGGCCAATGACT

GGTCAGCCCTGATCTCATTGGGGAACAGCTTCTCAAGCTCCTTCATGGTT

GCTTCYACAATCTCCTCATCTGGCCTGCCAATCCATTCAGCRGCRGGCGC

GAACACCAGCTCCAGCATGCTGGCTTTGTCATCTGAGTACTCCTTGCAGG

TGGTGCTCATGTCAGCATACACGCTGAGCAATTCTGAGCGCGAGAAGAGC

AGGTGGTCCACTGTGGACAGCTTGCGGTCGAACCAGATGTGGATGTTGAT

GACTGGCACCCCCTCCAGGCCATTCAGCTTCGAGAAGAAGTTCATACCCT

TCCAGGGCTGGGGCATCAGCTTCTTCATGATGTCCACTGGCATTGCAGAC

ATGTACGCATCTCCCTCAACAATCTCTCCGTTCAGSAGCTCGAAGTGCTT

GACGCTGTTGTCCTCATTGAGCACGATTTGCTTGATGCGTGCGTTCATCT

TTAGCTCTCCACCCCTGGAAGTGAAGTAGTCCACCATGGGCTGGCACAAG

CGCTCTGGAGGAGCACCATCAAGAAAGGCCATCTTGCTTCCATGTCGCTC

TTGCAAGAAGCGGTTCAGCGCTGTCAGCACGACAGTCATGGACAGCTCAT

CGGGGTTRATGAAGTTGAGGGCCTTGGCCATGGCAATGAAGACCTCATCR

TTTACTCGGCTGGGCACGCCCTGCTTCTGCATCCACTGAGTTACTGTCAG

TTCATCCTGCTCTTCCACATACTTCTGGCCGAAGATGATGGCCGGCAGCA

GGCCAACAGCAAACTGGATCTTCTCAGGCCACGACAGCATCTCATTGTTG

CGTAGGATGGCAATGACACCGTTCCATGGGGCTGGGATGTCTGGGAACTC

AAAGCGCGAGAACTCTCCAGGCTTGTCTTGCATGGCAAAAATCATAGAGT

GGCTCTTCCACTGTAACCTGTCAGAGATGTTGAGCTCCTTGAACAGCCGC

TGCATGTTGGGGTATGCGCCGAAAAAGATGTGCAGGCCAGTCTCATACCA

GTCCCCATCTTCGTCCTTCCATGCGGCCACCTTGCCCCCCAGCACATCGC

GGGCCTCCAGCACGACGGGGATGTGGCCAGCGTCAGAAAGGTACTTGGCA

GCGGATAGGCCAGCCAGGCCGGCTCCAGCAATGACGACACGCTGTGGCTT

TACTGGCCGGGGGGCATTTTGCAGCTTTGTGGACAGGGCCACGGCCTCCT

GGTACGTCTCCGTGCCATCGAACTGAGGAGCTGGGAAATCCCTGGCGTAC

ACCTGCAGGCGGGACCTGCCTACTTTCCGCTGCGTGCGCCTCTGCTGGAC

AGGCTTGCTGTTAAAAGAAGCGGCCTGCGCGTGTGCCCTGCCTTGCATAA

CCTGCATCCTTCTCGGATTGAGTTCCTTTTAAAATCGATTTTGT

>Contig9300

ACGTGGACCATTTTAGCAAAAAATTATTAAGTGAATTGGTGCAGAATCGG

GGCAAATATCACATTCAAACAGTTACGGGTACCTCTTTTGGCTGGGAGGT

GCCCCAGWGAGAGGGACTSKKATAGRAAGGTCCATTGGGCAAAATGTTGA

AAAGAGAAAGGACAAGCAGCGCATGAGCTCGCTTTTGCTACAGACCACTT

CGGAGAAAAGTATGTGGGGTGGTGTTTTGCTGCGAGCCAACGCCAAAAAG

GTAAATTCGTTTATTCAAAAGCTCTTCAAAGGAAAGGACACCTTGAGACC

AAAACCAGTTGCAGCCAGTAAGCCAGGTTTGACGCCTGGAATGTAGTTGA

AAAATAGCGCTTACGTCTTGCATCAAATGCACACAAACTGTCTCTTGTAT

GTGCAACCACATCCACTGTACATAGCCATTTTACCACCCGAGATAGAAGC

TGGCTGCTTGCATGATTGGGTGTGCGTAATAGGCGCCCAGGGTGAAGGCA

GTCACCGTAAAATATGGGGTCCGCAGAAACTCCTTGTAGTAATCAGCTGG

CAATACCTGGCGGCCCTCCCATATAGCTTGCAATGGGAAAGTGCTCGTCC

GCGCTYTGACGATCTCAAAGGCCTCKCCGTATTTGGCAGATAGCCGTCKG

TCACCATGCCAGCAGCCGAACAGGTGGTGAGCCATGAGGCCTGCTGAGGT

CACCAGCATGAAGCTATTCCCAATCCACAAMGTGTGCGCTGCGCACCAGA

TGAGCTGCCCTACCATTTGTGGGTGACGCGTGATTCTCATGATGCCTGTT

TCCCACATGTGGAGCTTAGGCTCATCCACTGCAGCTACCTCGAGAATGTT

GAAGGTGGATGGGTACAGGAAGTAGAAGGACACGAAGTTGAGAAACCACA

CCAGCTCGTGTACTCCCGTCACACCCCTAAGATCCCATAAGGGCATGCCA

TCATATCTATGGTTGATGAAGTACACGATTGCCACAATGGCCAGGGGCAG

GCTGGCTAGGGCAAATATCACTCGGTATGCTCGTGCGCCGATCAGCTGCT

CGCCACGAGGGCGCAGGCCTGCCAGCCCACTGTGCACCACCGCAAAGACG

AAGAGGATGAGGAGGATGGTTGCCTCGGGATTGTTGTTGCTGAAGCTCTC

GACTACGCCCAGGAAGTCATCTGCCAGACCTGCTCCTGGCTGGATCCAGA

CCAGGTAAATGAGGCCCAGGACGCCCGTCAGAAGCCCAAAAAACAGCGTC

CAGGACTTGGTGCTCTGCCGGGACGCATCGAAGGCAGCCGCATCCTCGCC

AACAAGCCCCAAATTCTGGGGCGGGGTAGACTCCTGCTGCTGCTCGTCGC

TGGCAGCCCGCGCACACAATACCTCCGCTCGTCTTCTGTCTTGTACTACG

GAAAATTCTAAGCCTTGGTGGTGGCGTTTACTGATGCATGGTAGTGTCTT

TGGAAGGGGCGAGCACTTGGAGACGAGTGGCTTGGCTCGAGAGGAAGTCC

GCAAGCCACTCAGCCCTTGTGTGCTGCCTTGCGCAGCGTAACACAAGCTC

GCCATACTTATTTTATTACAACGTGAGCCTCCGTACTTTAATTTTGCTCC

AAT

>Contig8517

CTTCATTTTTCAAAACTAAGCGTTTCAACCAACCTAAAGAAAAAGTTTGT

AAATTTTGGGGAAATTGAACTTCGGTGGGTCCACCACTGATTTCAGCGCT

GAACGTTACAACCTTCCTTGACAGAAAAGGAAAGAGGGATCATGCAATGA

GAAAAAACTCCCAAAACCAGTCCTGGAAAGGGGGGCCAGATTGGTCAAGA

GACCATGTGACCTCCCCACAACAAAGCCCAGACGCCGGGAGGGTCTGACC

CTGATGTACGCAGGTTTGTTTTCCGCATAGATATCTGCTCTTTTCCATTA

CATCATTGTTAGGCTGGATCAGTGAGCAGCCAAAACAGTGTCCAACTCAA

ATGACTTGCAGCACACTCTCATCACAGCACCCTCTGGGTGTGACATCACA

GGGGCGAAAATCTGTTCATGTGGAAATCAAACCACATTTTCTTAAGCTCA

AAAATTCAACAAAAGCTTTTGCAAAGTGGAGGCACTGGAATGCTGGACAA

AGAATACAGGAAGCTTTACACAGTGTTCAATGCTGTAGCTCGGTGACAGC

AGCAAAACCAATCTAAGCCTTTTTCTACAGTGGAATGGTTGGTGCAAGGA

TTGCTAGGAAAGAAAATGCTCACCACAGAATGCGGTATTTTTCCTTACTC

TTTCAAATGCTTGGAAGTGGCGCCTTGGATAGGGTCTGGATCAAGGGCAC

AGCCTTCATGATCTCACCGGCACACTGGCGACCTGACAGGGTGGCGCCCT

CCATGGAGTCGATGTAGTCTTGCTTGGTGTAGCTGCCAGCCAAGAAGAAG

TTGGGCACAGGCGTGGCTTGCTCGGGTCTGTAAGGGTCCATGCCTGGGGC

CTCTTGGTACAGCGACTGGCCGATCTTCACAACACTGTGCCACATCATGT

CTAATTTGCGTGCGCTGGGGAAGAGCTGGCGAACCTGTTTGTCAGCCTCC

TCAGCAATGGCCTCATTGGTCCATGGCATGTACGGGGCGGCAGGTGTAAT

TACGACTTGCATGAGCGACCCCTTGCCCTCATGGAAGTACTCCACAGGGC

TCACAAGGGCAAGGTCCGCAAAGCAGGAGAAAAATGCATCGGGGCTGTAC

AGCAAGTTGTTGATGCCTTGGGGCTGGGTGAGCTGCTTGACCTTCTCTGG

GTCTTGCATCTCAGTCACCCATCCATTGTATCGCAGCTGAACAGTGATCA

CTGGCACGCCATTGAGCGAGTAGATCTTGTCAAATTGGGGGTACTTCCTC

CATGCCTGCGGCAACAGCTGCTTTGCCCCTGGTACATCCAAGGCTGCTAC

ATAGGCATCAGCCTGCACGACTTTGCCATCGCGGCCCATGCGCATGCCAG

TCACCACAGGCTTGCCATCAGGGCCATCCTCAAACAGAATCTCCTTGCAA

CCCTGGCGCAARTGGATGCGGCCTCCCCTGGCTTCAATGTAGTCAGTGAT

GGGCTTCAGCAGCCTCTCAGCAGGGGATCCATTAAGCATACGCAGGACGG

AGGCGTCGGTCTTGGTTGCAAAGAATTGGAAGATGGTCAACATGCAGCGC

GCACTGATGCCCTTGCAGTCCAAGAAGCCCAAAGCGTAGGCAATGGGGTC

CCACATGCGCTTCATGGACTGCTCGGACCCGCCATGGCTCTTGAACCAGT

CCCAGAAGCTGATGTTGTCCAGGTTCCTTACGTCATTCATGCCCCCCTCA

GGGTCTATCAAGGAGCGCACGACAGGGCTGGTGCCCAGCGCCAACGCATT

GGCTGCCTTGTCACCCACAGAGAGCTGAGGGGTGGTGAAGAAGGCTTTCA

GKCCATGGAAYGGAGCCCCRATTTTCTGCCCTCCAASWTCAAAGCGGAAG

TCAAGCTCTCTGACGTCCCCGTCATTGTTGCAAAAAGTATGGGTGTGCTC

CTTCAATARCAAGTTCTCCAGTACACCACACTTGGCCATCAGTCGGAAAA

GGTTGTGGTAGCACCCGAAGAAGACGTGCAAGCCCATCTCAATGTGGTTG

CCATCTTTGTCTTTCCATGAGGCCACTTTGCCTCCTAAAAAGGGGCGCTG

GTCATAGATGTCTACCTCATGCCCTTGGTCTAGCAGCTCTACAGCTGTGG

ACAACCCAGCCAGTCCACTGCCCACAATGGCCACACGCATCTTGGGGGCA

CCTCGCTTTGGCGGGCCAGGCTCATCCGGGTACAAGGATTTGAGAGGCAC

GTCCTTCAGTGCCACCTTGCTCACATCCTGGGTGGTCCACTCCCTGGGTG

TGGTCTTAGGCGGAGCAGGGGGTGTGGCAATGGCTTGGGTGGTGCGCGCC

CTTCTTCTGGTGCGAGTGCTCTGCAAACAGCCACGCTTTGCGGGCACACT

CGAGGTACTCGCCATCCCATGGAGTCCCAACATCCCAGCAAATTCTTTAA

GAAATCTAATAGATACCGTGCCTGCAGGCGCGTCA

>Contig1382

AAAACATGATATGCGCATGACAAGTCAACTCAGTTTGTTCTATGTTTTGA

CCAACAATCAATTCAGAAAATAATAGGAATCAGTATGTACAACTCCTTTG

AAATTGAAATGAAGTCCCGTGCCAGAATTCAGGTGCAATAGAATGTGCAC

ACATCGTACTTTGGGTGCAGGCACACTCTTTCCTGGAATGCAATCACACA

TGTCACGGGTCCTTGTGACTTCAGCCACCCAAGTTGTCGGCAATGCTGAT

CAGGCATGAATAGAATCAATGTCACTGGCAACTGATTGAATCAATGATGA

ATGCACGTTTTGCACAAGTTCTTAAAACACCATGCCAGCTTTCAGCACTG

GCCAAATACAGATAAACCATCGATACAGAGCAGAGCWAMYATTTTCTWTG

CGWGAAACTTTACAACRATGWATCCAGGTCCAGTGCTTYAGAATCTATGC

ACGGTCCCTGAAGAATTGTAGGGTGCTGGTATAGGCATCGTCTACAGGTA

GAGGCAGGGCTGCCAAGTGGCCTAAGTCAACCATGACCCTGTGTGCACAG

CCAATCCCGCTCATGGCCACAGCATTAACGCCCTGGCCCGGAAAAGTTGA

ATCGCCAACGCAGTACAAACCCTTGATAGAGGTTCGATTAAACGGCATTC

CAATGATTCCCAGCGGTTTACGTGAGGGAACGGGTCCATAAGTGCCGCTG

TTCCTGCCTAGAAACCTCCTATGGGTCTTCGGGCTGCCCACCTCTTGCAT

ATCAATTGCTCCGCATAGGCCGGGCAGGACAGCCTCTAGGCGCGTGCACA

ACTCGTGCGCCTTCTCCTGTTTCTTTGTTGCGTATGCATCACCACTCAGC

CCCTGCCAATTGTCCATCCAATCTGATGTGAATGCATGCACCACGTGCTT

GCCTGCTGGGGCTACACTGGGGTCRATGAGGGAGGGCATGCTCAAGAACA

GCAGGCCAAAGGGCTCCTGTAGCTTTGCCCAGTCGTCCAAAATAATGTGG

TGCACGTCCATGGCCTGTTCATCGGGTCTTGGRAATWTCGAAGCATCCAC

ACCCATGTGCAGGGAGAAGAATGAGGGCGCACGCTTGTAMCGCRTCCTGA

AGAGCGYCTCACTCMKGGGCATGTTCTCCTCGCCCACCATGCGCTCAAAG

GTGTCCCACCTCGTGGCATTTGAGACTAAGGCCTTAGCTCGAAATTCTCT

GCCATCTGTCAGCTTCACCCCAACTGCCTTCCGTGCGCCATCCAAATCTT

CTGTCACAATGTTTCTCACATGCGCTCCATAAACCACAGCACCTCCGTGC

TCTACCACACCTTCAGCCAGGGCCTGCGGAATCTTGCCAACACCACCACG

GGGATAATTGATGTGGCCATAAAATCTGTCACTCAGTACCATGCCTGCGT

TGATGATGGGCGTGTGCGAGGCTGGAACTGTTGAGAAGACAAAGCACTCG

GCGTCGATCAGGCGCAGGAGCTCGGGGTCTTTGATGCACTTGGCAGCCAC

ATCACCTGTGTTGGAGGTCAAGTGAGGTACRAGACGCAGGCATGCCAAGG

GGTGCTTGGCGAACTGCTCAGCCTGGGCATAACAGCCATGCCACCTACTA

GGTACAGTGGTTCCTCCAAGGACTTGAGCTCCAGGGTATTCAAACAATTG

AATATGTCCCAGCATATTCCGTAGAACTTGTGGATGCCTTCTTCTTCATG

AGGGAACAAAGAAACAAGGTTGGCCAAGAACTCCTCCCTCGACCGACCCA

CAGTAAGCTTCAAGCCCTGGGGAAAACGTTGGCTTGCCGGTAAATGATAC

TTCACTTGTGTGGGATCAGGRATGGTTTCTAGCTGCTTCTTTACTGCCCC

CAGGGCTCGATGCGTGAGGTTTGTTGTCCCCTTGTTTCCAAATCCAAACA

TCATGCTGGAGCCCACATCAAAAGTGTAGCCCTGCCGCTTGAAATGGCTC

GCGCTTCCTCCTGGGATAAGATACTTTTCCAGAACAAGCACTCGCAGCCC

ACGAGCCACCATCTGTGCCGCGCTGGTGAGGCCGCCCACTCCACCTCCAA

TGACGATGGCATCATACTCCACATCCATGGGTSCAGACCTGCTCAACTCC

TGCAYKAAYRRMTGKAGAGGAAAAGTATCTCTGGTAACCGCAGAAGTGGG

ACCACATTGAGACCTCTCTACGCTCCTGCTCCGCTGTTTCAAAACGCGAG

CAAAATGACACCTCCTTTTTACATTGCACAACTCGCGGCCTCCGAGTTTG

GGCTGGACCCCCACCTGCGTGCGAGTATGTGTCGAAGGCTTTCGGTTAAC

CCGCGACCTTTGAACGAGTTCATGGGCCTCGTAGTGCAGCGAGTGTGCCA

TCCTACGGTCCTTGGCTCCTATCTGTCACTCAAGAGCCCCCAGGGATAAG

GATAAACGTGTCA

>Contig2348

GGGGAAAGCCAGTTTAATGCTTCACTGCACTTCACACAGTGTTATCCGCA

AGAAAAGCTACAAGGCTAAAAATCAGGGAGTGACAAATGCGAGAAGTAAC

AAGTCAAACATTGTGAAAAATTAAAACTATTTTAGTCTTACATGTGCAAT

TCCAGCACAGCCTTTATTCCTGTGAGCAAGGCCAGCTTCTTTGGCACATA

AAACGAGCGCGCAAACGTGCAAAACGTCAAAATGGTCTGATCGGCAACAA

AAAAGCAAGATTTGCTCAAAATTTGTGGCACAGACAGAAAATGCCTGCAT

AAATAAACATACAAGCGGTGTCGGTATTTTTGCATGCTTTTCACCAGTGT

GCGGGGCCAGCCTAGCTAGCATATRTCTTCAGGGTGCTACGATGCAGCAT

GCTACARGAGCCTGCTGCRCACTAATTATTCTAGGGCACCTTCTACACCC

CTGGGGGTGCCCACTGGTCAATCCTCTCCCCATGAAGAGGCAGCTTCATC

CCACAATTTGACTATGAGTTGTCGCGCACGTACTCGAGGAACTTGTTGAA

AGGCTTGTCCAAGGCGGGCCAGGTAGGCTCTAGTCCAATATCGCAAGCCA

CCCGATGCGCACAGCCAAAGCCAGAGAAGACAACTGCATTCACTCCTTGG

CCTGGGAAAGTTGAGTCTCCCACACAATAAAGTCCTTGCAGCGCAGTCCT

GTTGAAAGGCATGGACAACATGCCCAGAGGCGGCCTCGTTGGGATGGGAC

CATATGTGCCTGACGTCCGGTTCAAAAAGCGACGGTGCGTGCGCGGTGTC

CCCACCTCTTTGAAGACCACTCCTTGCTTCAATCCTGGAAACACAGCATC

AAGGCGGTCAATAAGCTGCGCAGAAATCTCCTCCTTCTTGGTCTCATACT

CTTTTACAGACAGGCCCTGCCAAGAGTCGATCCAGTCTGGAGTGAATGCG

TGTACRATGTGCTTGCCAGGAGGAGCCAGGGATGGGTCTAGCAGGGAGGG

CATGGACACAAAGAGTGTGCCATAYGCATCTTCTAGCTTTGACCAGTCAT

TTACRATCACATGGTGGCAGTCAACTGTCTCTCCTGAGCCCTCAAACACA

CTAGCGTCAACGCCCATGTGCATGGARAAAAATGAGGGCGCCTTCTTATA

CCGCTCCCTGAACAGCTTTTCACTGGATGGCAAGTTGTCATTGCCAATCA

TGGACTCAAACGTGTCCCACCGGGTGGCRTTGGAGATGATGCTCTTGCCC

CTGAATACACGCCCATCTGCAAGCTCCACGCCAACTGCTTTTGACTCTTC

GCCTTGCTTCTCCGTGAGGATGCGCTTCACGTTGGCCTTGTACACCACAT

GGCTGCCACGCTCTGTCAAGCCTTCTGCTAACACTTCAGGAATGCGGCCG

ACTCCACCCTTGGGGTAGTTGATGCCGCCGTAGTGCCTGTCACAAAAAAC

CATGCCAGCATTCATCATGGGCGTCAGCTCAGCAGAAACGGTGGACCAGA

TGTAGCACTCGAGGTCAATGAAGCGCAAAAGCTCAGGATCCTTGATGTAT

TTGCGCGAGATGTCCGCRACGTTRGAAGTGGCATACGTTGCGAGCGTGAG

GCACTCGATGGGGTGCTTTGCAAACTCTCGCAGCAGGTACCGGATTTCTT

CCAGGCTCTTGAGTTCCAGGGTATTGAGGGCATTGAAGATCTTCCAGGAC

TCATCATAGAATGCTTTGATGCCATCGCTCTCGTGGGGGAACCGATCGCA

CAGCTCYGACACAAAATCCTCATACTTCCTCCACACCTGGACATTCAGAC

CATTTGGGTGGGCTTCAGATGCAGGCAAATGGTAGTACACCTGCGTTGGA

TCTGGCACAGTYTCGATCTTCTTGTCCAGGGCGGCTAGGCAGCGGGTCAG

CAGGTTGGTGSTTCCCTTGTCTCCAAAGCCAAACATCATGGAGGAKCCRA

CATCRAAGGTGTAGCCCTCACGCTTGAAGTGCCCTGCGCTGCCGCCTGGG

ATRAGGTACTTCTCCAGGACAACCACGCGGGCACCCTTTGCTGCCAGCTG

GGAGGCAGTCGCCAACCCTCCCATGCCACTCCCCACAATGACTGCATCGT

ACTCCACGTCTGTTGGGGCATCTGTTRGCAAAGCCTTSACAACCTCTGCA

GGAGGATAWGCCATTGTGGTGGCAGCAGTGGTRCACCTCTGCAAGCGCTG

TTGTCTGCGGTTGCYGATTYTGCTAGGGCGGGCATTGTTCRGAGGGCCTG

GAGTGGGCCAGCTGCTGCTAGTCGGTGTAGAGGTGCTAGGGTGSGGAACG

RGCCTATGGACATGGTCCTGGCCAGARGCACGGAGACTTGCGACCCCTGC

GACCCCCCTTCCTGCCTGCGAGCCGCTGGCCTTCCCTGCCGGCAGGGTGT

GTGGCGTGGCAAACATTTGCCAGGCTGGTCTAATACCCTGGCCTCKTCTT

GRAAAGTAGAAAYGAAAGTTTRCAAAATTGCTCTATGCTGTAGCCACGCC

TGACACTGCAATCGTTGATTTTGTGGCGGTTCTTGTGGACGCAATGCCAC

TTCGCG

>Contig468

TAAAAATCCAGTAATAATCGTAGGGCGTCATGCAACAAATGCTGAGCAGT

CGAAGCACTMACGTRCYGAGTTGTTCCCCGCAGCTCCCAYCGTCGCAGCA

AGCKTACAGCATAAGCAGCGCACGCATTTGTAGTGCAGAACCCCTKCAAT

CATCGCATGAGGCCTTCAATCATGGCAGGAGGACTCCGAGCGTAACGCAG

TCCACACATACACATGGCAAGGAGGCGAGGAGGGCAAGGACCAGGGCCCA

GGCCCTGCTTCAGCAGAAGCCGGAGACCCCTTATTTCAGTCCYCCAGCTC

CTCCATCTGTCWCTGGGCCTGYGCAGTAYTACTACAGGGAGCCCTCAGCT

TGGCCCACGCAGCAGGAYGTCCCAGTGGCATACCAYGACCCGCAGAGCCA

ACCGACTGCAGACCTGCTGGTCGTGGGGTCTGGGCCATCAGGCCTGGCAG

TAGCAGAGCGTGTGGCTGCAGGCGGYTTCTCCGTCTGTGTCATTGACCTT

GACCCCTATGCCCCCATGATCCCAAATTATGGTGTCTGGGTAGACGAGAT

GCAGGCCATGGGCTTAGAGGAGTGCCTAGAAGTGGTGTGGCCCCAAGCCA

AGGTCTGGCTGGACAACGACAAGAGCGGGGAGCGGTTCTTGAGACGGGCG

TACGGGCGCATGGACCGGCCCATGCTCAAGAAGCTACTGCTACAGAAGTG

CGCCTCAAATGGTGTGACCTTCCTCACCAGCAAGGTGGCAGGCGTGAGTC

ATGGGGATGGCATCTCCACWGTGACCCTKTCAGATGGGCGCACYATGCAG

GGCACCATGGTGCTAGATGCCACGGGGCATGCRCGCAAGCTGGTCAACTT

TGACCAGAAGTTTGACCCAGGGTACCAGGGCGCGTACGGCATCACAGCAG

AGGTTGAGTCGCATCCCTTTGAGTTGGACACRATGCTGTTCATGGACTGG

AGAGACGAGCACACACACTCCAACCCAGCCATGCGGGCATCCAATGAGGC

RCTGCCCACCTTCCTTTATGTCATGCCCTACACCAAGAACAAGGTGTTCT

TAGAAGAGACGTCCTTGGTAGCTCGCCCAGCTGTGGGCTTTGATGAGCTC

AAGGAGCGATTGCAAGCCCGCATGGAATGGCTGGGCATTAAGGTGACAAA

GGTGGAGGACGAGGAGTACTGCCTGATTCCTATGGGTGGTGTTCTACCTC

AGCACCCCCAGCGYGTCCTGGGCATTGGAGGGACAGCAGGCATGGTGCAC

CCCTCAACCGGCTTTATGATGACGCGTATGCTTGGGTCCGCGCCCGTTGT

TGCGGACGCCATTGTAGATCAGTTGTCCAGGCCAACAGACAAAGCCACTG

ATGCAGGTGCCGCACGCCAACAGGTCTCTGAGCAAGAGGCAGAGGAGATG

GCTGCYGCTGTGTGGCGGGCTACTTGGCCAGTAGAGCGCATCCGGCAGCG

CGCATTTTTCTCGTTYGGCATGGAGATGCTGCTCACCCTCAACCTCCAAC

AGATGCGCGAGTTCTTCGCCGCTTTCTTCTCACTTTCYGACTTCCACTGG

CAAGGCTTCTTGTCAGCCCGCCTGTCTTTCACACAGCTCATCAACTTTGG

GCTGTCCCTGTTCTTGAAAGCAACATCTGCGACGCGCGCAAACCTGCTGC

GCTTGGGCATCCCAGGCCTGGTGCAAATGCTCCTTGTCCTGCTGCCCACC

GTGACGGGGTACTACAAGGAAGACAAGACAGTGAGGGACAAGAAGTTTGC

GCACGACCAGGCAGCTGCGGCTGCTGCAAAGCAGCAAGAGAGCGCGTCTG

CATCACCTGTTTCTCAAGGAGGCAACCCTGGTGCTTAATCAGATGGGGCG

TTTGCTTGGCTCGATCAGAGATAGTAAATGTTGCAGTGGRTGTTGTAGCC

TTAAAYKTGCATWGGARAGCGGGATGAATTTGGAAGTGGGCGTGAAGCTG

CCACATGTTTTAGTTGTGGCTCATGTCGTCTTCTCATTCACGCTCATGAA

AACGAACATGAACACTTGATGACATGAGAAAAGGTCGTGTTGCAGCGCAT

ATAATTTTCTCTTAATGCCTTTTTCACATTGAATCCTTGCAATGCCCATC

AGCTTCTTCAATGTGCCAACACTCATGAGCATAACCTTGTCAAAAAGGCC

TTSTCTTTCTTACCGWAAMTCTYTGCTCTCACTTGCGTGCCTCCTTCATT

TTCTTTTTTATGCCCTCTTCTGCCATCTCTTCTGGTGAGCATGGCACGGA

ACCAGGAACGTAGGGACCATTTTAAATTGTTGCACTTTTTTACTTGAAAT

TTCTGATGCACGCTTTCACGTGGAATGTATACTGCAATATTTTGTAGGCG

GATCATATTGTGGTCATGCTTACAACCCAAGCTGAATTCTGCTTTGTGTC

CACCTTGCAGACAGGTGAAGTGCTCAATTGATGTAAAATGGTACAAGGGT

TTAAAAAAAAAAAAAAAAAA

>Contig2259

TGCTGCTGCTGCTGCTGCCGCAGCCGCTCCAGCTGCTCCTGCTGCTCCTG

CCGTTGCTGCTTGAGCTGCTGCAGCTGCATCTGTAGATCCTCCACCTCCC

TCTCCTGCTTTCTGTCTACTTGAATCCTGCTTCCCTTCTCGCCCTTCTGA

CTCTGCCTTGTGCTCACAACATGCACACACTGCCCATCATCCGAGTCCCA

CGCATCCACCAGATTTTCCTGCTGCTGCTGTCGCCGCTGCTGCTGTTGCT

GCTGCTGCTTGGCGAGGAAGGGCGCAGGAGGCGAGGGGATGGACTGAGGG

GGATGGTACTCATAGTCCTGGCCTGAGCCAAACTCGAGCGCATCCAGCCA

TCGGCGGAAACGATAGCCAGCGCGGACCAGTGGGTCGTCATCCAAAGGAG

GTGAAGAGCGTGCAGGGGCCGAGCTGTTTGTGGGGCTGCTGACACTGCCA

CGCACAACTGCCCTCACAGGCGTGAGCAGGGTGTGCATGGCTGTGTAGTA

CATCAGGGCAAAGTAGTGGTAGAACCAGCCCGCAAGGGTACGTGGGCCCA

CCTGCAGCAGAACTCTGCTGATGGCCACTGGATTTGCGGCCATCATGCCC

AGCATTGACAGCGACAGCGGCACCAGCTGGATGGTGTCTTGCAGGAATGG

CCGCAGAACTCTGTCTCCCAAGACCTTCATGACATCGAAATTGCAGGCCA

GGACCTCATTGACGTGGTTGGCAGGGAGCTTGGTCCATTCAAGCATGGCA

GCCAAGCCCCTTGTCCCTGAGTTCTCGCTCTGCCCCTGCATGCTCACAGT

CAGCTCCTCCCACTGCTGTTGCCTTGCTTCCTGCACACTGCCTGTGCCGT

TGCTGCTGCTGCTGCTCATGCCATCACTGCTGCTGCCATCGCCGTTGCCG

TTGCTACTGCTGCTGCTGGCATTGCTGGGAGGCATCTGAGGGGCTGGGGG

GCCCTTCCGGAGCTGACCCACGCCCACGCTCATTGATCTTTGGAACAGCC

ACGAGGYTGAGAGGGAGGGCTGGTATGGGTGAATGGCAGCCAGGTCTGGT

TGGGACAGCGTGCCACAGCGCAGCGCGTCGTCACACGCACGCGTGAGCCG

CCCCAAGTGCCGCATCATCGCACCAAAGCCACCAAACGAYAGAGGGCTCT

GGGTGGCGCTGGCATCGCCAACCTGCATGATGTGGTCCCACTTGGGCTGG

AGAGGCCCATTGGAGTAGCAAGGGAAGCCACCAAACAGCACKCGCTTGAA

ACGCAGCTCAGACAGTGGCACGCCCTGGTAGTGTACAAGGTCCTCAAAGT

ATCTGTCTAGCAGGGCCTCAAAGTTTGGGCGTGCTGGCTCTGCGTCACTG

TACGCGAACATGTAAGTGGTGCGTGCCTTGCCGCCCTCCGCTGGAAATGC

TTCCCAAAAGAACTGCATGTCATTCTGTGCGTCCCCCAGCGTGTACAGAA

GGTCTGCATGGATGTTGTTCTCTGCTTGCACTCCCTCCGCACAGGAGCCC

ACCACCAGCACCATTCCATCAGGCTTTGAGCGCCCCCGCACCTGCTTCAC

GATATCACTGTAGTGGCCCATACAGTCCAGCAGCAGCCGGCAGCCCAACT

CCTTGGGCTGGCCCTTCCCACCACTGCCTCCGTTTGCAGCTGTTGCCGTT

GCTGCCACGGGCACAGCCCCATTAGGAGAAGGAGCACCGTTGCTGGTCAG

ACCATTAGCTGCTGCTGCAACAGCAGGTGCAGCGCCATTTGACGAGGGAG

CACCATTGCTGCTGGGAGCCCCATTGTTGCTGCTGCTGCTACCATTGCTG

CCATTGCTGCCCACAGAGGCCCCCGTTGGCGATTTGCTGGTGCGCAATCT

GCCGAGTCCATTGGGGCGGTTCACGTCTCCGGGGCCTAGTGGCTCGTCTT

CGATGCCCGCACCATGGCACATCAATTTGAGCTTCACGCCAACGCCTGGG

GTGACCTCTGCATTTTTGAAGGTYGYATTCTCCATGAGTGTGCCCCCTGC

CTCCACAAACTTGTTCTTGATGAGGTCCAGTAGGCGTTTGGGAGAGACCC

CTAGGTTGAGGCAGTCGTTCACCCACACCTCAGGGCCGCCTTTAAAGCCG

ACACGAATAGGGTTGAAGTTGGACACGATGCAAGCGTCCAGCTCTTCATT

GCTCAGCAGCCCCGTCTCTATCAAGCTCTTGAGTTCACCGCGGCTGATGT

TCCACTCTTGTGTGCGCCCCTCAATGAGTCGCTTGTCGAGCACACACACC

TTGAAACCTCTCTTTTGTAGCGTTGTGGCCAGCATGAGTCCCAAAGTGCC

TCCACATACGCAGACATCAAAGTCTAGGTCCTTCGGGTCCATTGCAGTAA

TGCCATCCCCAAGCATGCGCACCACACGGGGTCCAGGCTTATTGGGCTGG

TGCTTCTGATTGCGGAGGGCCCTCCAGTAAGCCTCTGTGACATCCAGGAA

GGCGAGTGGGTCCCCCTCTAAATTGTCCATGTTGTCAGCCAACACTTGTC

GCGCCAGGCCACTCCTCGCACTCTTGCTCCAACGTGGCTGCAGAAGGGCA

AATGGAGGCCTCTGACATAGGAATCCCGGACTTGCATTGGTGCTGGAGCC

TTTACTAGAGCACGCTCGGCGCGGGCGAGGTGCACTGTACACGGCATTGC

CAGCCCCGAGAGGATTCAAGCTTTCGCGTTGCAGGCCATTGGGCCCCAGA

TTAGTGTGCAGCATTCCAAAATGTTTAGGGTACAGTGGGTGTCGCGTACT

ACTGTTGA

>Contig1708

GATGTTGTACAGAAAGATGTTGTGAAAGTGGTCCACATTACAAAAYGRCG

CGCYTGTCCATTCTTGGACCAAACAAGRTTGCCCACACCCTTCAATTCAT

AAYTATCTGAGGAATGTTTGCTTRCAAAAGCAAATCAGTTGAGCGTGCTT

TTTAAAAACGCAGAATGTGGCAAACCCACTCACCCCTGGCTACAGGTCTC

GAAGCATTGGCAAAATGCTAGTGCCAAAACGAAATGAAGGTGATCCATGC

ATGATTAGAAATGCATGGAACACAACCAGCCAWGGCATTGGCCACCAGAA

CTGATGGCAAAGCAGGGCAAGCACTCRACAAAAAAACCGGASGAKGCKGG

RATCACRGAGSTTWGGGCCTAGACCAGCACACCAGAACACCCGCCCGACT

CCTAAATCAACTCAAGTTTACGCCTTGCAAAGATCCAATGTTCGTTAACA

AAAAGTGCATCCAAATACTTGGATATGCTTTCGGGGATAAAAGCCCACAC

ATTCTGTAATGCACCAGCACAAGATACACCAAGAACACAAGGGCTTGGGT

CATTGCAACTACTGCATTCAAAATGAAGAAAGTGTCTGTCAAGCCTCAGC

AAACACACACGAGAACGATGCTGCACACATGCATTATGTGTACTTCAGGC

ATCTTCGTGTGAGCATACACGCATGCATGCATRCATGCAKGCATGCAYRC

ATGCAATCACTCCATAACTCTCTCTCTCTCCCTCTCCGGATCCATTCAGC

TCTCAATCCGGGCATGGGCTCGCAACACTTCACTCCAACAGGTCATGGCA

CATCGAAAAAATTAAGTTTCTGCTTACTTTATTCTTCAGTTCAGTGYAGA

WTTCCCTCCTCAAGTTCTCGCTCCTCACATGTCCCCACTCCCAACCTACT

GCTGCTTTTCTGTAGACCTTGCCTGCTCAGATTGCTGCACTAAGCGCTCA

AGCTCGGCTCTTGCCCCAGGAATTGCATCCAGCTCTTGGACAGCCAAGAA

CAAGCCCCAAGGTGCACCATCGAATTTGCCTCCATGATGGATTTGATGGG

CCACAGCGATGCGCTTGAGTGCTGGCAGCTCGGCGATTGGGCCAACAGGG

AATCGCCTGTGTACAAGGCCATCATGCACAAACATGTACATAATGCCAAA

GAGAGTTATGCCCAAGCCAGCTCCGAAGCAAAGGCCTCCTGTCATGTTTG

GTGTCAGGAAGCCATACGCACACAACGCCATGGCGGGCACACCGTTTATA

ATGGCAAAGATGTCGTTTGCTTCAAAGGGGCCTGTCCGAGGYTCGTGGTG

GCTCTTATGCAGAGCCCAGCCACTGGGCAAGTCATGCCATAAGCTCTTGT

GAGCATAGCGGGCCCACATTTCCATTCCGAACACTCCTCCAGCCACAAGT

GCAACAGTGGCTGCCAACTCTCCCCAAGGCATCTCTCCCGCATCCCGCAA

GAGCCAGTAGAAGCGCATGTAGGTGGCAAGGATGGCCAACCCGCTGACAC

CCAACGACGCAGCTACAGCAGCCAGCTTGTATACCTGCTGTTCCCTATGG

CGCTGTTGCCTTCTCTCCATCACTGCTGCGCTGGGCTGCAGGGGCGCCTC

GGGATGTTGTGATGGCTCGTTGCTTGCAGTTGTTGCTGTGCTTTGGTCCT

GAGTCCGGCTCAATCCCTCCGATGRTGATGAGGRGCTGGGGAASGAGGAC

GCRCATACAGGAGGCGCCACCGGGAAAGGACGATGCACAAACAGGAGAGG

TTGGGCACGCTGAGCCCGCCCAGCAARTTTAAGTGKTGGGCCTGTTAGAC

CTGTTGTTGCGCACAAGGCCATCGTTCCAATTGACCTAGCACACGCACAA

CAATTTTATTAGTACTCCTTTTGTAATCAC

>Contig7531

CAAGTGCATCGGCGACCAGTTTGCACTGTTTGAGGCCACTGTAGCGCTGG

CGATGCTTGTGCAACGCTTTGAATTCCAGCTGGCGGTGGAACCCTCGCAG

GTGGGCATGGCCACTGGCGCCACCATCCACACTGCAAATGGAATGCCCAT

GCGCGTGGCYCGGCGCAAGCCTGCTGAGCTAAAGCAAGCGGAGCCTCAAG

TGGCAGGAGCAGTATAAGACTACTTTGTAGTAGTTTGAGGAGGCACACCA

ATAGGTGCGACACCACTGACTGTTGGGTCTTTCCTCAATGCRAGCGGGAT

GCTGTCCCRCAGACTTTTACTTCCRTGTTGGGGCCTGCATRGGGAGCTGC

GAGGCTTGRGTGCAAAGTAAGGAGCCAATGTGGCTTCTCACTTAACWTGG

TAGCATGACGCAYGGCWGGTGTTGCTTGAGGAGTGACAAGTTGCAGGTWT

GTGTGGAAATGGCTTGCCTTGCTTGCTGTTCCCTGGAATGATGCAGAGCA

TGTGCTGCTCACCTGCGCCTTGTTTTGCCTCACTAAGCCAACCAAACGTC

AAGCTTGTTTGGCATGACTGCACGGACCTGCGGCTGGATGATCGGGAGGA

GAAATCCGAGTTTTTTTGAGCTGTTCAGCTTGCCTGCGTAGGAGAACTCC

CCCCTTGGAACTCTTGTTTTGGAACTCTTGTTTACGCTCCATGGCATGGT

GTGACGCATGTAATTTGACGAAGTCATTTTGTTTTTGTTGGATTTTGGCA

GCATGAYGAYTGCCCTTGGTTTGTCCTGCTACCCACTGAATTTTGCATTT

TTGGCATTGTGTTTCCTTTCAAGGGTGACTTCACTAGGACATTCCATTCA

GATGGGGCACGTTCACAGGGCAGGTCCCTAGTTTTGCGCCTTTTTCTTGT

AATACCTGAGTCAGGCTGAAAAAAAAAAAAAAAAA

>Contig13440

GCTGCTGCTGCTGCTGCTGGTACGGCAGTGGTGGTGAAAGTCTGCTGTGA

TTGAGTTTGCCTTGTGAGGGGTGATGCTGAGAGGGATGCAGCTTTGCCAG

CTTGGTGATGGCGGCAGCAGCATGGATGTAGTTCATGCGTGTGCGGTGGC

GCTTGCAGATGCTGTGTAGCTGCTGCCKGTTCTGTGCGCCCTGGATGGCG

GWGGTGAGGTCCCAGGGCGTGYTTACTCCGTCATCTGGCTCCTCGCGAGT

ACTGCCTTGGATCCTGCTGATTTCCTGCTGCTGGATGCGCTGGTCCAGCA

CTGCTGCTGCTGCCCGCCTAGTCCTACGCCTCCTGGGTTGGCCATGACCG

AATGCTTCAGCTGTTTGTGCTGCAGCATTGCCAGAGGCAGCACAAACTGC

AGGTGGTCTGGGTGCATTTGCAAGGATGGGTGGTGCCGTGGACAGGGAGG

GCTTCAGCTGGAGGGAAGAGACATGCGTCACAGCAGTGGAGGGTGGTGTG

GCCATTGCCAGTAGTGAACAGTTCTCCATTATTTAATGGATGGTAGGAAC

TGTACTTTCAGGAGGGACACGCATGCCCAGGCATGCTCGTGTGCACATAA

ATTTTACTTTACTTAAGTTAGAGCATATTCAGCTATGTAGCTGTTTCATC

CAATGGTTCAGTTCTTT

>Contig4946

GCTGCTGCTGCTGCTGCTGCTGGCTCCGCTGGTGCTGCGCTCAGCCACCA

GCAGCCAGTCTGCGTTGGCTCTCCTCTCCAGCTCCTCGTCATTGCTCATC

AGCAGCGGGAACTCGCTCTCCTGGAACGAGCGTGGACGGTCAGACAGCCT

GCACTGAGGGGCGCGCGTGGACATCAACTTGTTGGTATTGCCACCCAGCA

CCCATTCCAGCACGCTTGGCATCGTTTTCTTCAGCACCTGCTGACCTGCC

ATGCGGCCAGGATGGGGGATGTGGAGGTCTTGCAACCACGACAAGGGACC

CATGCCCTCACCCAAGTAAGCCTTGTATGTGGATGCCATAAAGGCCGCCA

TGCCCGCCATGCCATGGATAGCCGCCACACGTAGGATGCGCTCTTTCTGG

TACTCCTTGAGGGTCTTGCGCACAGGCACGTCCTGACGGCCAAGCCCTTG

CGCGGCAACCTTGCCCACTGTGGCACCCAGGGAGCATGCCAGCTCATGCG

CATCCTCAATGGCCATGCACCCGCCTTGACCCAGGTTGGGCTGCATCGCA

TGTGCGCTGTCTCCCAGCAAAGCCACACGGCCCTCAGCCCACCGGAAGAT

GGGGGGTCGGTCGTACACATCGCGACGTAGCACATCAGCCTCTGGGGTGG

CCTTGATGAGGTCCACCACATTGTAGTTCCAGTGCCCAAACAGCTCCATC

AGCCGTGCCTTGCGCTGTCCTGGCGCATCCTGCCCACCGGGAGGCTCTTT

GTGGAAAGCATACCACTGCATCTTGCCCTCGCCAACGTCACTGGACACAA

AGTACTGCCCGTTGCCCAGGAACACGCGGTAGGCAACCAGCTCAATGTCT

GCGGGGACGTAGTCACTGATGCCCGTGTACACTGTGTACTCCGAGTAGTG

TGCAGGCGTGTCTCCGACCATTTGCTTGCGGATCTTGGACCAAATGCCGT

CTGTGCCTACCAGCACATCACCTTCCACCCTGCGGCCGTCGTCCAGCTCT

GCATAGACACCATTGGGCGAGTCATGGTAGGAGGTGACATGGCAGTCGCT

AAGGATGGCATCAGGCCCGCCATGCTTTAGGACAGCATCCGAGAGCAGCT

GCTGAAGAGACACACGATTGATGACGCGGGTCACAGGGAGGCCCACCTCC

ACTGCTGGGTGGAAGGTATCAAATTTGCAGTACCAGTCCCCGCTCACACC

ATCGCACAGGCCGTTGATCCTGTCGCCTGTGATGCAGCCCTCCGCCATGA

CCTTATCAGCCAGCACAGGGTCAATGGCCTCGAGTGCTCCCAAGGCATTG

CTTTGTATCTGAATGGGACCCCTCAGCTTGCCCTCCCCCYTCACAGCAGT

CAAATCCCTCTCCAGGACCTGCACGCGGATGCCTTGCTTGAGCAGCCCCA

GAGCCARGGTGAGGCCAGCAATGCCAGCACCTGCTATTACCACTTTAAAT

CCTGGRATGGTCTCCTTRAAGCCGGGCCAGGTTAGGGGGACGGGCATTTC

TTTCTTGAGGGAGGGACGGGTCAGAACTGCTCCCGTGCTGCTGCTTCCGG

TAAATGCAAAGCTGGAGGAGGCTGAGCRCAAWGGRGGGCACCGAGATGCA

GCAGGGGAATGCGGGATTTGGTGGGGCAGCTGGGGCGAACGCCTCTTTTC

AAGGGGGGAGCTGCAGTGCTGTGGAACTGCTGCAGGGCTGCTGCTYCCCC

ACGCGCYCAGAGGTCCCACCGCCGGAGCATGCGGATGCTGTCTATGGGTG

GCAGAGCCGCTCAGGGCGTTGCGCAGCATYGTGCTTGKCGTGCGAGGGGA

CGCACCCAAATCTTKGGACTACTACTCACAAASAAAGCAGATCCTATCAA

GTCACAAACACTTACAGATATCTGTATCAAATATGATTGCAGCTTAGTGG

CAAGTGGTACAC

>Contig2540

CACACACACACACACACACAGAGCACCTGATCTCAAGGAAAGAAATAAGC

TGCAGCTGCAAGCAGCCAGAGTCACAGGCTGCAGGCATTTGGAACAAAAC

ACATGGAGACTTTTACAGTGTTCACTAGTATTCACATAGTCACCCTCCAA

CCCTCGTGTGCATATGGTGGCAGCAGCCTCCAGCAACACTCACGACTCCT

CTTATCATTTCTGTACGCCTCCTCCACTACCAAGCACATGCATCAAATCT

ACAAACTACCCCGCACTGCGTCCAAAGCAAAAAGGGAGCCATTGGGCCAT

GTTGTTCCACACACAATGGTATATTGAGAGCACTACAAACATAACCACCC

TCAATACAGGGTGCACCTTTTTAGCATGGTAGATGCTGATTCCCCAGCTC

AAGGCCCTGACAATGCCGCTTCCCTATAGCTCTTTCTGGCTAGTCACTGC

AGCCACTGGACTCGCAACTCCTTGCTCAGACAGCTCCTTCTCCTCTTGTG

ACTTGGCGTACAGTTTCTTGTACGCATTGAACACATACCTGCCTGCTGGA

TCAGATAGCAGGGACGCCACAAGCAGAACTTTGATGCGAGGACCCGCAAG

CACGAATGTGAGGAAGGCAAAGCCGATGAGCTGCAAGCTGCTGAGCTGGC

TGGCCATATACCCACGCCACATGGACTTGGGCAGCTTGAAGAAGGTCTCA

AAAAAGAGGTTAGTGTCCGCCAGGTCCAATGAGGCCAACAGCTCCATGCC

AAACACATGGAAGGAGGTTTGCGTGCGTTTTTCCTGGGGCCACAATGCTT

CCCACACTTGCGCAGCTGTCTGCTGCACGCCTTGGTCAGGTTTGCGCAAG

GAGGCTGTAATCTGATCTGCTAAGCCGGGGGCTTCTCGGAAGGATCGGCT

GACGGAGAAGCCTGTGGCAGGGTGCACTAGGTTGGCAGCTGCCCCAAAAG

CTGTGATGGGTTGATTGCCCTCAGGCAAAGGGCCCCCCACCGGAATGTAA

CTCCACTCCTCCTCATGCACCTCTTTAACACGTACGCCCATGGCCTTCAG

ACGCCTCTCCAAGCGCCGCTTCAAAACCTTGAATGGCAGTGCAGGCTTTG

CAACCAAGCACGTCTCCTCAAGGAACACCCGGTTGTCCCCTTGTGGCATG

GCGTACAGGAAGCTGGGCACCTCCCCCTGTGTGCCCCACAGATTGTTGTC

TCCAGCAGGGTGAGCTCCACTCTTGATTCTGGAGGCAGCGCCGTCCCACA

CCCCTGTGTGATGTCTCCTGAAGTCCATAAAGAGCATCTCGCCAGCAGGG

TACACTTGGTCGTAGTTCTCCACCTCTGCCTCAATGCCATACGCAGTCTG

TGCAGCCACGCCTGGTGCATTTTCCTCATAGCGCAGGAACTTGCCAGCAG

CAGCTCCAGCGGCAAGGGTCACCAGCCTGGCATTCATCTGGGGCCCATCC

TTCACATCCAGGCACGTCTGCTTCCCTTCRGAGGTGAGCTCTAYGYTGGA

CACCTCACCCYTTAAAAACTCCACGCCTGTGTCTGTGCACATTTTGAGTA

GGTGCTCACGGAGCTTCCGCCGGCTCACTCGGCCATAGCCTCTGCCCAGG

TTCACCTTACGGCCTTCCTCGAAGTAGCATACAGCATCATCCCAGGCGTT

GTCCAGGGTGTGCTCCAAGCCAAGGCTCCGCGCCTCGTCAATCCACACCC

CATAATTATTCACCAGCGGACTGTCGTGTCCGATGATGACAGTACGCAAC

CCCCTCTTGGATAGTTCAGCTGCCAGGAACATGCCAGCRGGCCCCGCGCC

TACWACAGCTACGTCATACAGGCTTGAGGGGGTGGCTGGGGTGAGAGTGG

AGGCTAAGCTCTGCTGTGCGCTGTCCCTCTTGCTGGCCTGTGCTTGCACG

GATGGCCTCTCATAGTGGCCCTCCCTAATCATTTGATTGAGGTCAGGAGA

GTGATGCTGCTCCCTGATCCGTGGCCTCCGTGTCTGGACTTCTAAAGGAG

GAGTTTCCACAGCCGCTGTGGGCACACGCATACTCTGCCGGGTCTGCCTC

CGTGTCCCTCTCAAGTCCCTCGTCCAGCGGGCTGTATTGTTGGAATTGCA

TCTTTGAGGGAGGAGGTGGCAGGTGGAGCTCCCGCCTTGTAATAAGTTCA

TGTTTAAAATATATTGGGATAGCTAAGACGGTAGCAGTCCTTTCAGGAGA

GGGTTTTCGGAGGAGTGCGAATTTGGAGTGATTTATTCCATTACAATCAC

AGCCCATGCAAC

Contig1344

TTACAAGCTGCAAAAAAGTAAATGGCCTGGTTACACGCCTCTATGTCTTC

ACTCAGCTGCCTGTGTAGGCTGATACCAGTGTAAGCTCACCTATTCTGCC

CCCAAGAGAGTACTAGATCTATCCTGCCAGAGGCWWCGCACACCTTGYCT

YGTTACATACAAAATTTTGSGWWKSRAATGCCAMAYCGWCTCTCCTTCAA

AATGAATTGATCATGGTTCCAGTTWAGCAACAAAAACTTGATGGTGGCGG

CCACAGCGAAGACGAYTGAACCAAACAKTTGTCCCTCCYGCGAAGAATCA

CTGTCGTTCGTAACGTGCCAACAGAAGGATGTACAAGGCACAAAACWTTG

CTCTCYCACACCCAATCAGAAGGAGCAGCTGCTCATCAGATAACCGCACG

GACTCTCTCAGCGAAGCGTCTGTTGGAACTTCACAAACAAAGCMCCCAAA

ATCTKAACCAGTTCGCMTGTATGCCCTCCTCATTCYTAMCTGATGGAGAT

GTGTTAAGTTAAATTACACTCTTTTCCTATCCCGCACGTTACCAAGCACT

GAAACCAACCTGTGCAACCAGTCCCTCTGTCCACCATGCTCCTGCCACAA

TGTACTTGCTCGACTCAGTTTTCAAGTACACAAGGTAAAATACACGGCCC

ATGTGGAGACCTCAATCAATTAAAAAAAGGAAACTCTACCACTCAACCCT

CAGCTGCTGCTCTCCGTTCCCTCTTTTCCTCTCTTCTCCTCTCAGTCTCT

CTTATCTGAGCATGCTGCACCAGAGACAGTGTGCGGCTGCGTCACCACAG

ATAGCGAGAAGTGGGAAGGTTTAGTTTTCGTGACAGCACTGCATGCGTCT

CACCACCCATAGCAGCACTGCCCTTAGATGCAGCACTGCATGCGTTTTAT

AAATAACTATGCGGGTTGCCCAGCTGTGCCTGAAGGGATGTCGGCCCATG

ATGGCTGCATTTGGTGCAAGCTGTACATTATTGGGACTGCACCATTGCCC

CTGAGCTCACCACTTGCCAGCCCTTGCCAGTCACCTGTGCTGTGCGGTAG

TTGCGGTGCTGCAGCTTGACGGTGAAGGTCTCAGGAGCAGGGTGGGAGCC

AAACTCCAACGTGTCTCCAGGGTGCAGGGCTGCACGCGCCCGCGAGGGCA

GTAGGCGGCCATTGACCCATGTGCCACTACCAGAGCCCAGGTCTTGGACA

GAGTACCTGCTGGAGCCTTCATGGATGAGGCTTGCATGACGAGGGGCCAC

GCCTCCGCCTTCAACCACCAGCGCGCAGTTGTGGTCGCTCCCCACCAGCA

CCGACGTGCTGGTACCTGCTTGGCTTCGCTCCCTGCTCTCACTGCCGCTG

CTGCCATCCTCATTGCGCGTGGTCAGGTTGATGTAGATGCCCTTGAAGAG

GGAGGTGCCAGTGCTGCTAGTGGAAGGAGACAGGGCATCTCCACACCATG

ATTGTTGCGCGCCACCCTGGGCACCTTGACTGCCCCCCCGTGCTGCTGCT

GTGCCATTGCTGCTGCTGCTGCTGCTGCTGATGATGATGATGATGATGAT

GTTGGTGACTTTGAGCTGTGGCGGCCTCAGTGTGGCACTCAGAGGACTCA

GGTTTACAGCCTGGGTACACCTTCCGCATGTCACTCCATCCGATGCTGTC

AAAGCACGCACAACGTTGCGTGGTTTCTCCTCCCGCAGCAGAGGGCTCTC

TTATCACAAGTCTTGGTTTTAAGCCATYGTCACAYSAWAATGCGCCAKTG

CCACCAGCAGTGTTCCCTCGCACATTGCAGGCCACCAGCTTCGCGTCAGC

TTCCTTGGCATTGTCCTCCTGCGTCTTTGCCCTTGCTGCCTTCTCYTCCA

CTTTGTTCAATGCTATCCGTTTCTTCCTGTGCACATTCCAGAAGCGGCCC

AGGACCCTTCCCTTCAGCTTGTAGTCCGGGTTTTCCCTGAAGAATGAGCG

CCATCGCACGAGTGCAGCACATTGCTCATCTGTCAGGCCCTGGATGTCAT

CTGTCAGGTCACCCTTGAAATTGCCTGTCACGTACGACYTACTCGCATCC

TTGCCCAGGAAAAAGTGGTAGCCATCCTTGCCGTACTTGTCCTTGCYCTT

GGTGACATCATACACTTCCCCTAAAATGGCCAARTACATTGGYGAGTTCC

TCTCTCCGGTGAATAGGCTGAGTTGCTCTTCAGTRAACATGCGCGTTGCG

GGGCTCTCTTCATGGGTGTAGTACATCAAGAATGCTACACATGCTGACAC

GATGCCGCACAGAATAAGCAGCTCAACTACTGGCATGCGCGGTTTCTTCA

TCATGCGYTTGTGCTGACTYCCAGGTTGGGGCCCTGCCTYGCCCTTGGGA

CTCTCATTGGATGYATCACGGTTTGCCTTTCTTGCTTTTGCTTCTGAAAA

GAATCCTGAATCTAGAGGGCATTTCTGCTCAGCGCCATCATCACCTTGGT

CAYCATACATCTTGAATTACCTAAAATTTACAATGAC

>Contig4946

GCTGCTGCTGCTGCTGCTGCTGGCTCCGCTGGTGCTGCGCTCAGCCACCA

GCAGCCAGTCTGCGTTGGCTCTCCTCTCCAGCTCCTCGTCATTGCTCATC

AGCAGCGGGAACTCGCTCTCCTGGAACGAGCGTGGACGGTCAGACAGCCT

GCACTGAGGGGCGCGCGTGGACATCAACTTGTTGGTATTGCCACCCAGCA

CCCATTCCAGCACGCTTGGCATCGTTTTCTTCAGCACCTGCTGACCTGCC

ATGCGGCCAGGATGGGGGATGTGGAGGTCTTGCAACCACGACAAGGGACC

CATGCCCTCACCCAAGTAAGCCTTGTATGTGGATGCCATAAAGGCCGCCA

TGCCCGCCATGCCATGGATAGCCGCCACACGTAGGATGCGCTCTTTCTGG

TACTCCTTGAGGGTCTTGCGCACAGGCACGTCCTGACGGCCAAGCCCTTG

CGCGGCAACCTTGCCCACTGTGGCACCCAGGGAGCATGCCAGCTCATGCG

CATCCTCAATGGCCATGCACCCGCCTTGACCCAGGTTGGGCTGCATCGCA

TGTGCGCTGTCTCCCAGCAAAGCCACACGGCCCTCAGCCCACCGGAAGAT

GGGGGGTCGGTCGTACACATCGCGACGTAGCACATCAGCCTCTGGGGTGG

CCTTGATGAGGTCCACCACATTGTAGTTCCAGTGCCCAAACAGCTCCATC

AGCCGTGCCTTGCGCTGTCCTGGCGCATCCTGCCCACCGGGAGGCTCTTT

GTGGAAAGCATACCACTGCATCTTGCCCTCGCCAACGTCACTGGACACAA

AGTACTGCCCGTTGCCCAGGAACACGCGGTAGGCAACCAGCTCAATGTCT

GCGGGGACGTAGTCACTGATGCCCGTGTACACTGTGTACTCCGAGTAGTG

TGCAGGCGTGTCTCCGACCATTTGCTTGCGGATCTTGGACCAAATGCCGT

CTGTGCCTACCAGCACATCACCTTCCACCCTGCGGCCGTCGTCCAGCTCT

GCATAGACACCATTGGGCGAGTCATGGTAGGAGGTGACATGGCAGTCGCT

AAGGATGGCATCAGGCCCGCCATGCTTTAGGACAGCATCCGAGAGCAGCT

GCTGAAGAGACACACGATTGATGACGCGGGTCACAGGGAGGCCCACCTCC

ACTGCTGGGTGGAAGGTATCAAATTTGCAGTACCAGTCCCCGCTCACACC

ATCGCACAGGCCGTTGATCCTGTCGCCTGTGATGCAGCCCTCCGCCATGA

CCTTATCAGCCAGCACAGGGTCAATGGCCTCGAGTGCTCCCAAGGCATTG

CTTTGTATCTGAATGGGACCCCTCAGCTTGCCCTCCCCCYTCACAGCAGT

CAAATCCCTCTCCAGGACCTGCACGCGGATGCCTTGCTTGAGCAGCCCCA

GAGCCARGGTGAGGCCAGCAATGCCAGCACCTGCTATTACCACTTTAAAT

CCTGGRATGGTCTCCTTRAAGCCGGGCCAGGTTAGGGGGACGGGCATTTC

TTTCTTGAGGGAGGGACGGGTCAGAACTGCTCCCGTGCTGCTGCTTCCGG

TAAATGCAAAGCTGGAGGAGGCTGAGCRCAAWGGRGGGCACCGAGATGCA

GCAGGGGAATGCGGGATTTGGTGGGGCAGCTGGGGCGAACGCCTCTTTTC

AAGGGGGGAGCTGCAGTGCTGTGGAACTGCTGCAGGGCTGCTGCTYCCCC

ACGCGCYCAGAGGTCCCACCGCCGGAGCATGCGGATGCTGTCTATGGGTG

GCAGAGCCGCTCAGGGCGTTGCGCAGCATYGTGCTTGKCGTGCGAGGGGA

CGCACCCAAATCTTKGGACTACTACTCACAAASAAAGCAGATCCTATCAA

GTCACAAACACTTACAGATATCTGTATCAAATATGATTGCAGCTTAGTGG

CAAGTGGTACAC

>Contig2540

CACACACACACACACACACAGAGCACCTGATCTCAAGGAAAGAAATAAGC

TGCAGCTGCAAGCAGCCAGAGTCACAGGCTGCAGGCATTTGGAACAAAAC

ACATGGAGACTTTTACAGTGTTCACTAGTATTCACATAGTCACCCTCCAA

CCCTCGTGTGCATATGGTGGCAGCAGCCTCCAGCAACACTCACGACTCCT

CTTATCATTTCTGTACGCCTCCTCCACTACCAAGCACATGCATCAAATCT

ACAAACTACCCCGCACTGCGTCCAAAGCAAAAAGGGAGCCATTGGGCCAT

GTTGTTCCACACACAATGGTATATTGAGAGCACTACAAACATAACCACCC

TCAATACAGGGTGCACCTTTTTAGCATGGTAGATGCTGATTCCCCAGCTC

AAGGCCCTGACAATGCCGCTTCCCTATAGCTCTTTCTGGCTAGTCACTGC

AGCCACTGGACTCGCAACTCCTTGCTCAGACAGCTCCTTCTCCTCTTGTG

ACTTGGCGTACAGTTTCTTGTACGCATTGAACACATACCTGCCTGCTGGA

TCAGATAGCAGGGACGCCACAAGCAGAACTTTGATGCGAGGACCCGCAAG

CACGAATGTGAGGAAGGCAAAGCCGATGAGCTGCAAGCTGCTGAGCTGGC

TGGCCATATACCCACGCCACATGGACTTGGGCAGCTTGAAGAAGGTCTCA

AAAAAGAGGTTAGTGTCCGCCAGGTCCAATGAGGCCAACAGCTCCATGCC

AAACACATGGAAGGAGGTTTGCGTGCGTTTTTCCTGGGGCCACAATGCTT

CCCACACTTGCGCAGCTGTCTGCTGCACGCCTTGGTCAGGTTTGCGCAAG

GAGGCTGTAATCTGATCTGCTAAGCCGGGGGCTTCTCGGAAGGATCGGCT

GACGGAGAAGCCTGTGGCAGGGTGCACTAGGTTGGCAGCTGCCCCAAAAG

CTGTGATGGGTTGATTGCCCTCAGGCAAAGGGCCCCCCACCGGAATGTAA

CTCCACTCCTCCTCATGCACCTCTTTAACACGTACGCCCATGGCCTTCAG

ACGCCTCTCCAAGCGCCGCTTCAAAACCTTGAATGGCAGTGCAGGCTTTG

CAACCAAGCACGTCTCCTCAAGGAACACCCGGTTGTCCCCTTGTGGCATG

GCGTACAGGAAGCTGGGCACCTCCCCCTGTGTGCCCCACAGATTGTTGTC

TCCAGCAGGGTGAGCTCCACTCTTGATTCTGGAGGCAGCGCCGTCCCACA

CCCCTGTGTGATGTCTCCTGAAGTCCATAAAGAGCATCTCGCCAGCAGGG

TACACTTGGTCGTAGTTCTCCACCTCTGCCTCAATGCCATACGCAGTCTG

TGCAGCCACGCCTGGTGCATTTTCCTCATAGCGCAGGAACTTGCCAGCAG

CAGCTCCAGCGGCAAGGGTCACCAGCCTGGCATTCATCTGGGGCCCATCC

TTCACATCCAGGCACGTCTGCTTCCCTTCRGAGGTGAGCTCTAYGYTGGA

CACCTCACCCYTTAAAAACTCCACGCCTGTGTCTGTGCACATTTTGAGTA

GGTGCTCACGGAGCTTCCGCCGGCTCACTCGGCCATAGCCTCTGCCCAGG

TTCACCTTACGGCCTTCCTCGAAGTAGCATACAGCATCATCCCAGGCGTT

GTCCAGGGTGTGCTCCAAGCCAAGGCTCCGCGCCTCGTCAATCCACACCC

CATAATTATTCACCAGCGGACTGTCGTGTCCGATGATGACAGTACGCAAC

CCCCTCTTGGATAGTTCAGCTGCCAGGAACATGCCAGCRGGCCCCGCGCC

TACWACAGCTACGTCATACAGGCTTGAGGGGGTGGCTGGGGTGAGAGTGG

AGGCTAAGCTCTGCTGTGCGCTGTCCCTCTTGCTGGCCTGTGCTTGCACG

GATGGCCTCTCATAGTGGCCCTCCCTAATCATTTGATTGAGGTCAGGAGA

GTGATGCTGCTCCCTGATCCGTGGCCTCCGTGTCTGGACTTCTAAAGGAG

GAGTTTCCACAGCCGCTGTGGGCACACGCATACTCTGCCGGGTCTGCCTC

CGTGTCCCTCTCAAGTCCCTCGTCCAGCGGGCTGTATTGTTGGAATTGCA

TCTTTGAGGGAGGAGGTGGCAGGTGGAGCTCCCGCCTTGTAATAAGTTCA

TGTTTAAAATATATTGGGATAGCTAAGACGGTAGCAGTCCTTTCAGGAGA

GGGTTTTCGGAGGAGTGCGAATTTGGAGTGATTTATTCCATTACAATCAC

AGCCCATGCAAC