

90 91

93

93

92

93

93

93

93

91

89

89

92

91

92

92

92 92

82

92

92

182

185

186

187

186

186

187

187

187

183

183

170

185

183

183 185

186

185

174

185

176

### logo

consensus

#### tig00002380:159743-198526() GCCGGGCCCGG C<mark>GGAG</mark>TCGGGTTGCTTGGGAATGCAG**C**CCAAAGCGGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC tig00008411:134529-176298() tig00008216:94751-135048(-) GCCGGGCCCGG <u>GA . GTCGGGTTGCTTGGGÁATGCAGCCCAAAGCGG</u>GTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC tig00002380:120727-159743() GCCGGGCCCGG GGAGTCGGGTTGCTTGGGAATGCAG**C**CCAAAGCGGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC tig00008216:53978-94751(-) GCCGGGCCCGG GGAGTCGGGTTGCTTGGGAATGCAGCCCAAAGCGGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC GCCGGGCCCGG tig00002380:1146-40745() G<mark>A . G</mark>TCGGGTTGCTTGGGAATGCAG**C**CCAAA**GCGG**GTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC GCCGGGCCCGG tig00008411:94672-134529() **GGAG**TCGGGTTGCTTGGGAATGCAG**C**C**CAAAGCGG**GTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGAC tig00008411:217104-257759( ) GCCGGGCCCGG GGAGTCGGGTTGCTTGGGAATGCAGCCCAAAGCGGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC GCCGGGCCCGG tig00008411:257759-297618() GGAGTCGGGTTGCTTGGGAATGCAGCCCAAAGCGGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC tig00002380:80433-120727() GCCGGG.CCGG GGAGTCGGGTTGCTTGGGAATGCAG**C**C.AAAGCGGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC GCCGGGGCCCG tig00008215:19898-58526(-) <mark>CGGAG</mark>TCGGGTTGCTTGGGAATGCAG**C**CCAAAGCGGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC GCCGGGCCCGG tig00008215:58526-97877(-) ...AGTCGGGTTGCTTGGGAATGCAG.......GTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC GGAGTCGGGTTGCTTGGGAATGCAG**C**CCAAAGCGGGTGGTAAACTCCATCTAAGGC<u>TAAATACCGGCACGAGAC</u> tig00008216:21673-53978(-) GCCGGGCC.AG GGAGTCGGGTTGCTTGGGAATGCAGCCCAAAGCGGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC tig00008411:14398-55544() tig00008215:97877-137448(-) GCCCGGGC.GA AG.GTCGGGTTGCTTGGGAATGCAGCCCAAAGCGGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC tig00008411:55544-94672() GGAGTCGGGTTGCTTGGGAATGCAG**C**CCAAAGCGGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC GCCGGGCCCAG <u>GGAGTCGGGTTGCTTGGGAATGCAGCCCAAAGCG</u>GTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC tig00002380:40745-80433() tig00008411:176298-217104() FCGGGTTGCTTGGGAATGCAG**C**C**CAAAGCGG**GTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC tig00008215:0-19898(-) GCCGGGCCCGG FCGGGTTGCTTGGGAATGCAG**CCCAAAGCGG**GTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACC tig00008216:0-21673(-) GCCCGGGCCAG GGAGTCGGGTTGCTTGGGAATGCAG**C**CCAAAGCGGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGAC tig00008411:297618-338078() GCTGGAAAATT. GTGTTAT.....TGTAATTATTT...ACCGCTATCTCTCTTTCATGGT..TCTCCATCAGTTGTAAGCATCTATTAGTTTATC $\overline{\texttt{GCCgGGcCcgg}} \cdot \overline{\texttt{GTCTTCC}} \cdot \overline{\texttt{ggagTCGGGTTGCTTGGGAATGCAGCC}} = \overline{\texttt{GCCgGGTGGTAAACTCCATCTAAGGCTAAATACCGGCACGAGACG}}$



logo

### tig00002380:159743-198526() tig00008411:134529-176298() tig00008216:94751-135048(-) tig00002380:120727-159743() tig00008216:53978-94751(-) tig00002380:1146-40745() tig00008411:94672-134529() tig00008411:217104-257759() tig00008411:257759-297618() tig00002380:80433-120727() tig00008215:19898-58526(-) tig00008215:58526-97877(-) tig00008216:21673-53978(-) tig00008411:14398-55544() tig00008215:97877-137448(-) tig00008411:55544-94672() tig00002380:40745-80433() tig00008411:176298-217104() tig00008215:0-19898(-) tig00008216:0-21673(-) tig00008411:297618-338078() consensus

# 

CCAGGTCACTAAGTATATTTTATTTAGGTACATCTGTTTTTCTTTATACACCTGTTTCTGGAGTATAGGGTCGCATACTCATAAACCCAGTGTAA

FGAAGAGAG<mark>AGTTCA</mark>AG<mark>A</mark>GGG<mark>CG</mark>TGAAACCGTTAAGAGGTAA<mark>A</mark>CGGGT<mark>G</mark>GG<mark>G</mark>T

TGAAGAGAGAGTTCAAGAGGGCGTGAAACCGTTAAGAGGTAAACGGGTGGGGT

TGAAGAGAG<mark>AGTTCA</mark>AG<mark>AGG</mark>GCGTGAAACCGTTAAGAGGTAA<mark>.</mark> CGGGT<mark>G</mark>GG<mark>G</mark>T

TGAAGAGAGAGTTCAAGAGGGCGTGAAACCGTTAAGAGGTAAACGGGTGGGGT

TGAAGAGAGAGTTCAAGAGGGCGTGAAACCGTTAAGAGGTAAACGGGTGGGGT

TGAAGAGAGAGTTCAAGAGGGCGTGAAACCGTTAAGAGGTAA.CGGGTGGGGT

TGAAGAGAG<mark>AGTTCA</mark>AG<mark>A</mark>GGGCGTGAAACCGTTAAGAGGTAA<mark>.</mark>CGGGT<mark>G</mark>GG<mark>G</mark>T

TGAAGAGAGAGTTCAAGAGGGCGTGAAACCGTTAAGAGGTAAACGGGT**G**GG**G**T

TGAAGAGAG<mark>TTCAAG</mark>AG<mark>G</mark>GCG..TGAAACCGTTAAGAGGTAAACGGGT**G**GG<mark>TC</mark> TGAAGAGAG<mark>AGTTCA</mark>AGAG**G**G..TGAAACCGTTAAGAGGTAAACGGGT**G**GG<mark>GT</mark>

TGAAGAGAGAGTTCAAGAGGGCGTGAAACCGTTAAGAGGTAAACGGGTGGGGT

TGAAGAGAG<mark>AGTTCA</mark>AG<mark>A</mark>GGGCGTGAAACCGTTAAGAGGTAA<mark>A</mark>CGGGT<mark>G</mark>GG<mark>G</mark>T

TGAAGAGAG<mark>AGTTCA</mark>AG<mark>A</mark>GGGCGTGAAACCGTTAAGAGGTAA<mark>A</mark>CGGGT<mark>G</mark>GG<mark>G</mark>T

TGAAGAGAG..TTCAAGAGGGCGTGAAACCGTTAAGAGGTAA<mark>G</mark>CGGGT**G**GG**G**T

TGAAGAGAGATTCAAGAGGGCGTGAAACCGTTAAGAGGTAAACGGGTGGGGT

TGAAGAGAGAGTTC.AGAGGGCGTGAAACCGTTAAGAGGTAAACGGGTGGGGT

TGAAGAGAGAGTTCAAGAGGGCGTGAAACCGTTAAGAGGTAAACGGGTGGGGT

TGAAGAGAGATTCAAG<mark>AGGGC..</mark>GAAACCGTTAAGAGGTAA<mark>.</mark>CGGGT<mark>G</mark>GG<mark>G</mark>T

TGAAGAGAGAGTTCAAGAGGGCGTGAAACCGTTAAGAGGTAAACGGGT<mark>A</mark>GGGT

276 279

280

280

280

280

280

280

281

275

274

264

279

277

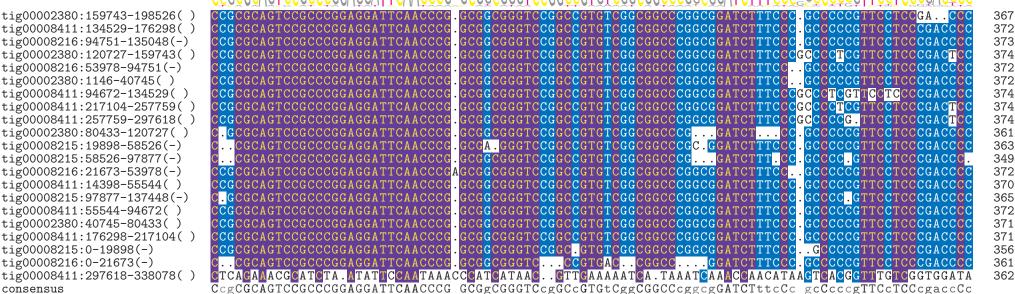
274

279

278 278

265 279

271



GTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACTT

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACT1

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACT'

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACT1

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACTT

GATAGTCAACAAGTACCGTAAGG**G**AAAGTTGAAA<mark>A</mark>GAACTT

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACT1

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACT

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA ...GAACTT

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACT1

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACT1

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACTT

GATAGTCAACAAGTACCGTAAGG.AAAGTTGAAA<mark>A</mark>GAACTT

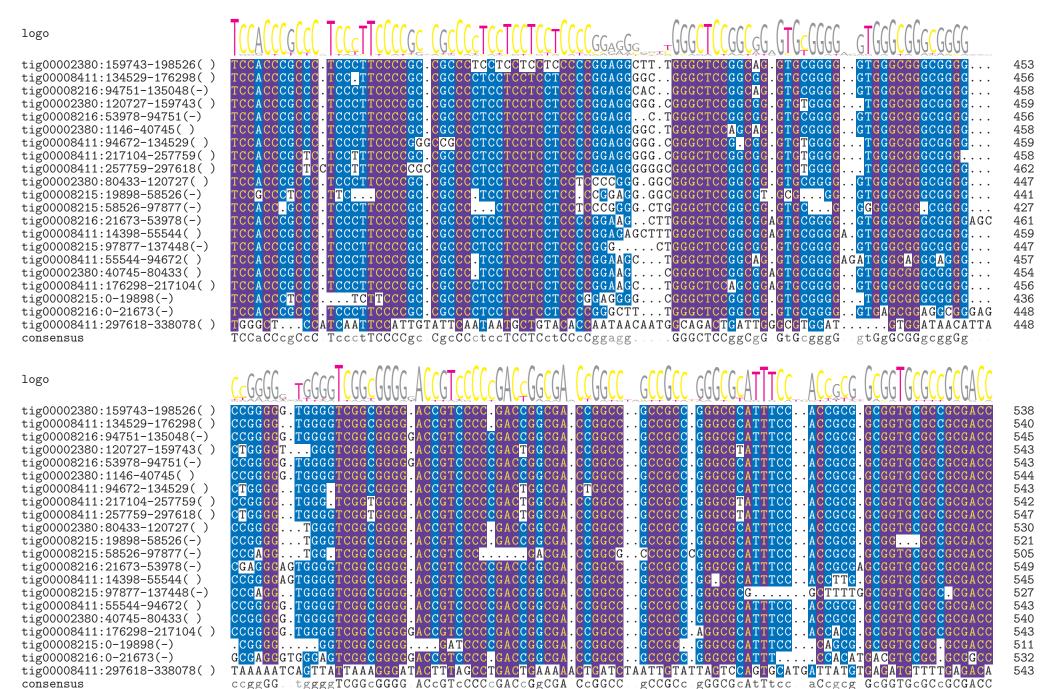
GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACTI

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA.GAACTT

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA .GAACT?

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACTT

GATAGTCAACAAGTACCGTAAGG<mark>G</mark>AAAGTTGAAA<mark>A</mark>GAACTT





#### tig00002380:159743-198526() tig00008411:134529-176298() tig00008216:94751-135048(-) tig00002380:120727-159743() tig00008216:53978-94751(-) tig00002380:1146-40745() tig00008411:94672-134529( ) tig00008411:217104-257759() tig00008411:257759-297618() tig00002380:80433-120727() tig00008215:19898-58526(-) tig00008215:58526-97877(-) tig00008216:21673-53978(-) tig00008411:14398-55544() tig00008215:97877-137448(-) tig00008411:55544-94672() tig00002380:40745-80433() tig00008411:176298-217104() tig00008215:0-19898(-) tig00008216:0-21673(-) CAGTAGTAGATTTGTGAATGAAAATTTATGGAATTTTTCACTTACTAG.....GAACCTTTGTGTGTGGAAAACTTGAGAAAATTGCTTTCTGCTG tig00008411:297618-338078() consensus

#### GGCTCCAGGACGGCTGGGAAG GCCCGGCGGGGAAGGTGGCTCGGGGG G<mark>G</mark>CTC<mark>C</mark>GGG<mark>A</mark>CGGCTGGGAAG GCCCGGCGGGGAAGGTGGCTTGGGGG GCCCGGCGGGGAAGGTGGCTCGGGGG GGCTCCGGGACGGCTGGGAAG CTCCTCCTCCCGTCTCCGCCC G<mark>G</mark>CTC**CG**GG<mark>A</mark>CGGCTGGGAAG GCCCGGCGGGGAAGGTGGCTCGGGGG CTCCTCCTCCCGTCTCCGCCC GGCTCCGGGACGGCTGGGAAG GCCCGGCGGG.AAGGTGGTTTGGGG. CCCCGTCCGTCCGTCCGTCT.CTCCTCCTCGTCTCCGCCT GCCCGGCGGGGAAGGTGGCTTGGGGG GGCTCCGGGACGGCTGGGAAG GCCCGGCGGGGAAGGTGGTTTGGGGG GGCTCCGGGACGGCTGGGAAG GGCTCCGGGACGCTGGGAAG GCCCG...GCGAAGGTGGCTCGGGGG..CCCCGTCCGTCCGTCCGTC CTCCTCCTCCCGTCTCCGCCC G.CTCCGGGACGGCTGGGAAG .GCCCGCG.GGGAAGGTGGCTCGGGG... CTCCTCCTCCCGTCTC.GCCC GGCTCCGGGACGCTGGGAAG ..CCCGGC.GGGAAAGTGGCTCGGGG CTCCTCCTCCCGTCTCCGCCC GGCTC.GGGGCGGCTGGGAAG AGCCCGGCGGGGAAGGTGGCTCGGGGG CTCCTCCCCCGTCTCCGCCC G<mark>G</mark>CTC<mark>C</mark>GGG<mark>A</mark>CGGCTGGGAAG CTCCTCCCCGTCTCCGCCC GGCTC.GGGGCGGCTGGGAAG GCCCGGCGGGAAGGTGGCTCGGGGGG<mark>G</mark>CCCCGTCCGTCCGTCCGTCCGTC CTCCTCCTCCCGTCTCCGCCC G<mark>G</mark>CTC<mark>C</mark>AGG<mark>A</mark>CGGCTGGGAAG CTCCTCCTCCCGTCTCCGCCC GCCCGCCGGGGAAGGTGGCTCGGGGG

GGCTCC<mark>A</mark>GGACGGCTGGGAAG.GCCCGGCGGGGGAAGGTGGCTCGGGGG<mark>G</mark>CCCCGTCCGTCCGTCCGTCCGTC

GGCTCCAGGACGGCTGGGAAG.ACCCGGCGGGGAAGGTGGCTCGGGGGG<mark>G</mark>CCCCG<u>TC</u>CGTCCGTCCGTCCGTC

 ${ t GGCTC}.{ t GGGGCGGGGAAG}.{ t GCCCGGCGGGGGAAGGTGGCT}{ t GGGGGG}...{ t CCCGTC}{ t CGTCCGTCCGTCCGTC}$ 

Cc.gg.CCCCCCCCCCCCGGgag.ggcgcGcgggtc.Gg.

630

633

637

636

635

636

633

634

640

618

604

593

641

638

619

635

633

636

600

624

633

715

723

731

725

719

719

722

723

731

701

678

680

731

724

699

723

715

725

654

701

726

CTCCTCCTCCCGTCTCCGCCC

CTCCTCCTCCCGTCTCCGCCC

CTCCTCCCCCCGTCTCGCCC

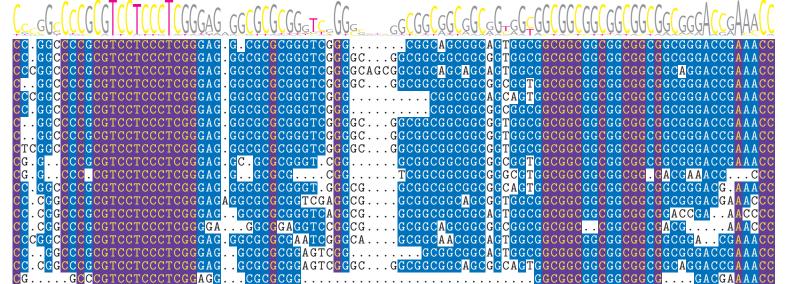
CTCCTCCTCCCGTCTCCGCCC

 $oxed{\operatorname{gcggcggc}}$  .  $oxed{\operatorname{gcgGCGGCggCggCggCGGcGgcgggaccgAaaCC}}$ 

consensus

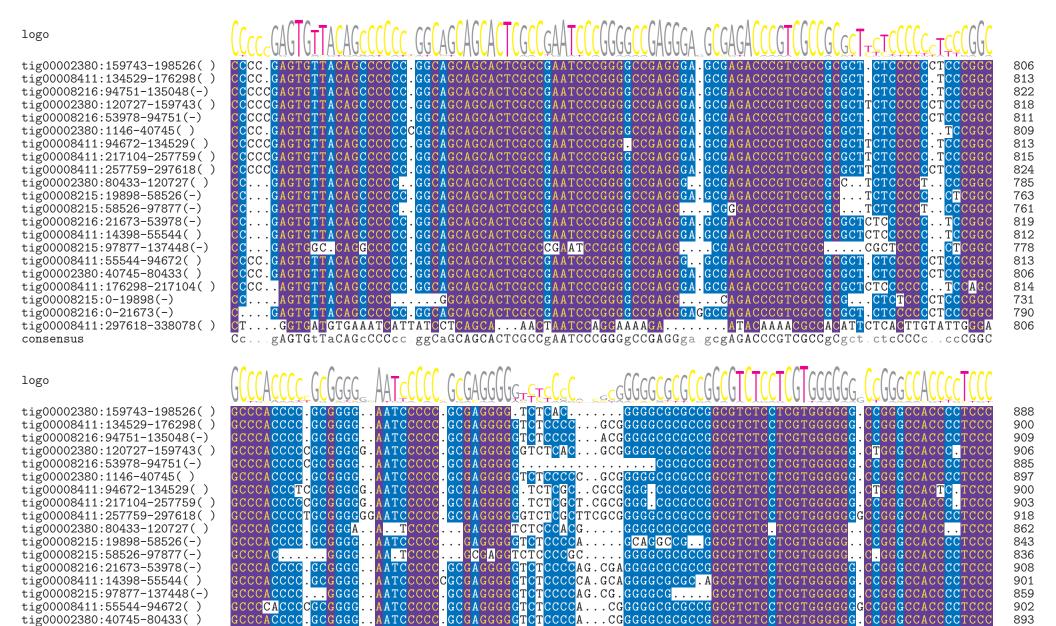
logo

### tig00002380:159743-198526() tig00008411:134529-176298() tig00008216:94751-135048(-) tig00002380:120727-159743() tig00008216:53978-94751(-) tig00002380:1146-40745() tig00008411:94672-134529() tig00008411:217104-257759() tig00008411:257759-297618() tig00002380:80433-120727() tig00008215:19898-58526(-) tig00008215:58526-97877(-) tig00008216:21673-53978(-) tig00008411:14398-55544() tig00008215:97877-137448(-) tig00008411:55544-94672() tig00002380:40745-80433() tig00008411:176298-217104() tig00008215:0-19898(-) tig00008216:0-21673(-) tig00008411:297618-338078()



C<mark>CCGCCCCG</mark>CGTCCTCCCTCGG<mark>G</mark>GG.......GCGGCCTTGG......ACGGCAG..GCAGCAGTGGCGGCC.CGGCGGCGGCGAACCC

 $\overline{\texttt{GgCTCcgGGaCGGCTGGGAAG}} \quad \texttt{gCCCGgcgGggAAgGTGGcTcGGGGg} \cdot \texttt{cCccGtcCGTCCGTCCGTCCGTc} \cdot \text{ctcCtcctCcccgTcTCcGCCc}$ 



AATCCCC....GCAGGGGTCTCCCCC....GGGGGGC...CCGGCGTCTCCTCGTGGGGG..

AatcCCCC gcGaGGGGg.c.ccc.....ggggcgcgcgGCGTCTCcTCGTGGGGGG CcGGgCCACCccTCCC

....TCCCC.GCGAGGGGAGTCTCC.....AGCGAGCGCCGGCGTCTCCTCGTGGGGGG

CGGGGGCGCCGGCGTCTCCTCGTGGGGGGCCGCCCCCTCC

903

810

868

897

CCGGCCACCCTCCCCT

CCGGGCCACCCCTCCC

tig00008411:176298-217104()

tig00008411:297618-338078()

tig00008215:0-19898(-)

tig00008216:0-21673(-)

consensus

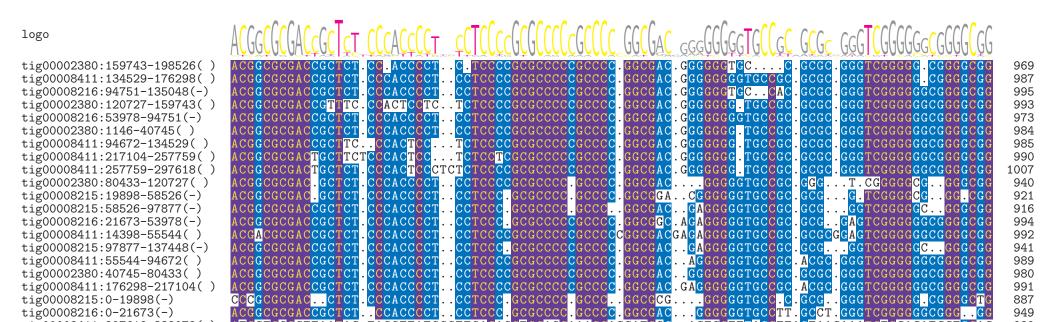
GCGGGG

GCGGGG

GCCCACCCC

GCCCACCCC . . . GCAG

GCCCAcccc gcGggg



ATGCTGGGCTTAATAC.TAGGTTATGGGTTGACAGGTGCAGCAAACCACCATGGC..ACTCGTTTACCTTAGTAACAAATCTGCACATCCTGCAC

.g.agGTtcTCtc.ggggccaCgcgcgcgtccccc.gAAGaGGgg.aC

989

### logo

consensus

consensus

tig00008411:297618-338078()

ACTGTCCCCAGTGCCCCGGGCGG GTCGCGCCGCGCGCCCGGG GGAGGTTCTCTC\_GGGGGCCACGCGCGCGCGCCCCCCGAAGAGGGGGA ACTGTCCC. AGTGCGCCCCGGGCGG GTCGCGCCGTCGGGCCCGGG...G.AGGTTCTCTCGGGGG.CCACGCGCGCGTCCCCC tig00002380:159743-198526() 1056 ACT<mark>GT</mark>CCC<del>C</del>AGTGCGCCC<mark>CG</mark>GGC<mark>GG</mark> GTCGCGCCGTCGGGCCCGG<mark>G...GG</mark>AG<mark>GT</mark>TC<mark>TC</mark>TC<mark>G</mark>GGGGGCCA<mark>C</mark>GCGCGCGTCCCCC GAAGAGGGG. CO 1077 tig00008411:134529-176298() GTCGCGCCGTCGGGCCCGGG...G.AGGTTCTCTCGGGGG.CCACGCGCGCGTCCCCC tig00008216:94751-135048(-) ACTGTCCCCAGTGCGCCCCGGGCGG 1084 tig00002380:120727-159743() GTCGCGCCGTCGGGCCCGGG... GGAGGTTCTCT..GGG.TTACGCGCGCGTCCCCC ACTGTCCCCAGTGCGCCCCGGGCGG 1081 tig00008216:53978-94751(-) ACTGTCCCCAGTGCGCCCCGGGCGG  ${ t GTCGCGCCGTCGGGCCCGGG}\ldots { t GGAGGTTCTCTCGGGGG}. { t CCACGCGCGCGTCCCCC}$ 1063 GTCGCGCCGTCGGGCCCGGG...G AGGTTCTCTCGGGG.CCACGCGCGCGTCCCCCCGAAGAGGGGGGAC 1074 tig00002380:1146-40745() ACTGTCCCCAGTGCGCCCCGGGCGG ACT<mark>GTT</mark>CCCAGTGCGCCC<mark>CG</mark>GGC<mark>GG</mark>  ${ t GTCGCGCCGTCGGGCCCGG}_{ t GG}$ 1073 tig00008411:94672-134529()  ${ t GTCGCGCCGTCGGGCCCGGG}\ldots { t GGGTTCTCT}\ldots { t GGGTTACGCGCGCGTCCCCC} { t GAAGAGGGGGGAC}$ 1079 tig00008411:217104-257759() GGAGGTTCTCT...CAAT.ACGCGCGCGTCCCCC ACTGTCCCCAGTGCGCCC<mark>C</mark>GGCCGG GTCGCGCCGTCGGGCCCGGG... 1094 tig00008411:257759-297618() tig00002380:80433-120727() ACTGTCCCCAGTGCGCCCCGGGCGG GTCGCGCCGTCGGGCCCGG<mark>G</mark>.AG<mark>G</mark>AG<mark>GT.CTCTC.GGGGCCAC</mark>GCG<mark>TC.....</mark>CCC 1022 tig00008215:19898-58526(-) ACTGTCCCCAGTGCGCCCCGGGCGG GTCGCGCCGTCGGGCCCGGGGAGGTTCTCTCCCGGGGCCACCGGC......AAGGGGA.... 1001 tig00008215:58526-97877(-) GTCGCGCCGTCGGGCCCGG<mark>G...GAGGT...TCTC.</mark>GGGGCC<mark>GCGCGT</mark>C.....CC..GAAGG<mark>GG</mark>A... <u>ACTGTCC</u>CCAGTGCGCCC<mark>.GGGCGG</mark> 993 tig00008216:21673-53978(-)  ${ t ACTGTCCCCAGTGCGCCCCGGGCGA}$  .  ${ t GTCGCGCCGTCGGGCCCGGG}$  . .  ${ t GAGAGTTCTCTC}$  .  ${ t GGGGCCACGCGCGCGTCCCCC}$ 1083 tig00008411:14398-55544() ACTGTCCCCAGTGCGCCCCGGGCGA. GTCGCGCCGTCGGGCC.AGG..GAGAGTTCTCTC GGGGCCACGCG..TCCCCC 1079 tig00008215:97877-137448(-) GTTCTC.C GGGGCCACGCGCG...TCCC 1001 GTCGCGCCGTCGGGCCCGGG...GAGGTTCTCTC GGGGCCACGCGCGCGTCCCCCCGAAGAGGGGGAC 1079 tig00008411:55544-94672() ACTGTCCCCAGTGCGCCCCGGGCGG ACTGTCCCCAGTGCGCCCCGGGCGG GTCGCGCCGTCGGGCCCGGG...GAGGTTCTCTC GGGGCCACGCGCGCGTCCCCCCGAAGAGGGGGGAC 1070 tig00002380:40745-80433() tig00008411:176298-217104() ACTGTCCCCAGTGCGCCCCGGGCGGAGTCGCGCCGTCGGGCC<mark>A</mark>GGG...AGA<mark>G</mark>TTCTCTC.GGGGCCACGCGCGCGCCCCCC<mark>C</mark>GAAGAGGGGG<mark>G</mark>AC 1082 GCT..CCCCAGTGCGCCCCGGGCGG.....CGCCGTCCGGGCCCGGG...GAGGTTCTC...GGGGCCGCGCTCG....... ACTGTCCCCAGTGCGCCCCAGGCCGGAGTGCG...TCGGGCCGGGG....AGGTTCTCT..GGGGCCGCGTCCC....... tig00008215:0-19898(-) 957 tig00008216:0-21673(-) 1024 tig00008411:297618-338078() 1075 ACTgtCCCCAGTGCGCCCcgGGCgg gtcgccgtcgggcccgg

#### tig00002380:159743-198526() 1148 tig00008411:134529-176298() GGCCGAG.... 1084 GGCGGAGCGAG tig00008216:94751-135048(-) A A A C A C G G A C C A A G G A G T C T A A C A C G T G C G C G A G T 1176 GGCGGAGCGAG AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT 1172 tig00002380:120727-159743() 1155 tig00008216:53978-94751(-) GGCGGAGCGAG CGCACGGGGTCGGCGACGTCGGCTACCCACCCGACCCGTCTTG AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT tig00002380:1146-40745() GGCGGAGCGAG... CGCACGGGTCGGCGACGTCGGCTACCCACCCGACCCGTCTTG AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT 1166 tig00008411:94672-134529( ) AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT 1164 tig00008411:217104-257759() GGCGGAGCGAG 1171 CGCACGGGGTCGGCGGCGACGTCGGCTACCCACCCGACCCGTCTTG AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT tig00008411:257759-297618() GGCGGAGCGAG 1186 tig00002380:80433-120727() CGCACGGGGTCGGCGACGTCGGCTACCCACCCGACCCGTCTTG AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT 1114 GG.GCAGCGGC..... tig00008215:19898-58526(-) .GAGTCGGC.....GTCGGCTACCC....GACCCGTCTTG AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT 1076 tig00008215:58526-97877(-) AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT 1079 ${\tt GG\overline{C}G\overline{G}AAG\overline{C}GA}$ . . ${\tt CGCACGGGGTCGGCGG\overline{C}GACGTCGGCTACCCGACCCGACCCGTCTTG}$ AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT 1175 tig00008216:21673-53978(-) <mark>GG</mark>CGGA<mark>GCGA</mark>AAGCGCACGGGGTCGGCGGCGACGTCGGCTACCCCACCCGACCCGTCTTG AAACAC<mark>GG</mark>ACCAAGGAGTCTAAC<mark>AC</mark>GTGCGCGAGT tig00008411:14398-55544() 1173 tig00008215:97877-137448(-) AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT 1089 ${ t GGCGGAGCG\overline{AG}}$ . . ${ t CGC\overline{A}CG\overline{G}GG\overline{TC}G\overline{G}CGGCG\overline{A}CG\overline{TC}G\overline{G}C\overline{T}ACCCACCCGACCCG\overline{T}C\overline{T}G}$ 1171 tig00008411:55544-94672() AAACAC<mark>GG</mark>ACCAAGGAGTCTAAC<mark>AC</mark>GTGCGCGAGT tig00002380:40745-80433() GGCGGAGCGAG...CGCACGGGGTCGGCGGCGACGTCGGCTACCCACCCGACCCGTCTTG AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT 1162 tig00008411:176298-217104() GGCGGAGCGAA.GCGCACGGGGTCGGCGGCGACGTCGGCTACCCACC.GACCCGTCTTG AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT 1174 GGCGGAGCGCC.......GCGGTCGGCGGCGGCGTCGGCTACCC.....ACCCGTCTTG AAACACGGGCCAAGGAGTGC..CACGTGCGCGAGT tig00008215:0-19898(-) 1037 AAACACGGACCAAGGAGTCTAACACGTGCGCGAGT tig00008216:0-21673(-) 1110 CTCAGAAAATGACAGACCAATTTTTGCTTCAAATCATGGTTCTCAACCCAGGTGTCATA.AGGTCAGGATAAAGAATTTGATTACATA...... tig00008411:297618-338078() 1162 $\verb|cgcacggggtcggCggcgacgtcgGcTaCcCacccgAcccGTCtTg||AaacacGGaccAAGg\overline{A}g\overline{T}ct\overline{aacACg}\overline{T}gcgcgagt$ consensus

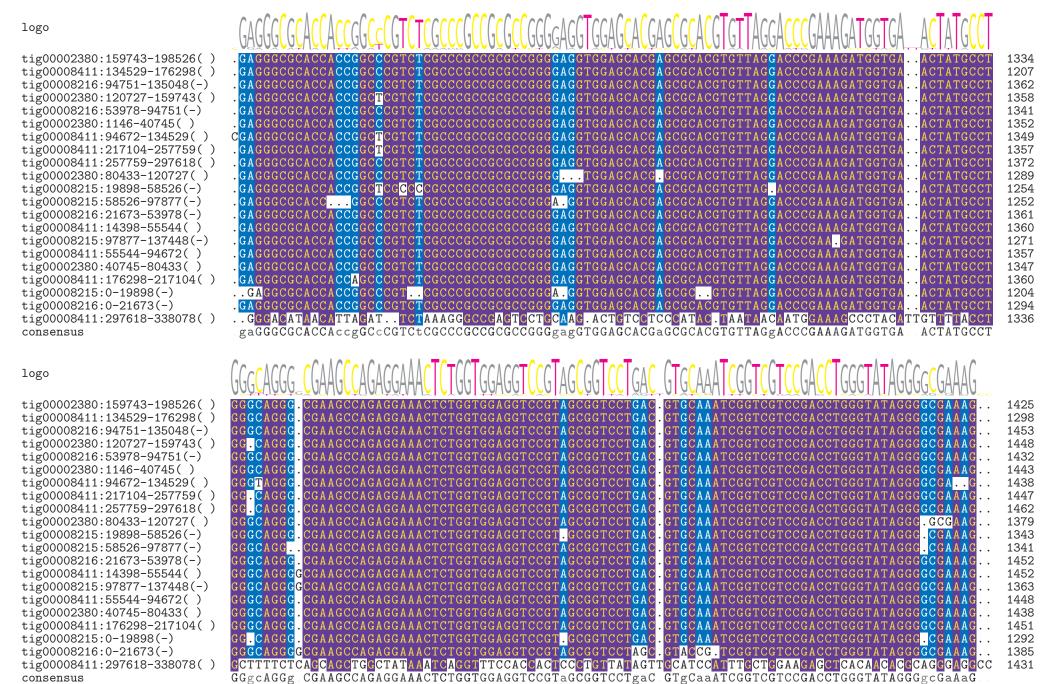
## logo

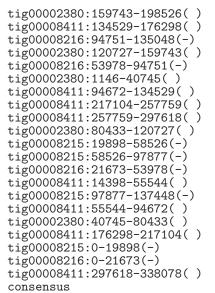
consensus

```
tig00002380:159743-198526(
tig00008411:134529-176298()
tig00008216:94751-135048(-)
tig00002380:120727-159743()
tig00008216:53978-94751(-)
tig00002380:1146-40745()
tig00008411:94672-134529()
tig00008411:217104-257759( )
tig00008411:257759-297618()
tig00002380:80433-120727()
tig00008215:19898-58526(-)
tig00008215:58526-97877(-)
tig00008216:21673-53978(-)
tig00008411:14398-55544()
tig00008215:97877-137448(-)
tig00008411:55544-94672()
tig00002380:40745-80433()
tig00008411:176298-217104()
tig00008215:0-19898(-)
tig00008216:0-21673(-)
tig00008411:297618-338078()
```

# :GGGGG<mark>CTCG</mark>CACGAAAGCCGCCGTGGCGCAATGAAG\_GTGAAGGCCGGCGGCGGCCGGCCGAGGTGGGATCCCGAGGCCTCTCCAGTCCGCC

```
1242
                                                                                                               1115
                                                                                                               1270
                                           GTGAAGGCCGGCGCCCCCGCCGAGGTGGGATCCCGAGGCCT
<u>CGGGGGCTC</u>GCACGAAAGC<mark>C</mark>GCC<mark>G</mark>TGGCGCAATGAAG
                                           <u>GTGAAGGCCGGCG</u>CTCGCCGGCCGAGGTGGGATCCCGAGGCCTCTCCAGTCCGCC
                                                                                                               1266
CGGGGGCTCGCACGAAAGCCGCCGTGGCGCAATGAAG
                                           GTGAAGGCCGCGCCCCCGCCGGCCGAGGTGGGATCCCGAGGCCTCTCCAGTCCGCC
                                                                                                               1249
                                                                                                               1260
CGGGGGCTCGCACGAAAGC<mark>C</mark>GCC<mark>G</mark>TGGCGCAATGAAG
                                           GTGAAGGCCGGCGCTCGCCGGCCGAGGTGGGATCCCGAGGCCTCTCCAGTCCGCC
                                                                                                               1256
CGGGG.CTCGTACGAAAGCCGCCGTGGCGCAATGA.G
                                           {	t GTGAAGGCCGGCGCTCGCCGGCCGAGGTGGGATCCCGAGGCCTCTCCAGTCCGCTC}
                                                                                                               1265
CGGGGGCTCG<mark>T</mark>ACGAAAGC<mark>C</mark>GCC<mark>G</mark>TGGCGCAATGAAG
                                           GTGAAGGCCGGCGCCCCGGCCGAGGTGGGATCCCGAGGCCTCTCCAGT
CGGGGGCTCGCACGAAAGC<mark>C</mark>GCC<mark>G</mark>TGGCGCAATGAAG
                                           1280
CGGGG.GCCGCAG....GCCGCCGTGGCGCAATGAAG
                                           GTGAAGGCCGGCGCTC..GCCGGCCGAGGTGGGATCCCGAGGCCTCTCCAGTCCGCC
                                                                                                               1201
CGGGG.CTCGCAAA...GCCGCCGTGGCGCAATGA.G
                                           GTGAAGGCCGGCGCTC..GCCGGCCGAGGTGGGATCCCGAGGCCTCTCCAGTCCGCC
                                                                                                               1163
                                           GTGAAGGCCGGCG....GCTCGCCGAGGTGTGGATC.GAGGCCTCTCCAGTCCGCC
GGGGG.CTCGCACG...GCCGCCGTGGCGCAATGAAG
                                                                                                               1164
CGGGGGCTCGCACGAAAGCCGCCGTGGCGCAATGAAG<mark>A</mark>GTGAAGGCCGGCGCCGCCGGCCGAGGTGA .ATCCCGAGGCCTCTCCAGTCCGCC
                                                                                                               1269
CGGGGGCTCGCACGAAA<mark>A</mark>CCGCCGTGGCGCAATGAAG<mark>A</mark>GTGAAGGCCGGCGCCGCCGGCCGAGGTG<mark>A</mark>GATCCCGAGGCCTCTCCAGTCCGCC
                                                                                                               1268
CGGGGGCTCGCACGAAA<mark>A</mark>CCGCC<mark>G</mark>TGGCGC<mark>AATGA</mark>AG
                                           {	t GTGAAGGCCGGCGCTCGC.CCGGCCGAGGTG\overline{G}GAT..CGAGGCCTCTCCAGTCCGCC}
                                                                                                               1180
                                                                                                               1265
CGGGGGCTCGCACGAAAGCCGCCGTGGCGCAATGAAG
                                           GTGAAGGCCGGCGCCCCGCCGAGGTGGGATCCCGAGGCCTCTCCAGTCCGCC
                                                                                                               1255
CGGGGGCTCGCACGAAAGC<mark>C</mark>GCC<mark>G</mark>TGGCGC<mark>AATGA</mark>AG
                                           GTGAAGGCCGGCGCTCGCCGGCCGAGGTGGGAT.CCGAGGCCTCTCCAGTCCGCC
                                           .GTGAAGGCCGGCGCCCGCCGGCCGAGGTGGGAT\overline{	ext{C}}CCGAGGCCTCTCCAGTCCGCC
                                                                                                               1268
CGGGGGCTCGCACGAAAACCGCCGTGGCGCAATGAAG
                                           CGGGG...CTCGCGAAAGCCGCCGTGGCGCAATGAAG
                                                                                                               1118
CGGGG<mark>GCTCG</mark>CACGAAAGCCGCCGTGGCGCAATGAAG<mark>A</mark>GTGAAGGCCGGCGC..<u>TCGCCGGC</u>CGAG<mark>.</mark>TG<mark>A</mark>GATCCCGAGGCCTCTCCAGTCCGCC
                                                                                                               1202
.....<mark>TTGTAAAT</mark>AAGACAT.GCAGCA.AATGACCAGAAAAATTATTCCCAACATATGTGTGTCTTTGAATTCAATGGTGACGCTA.TCTACC
                                                                                                               1247
{	t cgggggctcgcacgaaagcCgccGtgGCgcAATGAag.GTGAAGgccggCgCgctcgccggccGaggTgggatcCcGAGGCCTCTCCAGTCCGCc}
```





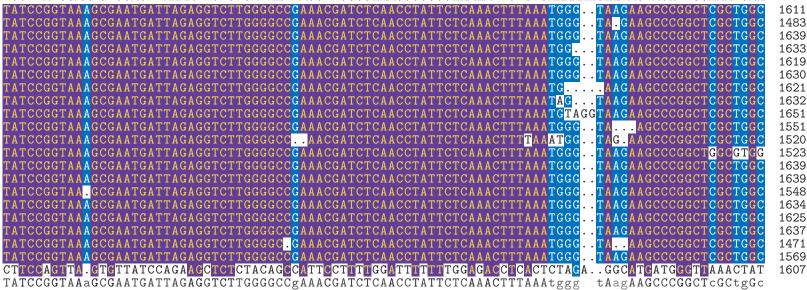
#### 1518 1391 1546 TAGCTGGCGCTCTCGCAGACCCGACGCACCCC TAGCTGGCGCTCTCGCAGACCCGACGCACCCCCCGCCACGCAGTTT 1541 1526 TAGCTGGCGCTCTCGCAGACCCGACGCACCCCCCGCCACGCAGTT <u>ACTAATCGAACCATCTAGTAGCTGGTTCCCTCCGAAGTTTCCCTCAGGA</u> TAGCTGGCGCTCTCGCAGACCCGACGCACCCCCGCCCACGCAGTT 1537 TAGTTGGCGCTCTCGCAGACCCGACGCACCCCCCGCCACGCAGTTT 1531 TAGCTGGCGCTCTCGCAGACCCGACGCACCCCCGCCACGCAGTT? 1540 TAGCTGGCGCTCTCGCAGACCCGACGCACCCCCGCCACGCAGTTT 1556 A CTA A TCG A A CCA TCTA GTA G CTGGTTCCCTCCGA A GTTTCCCTCA G G A A CTA A T C G A A C C A T C T A G T A G C T G G T T C C C T C C G A A G T T T C C C T C A G G A TAGC . . GCTCTC . . GCAGACCCGACGC . . . . . . . . . CACGCAGTT 1461 TAGCTGGCGCTC..GCAGACCCGACGCACCCC GCCACGCAGTT? <u>ACTAATCGAACCA</u>TCTAGTAGCTGGTTCC<mark>C</mark>TC**CG**AAGTT....TCAGG*A* 1430 ACTAATCGAACCATCTAGTAGCTGGTTCC<mark>C</mark>TC..AAGTTT**CCC**TCAGGA TAGCTGGCGCTC..TAAGACCCGACGCACCCC 1430 ${ t TAGCTGGCGCTCTCGC}$ ${ t AGACCCGACGCACCCCCCGCCACGCAGTTT}$ 1546 ACTAATCGAACCATCTAGTAGCTGGTTCC<mark>C</mark>TC<mark>CG</mark>AAGTTT**CCC**TCAGG*A* A CTA A TCGA A CCATCTA GTA GCTGGTTCC <mark>C</mark>TC <mark>CG</mark>A A GTTT <mark>CCC</mark>TC A GG*A* TAGCTGGCGCTCTCGCAGACCCGACGCACCCCCCGCCACGCAGTTT 1546 1456 TAGCTGGCGCTCTCGCAGACCCGACGCACCCC 1541 ACTAATCGAACCATCTAGTAGCTGGTTCC<mark>C</mark>TC<mark>CG</mark>AAGTTT**CCC**TCAGG*A* TAGCTGGCGCTCTCGCAGACCCGACGCACCCC TAGCTGGCGCTCTCGCAGACCCGACGCACCCCCCGCCACGCAGTTT 1532 GCCACGCAGTTI 1544 TAGCTGGCGCTCTCGCAGACCCGACGCACCCC ACTAATCGAACCATCTAGTAGCTGGTTCC**C**TC.GAAGTTT**CCC**TCAGGA<mark>G</mark>TAG**CTG**GCGCTC..GCAGACCCGACGCACCCC...AACGCAGTTT 1381 ACTAATCGAACCATCTAGTAGCTGGTTCC**C**TC**CG**AAGTTT**CCC**TCAGGA.TAG**C**T**G**GCGCTC**TCG**CAGACCCGACGC**ACCCC**. 1476 ATTACATTTACCATTTTATTGTTGCAGATATTGCAAAAAT....TCAGAAAAATTTTTTGGTCCTGTCTTTTTGGAGTG...... 1515 ACTAATCGAACCATCTAGTAGCTGGTTCCcTCcgAAGTTTcccTCAGGA TAGcTgGCGCTCtcgCAGACCCGACGCacccc gccaCGCAGTTT

#### logo

consensus

```
tig00002380:159743-198526()
tig00008411:134529-176298()
tig00008216:94751-135048(-)
tig00002380:120727-159743()
tig00008216:53978-94751(-)
tig00002380:1146-40745()
tig00008411:94672-134529()
tig00008411:217104-257759( )
tig00008411:257759-297618()
tig00002380:80433-120727()
tig00008215:19898-58526(-)
tig00008215:58526-97877(-)
tig00008216:21673-53978(-)
tig00008411:14398-55544()
tig00008215:97877-137448(-)
tig00008411:55544-94672()
tig00002380:40745-80433()
tig00008411:176298-217104()
tig00008215:0-19898(-)
tig00008216:0-21673(-)
tig00008411:297618-338078()
```

# TATCCGGTAAAGCGAATGATTAGAGGTCTTGGGGCCGAAACGATCTCAACCTATTCTCAAACTTTAAATGGG...TAAGAAGCCCGGCTCGCTGGG





tig00002380:120727-159743() tig00008216:53978-94751(-) tig00002380:1146-40745() tig00008411:94672-134529( ) tig00008411:217104-257759() tig00008411:257759-297618() tig00002380:80433-120727() tig00008215:19898-58526(-) tig00008215:58526-97877(-) tig00008216:21673-53978(-) tig00008411:14398-55544() tig00008215:97877-137448(-) tig00008411:55544-94672() tig00002380:40745-80433() tig00008411:176298-217104() tig00008215:0-19898(-) tig00008216:0-21673(-) tig00008411:297618-338078()

#### 1705 1577 1733 GTGGAGCCGGGCGTGGAATGCGA GTGCCTAGTGGGCCACTTT**T**GGTAAG**C**AGAACTGGCGCTGCGG**G**ATGAACCGAACG**C**CGGG**T**T**A**AGGCGCC 1727 GTGGAGCCGGGCGTGGAAT<mark>GC</mark>GA 1713 GTGCCTAGTGGGCCACTTT**T**GGTAAG**C**AGAACTGGCGCTGCGG**G**ATGAACCGAACG**C**CGGG**T**T**A**AGGCGCC G<mark>TGG</mark>AGCCGGGCGTGGAAT<mark>GC</mark>GA 1724 GTGCCTAGTGGGCCACTTT**T**GGTAAG**C**AGAACTGGCGCTGCGG**G**ATGAACCGAACG**C**CGGG**T**T**A**AGGCGCC GTGCCTAGTGGGCCACTTT**T**GGTAAG<mark>T</mark>AGAACTGGCGCTGCGG**G**ATGAACCGAACG<mark>T</mark>CGGG**TTA**AGGCGC**C** 1715 GTGGAGCCGGGCGTGGAATGCGA ${ t GTGCCTAGTGGGCCACTTT{ t TGGTA.G{ t C}AGAACTGGCGCTGCGGGATGAACCGAACG{ t TCGGGT{ t T}AAGGCGCC{ t C}}$ 1725 GTGGAGCCGGGCGTGGAATGCGA GTGCCTAGTGGGCCACTTT**T**GGTAAG**C**AGAACTGGCGCTGCGG**G**ATGAACCGAACG**C**CGGG**T**TAAGGCGCC 1745 GTGGAGCCGGGCGTGGAAT.CGA GTGCCTAGTGGGCCACTTTTGGTAAGCAGAACTGGCGCTGCGGGATGAACCGAACGCCGGGTTAAGGCGC. 1643 G..<mark>G</mark>AGCCGGGCGTGGAAT<mark>GCG</mark>A GTGCCTAGTGGGCCACTTT.GGTAAGCAGAACTGGCGCTGCGGGATGAACCGAACGCCGGGTTAAGGCGCC 1611 GTGCCTAGTGGGCCACTTTTGGTA.GCAGAACTGGC..TGCGGGATGAACCGAACGCCGGGTTAAGGCGCC 1609 $. \texttt{TGCCTAGTGGGCCACTTT}. \texttt{GGTA} \overline{\texttt{A}} \texttt{GC} \texttt{AGAACTGGC} \overline{\texttt{GC}} \texttt{TGCGGG} \texttt{ATGAACCGAACG} \textbf{CGGGGTTAAGGCGCC}$ 1731 GTGGAGCCGGGCGTGGAAT<mark>CT</mark>GA<mark>AG</mark>TGCCTAGTGGGCCACTTT<del>T</del>GGTAAGCAGAACTGGCGCTGCGG**G**ATGAACCGAACG**C**CGGG**T**TAAGGCGCC 1734 GTGGAGCCGGGCGTGGAAT<mark>CT</mark>GA<mark>AG</mark>TGCCTAGTGGGCCACTTTTGGTAAGCAGAACTGGCGCTGCGGGATGAACCGAACGCCGGGTTAAGGCGCC 1643 GTGGAGCCGGGCGTGGAAT<mark>CT</mark>GA<mark>AG</mark>TGCCTAGTGGGCCACTTTTGGTAAGCAGAACTGGCGCTGCGG**G**ATGAACCGAACG**C**CGGGTTAAGGCGCC 1729 GTGGAGCCGGGCGTGGAAT<mark>CT</mark>GA<mark>AG</mark>TGCCTAGTGGGCCACTTTTGGTAAGCAGAACTGGCGCTGCGGGATGAACCGAACGCCGGGTTAAGGCGCC 1720 <u>GTGGAGCCGGGCGTGGAAT<mark>CT</mark>GA<mark>AG</mark>TGCCTAGTGGGCCACTTTTGGTAAGCAGAACTGGCGCTGCGGGATGAACCGAACGCCGGGTTAAGGCGCC</u> 1732 GTGGAGCCGGGCGTGGAAT.CGA.GTGCCTAGTGGGCCACTTT.GGTAAGCAGAACTGGCGCTGCGG.ATGAACCGAACGCCGGGG<mark>C</mark>TTAGGCGC. 1561 <u>GTGGAGCCGGGCGTGGAAT<mark>CT</mark>GA<mark>A</mark>GTGCCTAGTGGGCCACTTTTGGTA<mark>AGC</mark>AGAACTGGCGCTGCGG**G**ATGAACCGAACG**C**CGGG**T**TAAGGCGCC</u> 1664 AGGCTGTTGGTCATCAACCTGAGGCTCTCAACCCTCCCTGGAAATTTGGGGTTTGAGAAGAATTTGCAC......AAACGG. 1694

## logo

consensus

consensus

### tig00002380:159743-198526( tig00008411:134529-176298() tig00008216:94751-135048(-) tig00002380:120727-159743() tig00008216:53978-94751(-) tig00002380:1146-40745() tig00008411:94672-134529() tig00008411:217104-257759() tig00008411:257759-297618() tig00002380:80433-120727() tig00008215:19898-58526(-) tig00008215:58526-97877(-) tig00008216:21673-53978(-) tig00008411:14398-55544() tig00008215:97877-137448(-) tig00008411:55544-94672() tig00002380:40745-80433() tig00008411:176298-217104() tig00008215:0-19898(-) tig00008216:0-21673(-) tig00008411:297618-338078()

# CGATGCCGACGCTCATCAG ACCCC AGAAAAGGTGTTGGTTGATATAGACAGCAGGAC\_GGTGGCCATGGAAGTCGGAATCCGCTAAGGAGTGT

