```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1038 HON27 RS01510 WP 000993725.1   ........MNAQKGFTLIELMIVVAIIGILAAIAIPQYQNYIAKSQVNSGFSEISSIKTGYENA.VNEGAVPTKLSD........   68
NTDB id 1192 PAKAF RS23870 WP 024947914.1   ........MKAQKGFTLIELMIVVAIIGILAAIAIPQYQNYVARSEGASALASVNPLKTTVEEA.LSRGWSVKSGTGTEDA...T   73
NTDB id 1197 PSJM300 03940 AFN76866.1       ......MKAQMQKGFTLIELMIVVAIIGILAAIALPAYQDYTVRSNAAAALAEITPGKIGFEQA.INEGKTPSLTSTD.......   71
NTDB id 1191 AAC28468.1 484..945( )         ......MLKKVQKGFTLIELMIVIAIIGILAAIALPAYQDYTARAQAIEGFKATAGLQTDLGAWRADRGSFPNAAALVAGNVIFD   79
NTDB id 1079 FDQ49 RS11140 WP 022575996.1   ........MNAQKGFTLIELMIVVAIIGILAAIAIPAYQNYIAKSQASEAFTLADGLKTTINTNLQAGTCF.AGGATAVT.....   71
NTDB id 1109 OK783 RS10670 WP 157147416.1   .......MNTLQKGFTLIELMIVIAIVGILAAVALPAYQDYTARAQVSEAILLAEGQKSAVTEYYLNHGIWPKDNTSA.......   71
NTDB id 1119 NGFG RS11465 WP 017147169.1    .......MNTLQKGFTLIELMIVIAIVGILAAVALPAYQDYTARAQVSEAILLAEGQKSAVTEYYLNHGKWPENNTSA.......   71
NTDB id 123852 FD63 RS19715 WP 047325192.1  ........MKKQQGFTLIELMIVVAIIAILAAIAIPAYQDYIARAQMSEALTLASGQKVGVSEVFSNKGTCPANGSD.GFA....   72
NTDB id 1188 NELON RS01755 WP 003772458.1   .......MKAMQKGFTLIELMIVIAIIGILAAIALPAYQDYTVRSKVSEALIAASSPKSALSEAFQTDGITGMTAAAKAFNKTAA   78
NTDB id 1424 RS RS02795 WP 011000517.1      MKSMRHLNKRVQKGFTLIELMIVVAIVGILAAIAIPAYQDYTVRARVTEGLSLAAQAKALVSENAANAQSDLSV..........   74
NTDB id 1002 ACIAD RS15100 WP 004923779.1   ........MNAQKGFTLIELMIVIAIIGILAAIAIPAYTDYTVRARVSEGLTAASSMKTTVSENILNAGALVAGTPSTAGS....   73
NTDB id 1258 GCO85 RS09745 WP 014844212.1   ........MRQKGFTLIELMIVVAIIGILAAIAIPAYQDYTIRARVTEGLTLADSAKLAVSETAITNNALPATQAATGYV....   72
NTDB id 1274 LPP RS09530 WP 011214168.1     ........MRQKGFTLIELMIVVAIIGILAAIAIPAYQDYTIRARVTEGLTLADSAKLAVSETAITNNALPATQAATGYV....   72
consensus                                                !*!!!!!!!!!!*!!**!!!!*!*!*!**!* ** *****  *   ******  *  *  *
```

```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1038 HON27 RS01510 WP 000993725.1   .....VGFTAATSSVCATY....SIDAFTETDGAGKI.TC.TLK..GNPKIATKIVELTR.S............TDGAWTCVSD.   126
NTDB id 1192 PAKAF RS23870 WP 024947914.1   KKEVPLGVAADANKLGTIA.....LKP.DPADGTADITLT.FTMGGAGPKNKGKIITLTRTA............ADGLWKCTSD.   138
NTDB id 1197 PSJM300 03940 AFN76866.1       ..EGYIGITDS.TSYCDVD.....LD..TAADGHI...EC.TAKGGNAGKFDGKTITLNR.T............ADGEWSCAST.   128
NTDB id 1191 AAC28468.1 484..945( )         ..........SANGLDGKYFAPGGVTVTP.DTGAINIAFDAGA.......NAGKTMTITPTVI.......AASGQISTWTCAPGA   139
NTDB id 1079 FDQ49 RS11140 WP 022575996.1   ..........AADKVSGKYGDA...EIGGTA.PNCTITYT.FKSSGVSNKLTSTKIVMNVSETG...........ILTKNSGT..   128
NTDB id 1109 OK783 RS10670 WP 157147416.1   ......GVASA.STIKGKYVQKVEVAKG.....VV...TAQMASTGVNKEIQDKKLSLWA..........KRQDGSVKWFCGQPV   131
NTDB id 1119 NGFG RS11465 WP 017147169.1    ......GVASPPTDIKGKYVKEVEVKNG.....VV...TATMLSSGVNNEIKGKKLSLWG..........RRENGSVKWFCGQPV   132
NTDB id 123852 FD63 RS19715 WP 047325192.1  ..........ADTDINGKYVQKVTVGGTAAASGGCTIVAT.MKSTGVSTGVQGATLTLTL.........SNADKGSNVWTCTSSA   137
NTDB id 1188 NELON RS01755 WP 003772458.1   AGGGAGGAAAAGTQHASKYVKSV..KVTEASPWDITVAISATEANGIPTGLDGNTIRLFPLVNK.AVP.AATSTGAIDWACASAA   159
NTDB id 1424 RS RS02795 WP 011000517.1      ......GSSVF...TPTKNVANLTIAGTGTVPGQITVTYTT.A.......AGGGTLALVPTAAGTALPVSSAPSGPIMWTCYAQN   142
NTDB id 1002 ACIAD RS15100 WP 004923779.1   ...SCVGVQEISASNATTNVAT..ATCGASSAGQIIVTMDTTK.......AKGANITLTP..........TYASGAVTWKCTTT.   135
NTDB id 1258 GCO85 RS09745 WP 014844212.1   ............SPAATPNVQS..IAIG..ANGVITITYTA.A.......AGGGTIIMTPT.........LQANGDVTWTCTGG.   123
NTDB id 1274 LPP RS09530 WP 011214168.1     ............SPAATPNVAS..IAIG..ANGVITITYTA.A.......AGGGTIVMTPT.........LQANGDVTWTCTGG.   123
consensus                                       *     *      *    *       * * *                 *  * *                 * * * *
```

<0

```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1038 HON27 RS01510 WP 000993725.1   ...................VPTEFLPKGCTAGTPTEGAITSL   149
NTDB id 1192 PAKAF RS23870 WP 024947914.1   ...................QDEQFIPKGCSK...........   150
NTDB id 1197 PSJM300 03940 AFN76866.1       ...................LDAKYKPGKCS............   139
NTDB id 1191 AAC28468.1 484..945( )         ...............ANGIETRRLPTSCQ*............   153
NTDB id 1079 FDQ49 RS11140 WP 022575996.1   .............DTPVELLPQSFVAS..............   142
NTDB id 1109 OK783 RS10670 WP 157147416.1   TRTGDNDDTVA..DANNAIDTKHLPSTCRDESSAT......   164
NTDB id 1119 NGFG RS11465 WP 017147169.1    TRADDDTVADA..KDGKEIDTKHLPSTCRDKASDAK.....   166
NTDB id 123852 FD63 RS19715 WP 047325192.1  ...................KQKYLPTACTGGTGA.......   152
NTDB id 1188 NELON RS01755 WP 003772458.1   KETADKRFGTGSGVAVGTLPAKYAPSECK............   188
NTDB id 1424 RS RS02795 WP 011000517.1      KAQAASSVAPS...GTMSLAAKYAPAECR............   168
NTDB id 1002 ACIAD RS15100 WP 004923779.1   ..................S.DKKYVPSECRG...........   147
NTDB id 1258 GCO85 RS09745 WP 014844212.1   ..................TLLAKYRPASCRP...........   136
NTDB id 1274 LPP RS09530 WP 011214168.1     ..................TLLAKYRPASCRP...........   136
consensus                                                     *  ****  *
```

X non conserved
X similar
X $\geq$ 50% conserved