```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1435 BW25113 RS00535 WP 000360904.1   ........MDKQRGFTLIELMVVIGIIAILSAIGIPAYQNYLRKAALTDMLQTFVPYRTAVELCALEHGG..LDTCD...   67
NTDB id 1383 A4U84 RS08530 WP 005711781.1     .MKKIRLIRPLAKAFTLIELMIVIAIIAILATIAIPSYTSYTQKAALSELLSASASYKSDVEICIYNVGDKKISECS...   76
NTDB id 1365 NTHI RS01955 WP 011271973.1      ..MKLTTQQTLKKGFTLIELMIVIAIIAILATIAIPSYQNYTKKAAVSELLQASAPYKADVELCVYSTNE..TTNCT...   73
NTDB id 1354 HI 0299 AAC21963.1               ..MKLTTLQTLKKGFTLIELMIVIAIIAILATIAIPSYQNYTKKAAVSELLQASAPYKADVELCVYSTNE..TTSCT...   73
NTDB id 1184 GTF74 RS02335 WP 000649326.1     ...MKAYKNKQQKGFTLIELMIVVAVIGVLAAIAIPQYQNYVKKSAIGVGLANITALKTNIEDYIATEGSFPATTAGT..   75
NTDB id 1167 A1552VC RS11065 WP 000649326.1   ...MKAYKNKQQKGFTLIELMIVVAVIGVLAAIAIPQYQNYVKKSAIGVGLANITALKTNIEDYIATEGSFPATTAGT..   75
NTDB id 1160 ABDM36 RS02330 WP 000649326.1    ...MKAYKNKQQKGFTLIELMIVVAVIGVLAAIAIPQYQNYVKKSAIGVGLANITALKTNIEDYIATEGSFPATTAGT..   75
NTDB id 1038 HON27 RS01510 WP 000993725.1     ........MNAQKGFTLIELMIVVAIIGILAAIAIPQYQNYIAKSQVNSGFSEISSIKTGYENAVNEGAVPTKLS.....   67
NTDB id 1192 PA4525 NP 253215.1               ........MKAQKGFTLIELMIVVAIIGILAAIAIPQYQNYVARSEGASALATINPLKTTVEESLSRGIAGSKIKIGTTA   72
NTDB id 1197 PSJM300 03940 AFN76866.1         ......MKAQMQKGFTLIELMIVVAIIGILAAIALPAYQDYTVRSNAAAALAEITPGKIGFEQAINEGKTPSLTS.....   69
NTDB id 1204 PSJM300 03935 AFN76865.1         ....MKPVKSSCRGFSLIELMIVVAIIGILAAIALPAYQNYTVRSTAASALAEITPAKAAFEQAISEGHTPSLVS.....   71
NTDB id 1119 NGFG RS11465 WP 017147169.1      .......MNTLQKGFTLIELMIVIAIVGILAAVALPAYQDYTARAQVSEAILLAEGQKSAVTEYYLNHGKWPENNTS...   70
NTDB id 1109 OK783 RS10670 WP 157147416.1     .......MNTLQKGFTLIELMIVIAIVGILAAVALPAYQDYTARAQVSEAILLAEGQKSAVTEYYLNHGIWPKDNTS...   70
NTDB id 1191 AAC28468.1 484..945( )           ......MLKKVQKGFTLIELMIVIAIIGILAAIALPAYQDYTARAQATEGFKATAGLQTDLGAWRADRGSFPNAAALVAG   74
NTDB id 1188 NELON RS01755 WP 003772458.1     .......MKAMQKGFTLIELMIVIAIIGILAAIALPAYQDYTVRSKVSEALIAASSPKSALSEAFQTDGITGMTAAAKAF   73
NTDB id 1424 RS RS02795 WP 011000517.1        MKSMRHLNKRVQKGFTLIELMIVVAIVGILAAIAIPAYQDYTVRARVTEGLSLAAQAKALVSENAANAQSDLS.......   73
NTDB id 1002 ACIAD RS15100 WP 004923779.1     ........MNAQKGFTLIELMIVIAIIGILAAIAIPAYTDYTVRARVSEGLTAASSMKTTVSENILNAGALVAGTP....   68
NTDB id 36719 LPE509 RS05930 WP 016356941.1   .........MRQKGFTLIELMIVVAIIGILAAIAIPAYQDYTIRARVTEGLTLADSAKLAVSETAITNNALPPTQA....   67
NTDB id 1258 GCO85 RS09745 WP 014844212.1     .........MRQKGFTLIELMIVVAIIGILAAIAIPAYQDYTIRARVTEGLTLADSAKLAVSETAITNNALPATQA....   67
NTDB id 1274 LPP RS09530 WP 011214168.1       .........MRQKGFTLIELMIVVAIIGILAAIAIPAYQDYTIRARVTEGLTLADSAKLAVSETAITNNALPATQA....   67
consensus                                                ***!*!!!!!*!******!*****!*!**!* ** *****      ****** *   *    *
```

```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1435 BW25113 RS00535 WP 000360904.1   ............GGSNGIPSPT....TTRYVSAMS.....VAKGVVSLTGQES........LNGLSVVMTPGW.......   111
NTDB id 1383 A4U84 RS08530 WP 005711781.1     ............SGKNGVRADKSDVPDAKYLKSIS.....VASGVITVAGKGN........IDGYGYTMTP.K.......   123
NTDB id 1365 NTHI RS01955 WP 011271973.1      ............GGKNGIAADITT..AKGYVKSVT.....TSNGAITVKGDGT........LANMEYILQATG.......   119
NTDB id 1354 HI 0299 AAC21963.1               ............GGKNGIAADIKT..AKGYVASVI.....TQSGGITVKGNGT........LANMEYILQAKG.......   119
NTDB id 1184 GTF74 RS02335 WP 000649326.1     ...........AAGFTRLGT...VEDMGDGKIVIAPTASGALGGTIKYTFDAG.......VVSSSKIQLARDA.......   127
NTDB id 1167 A1552VC RS11065 WP 000649326.1   ...........AAGFTRLGT...VEDMGDGKIVIAPTASGALGGTIKYTFDAG.......VVSSSKIQLARDA.......   127
NTDB id 1160 ABDM36 RS02330 WP 000649326.1    ...........AAGFTRLGT...VEDMGDGKIVIAPTASGALGGTIKYTFDAG.......VVSSSKIQLARDA.......   127
NTDB id 1038 HON27 RS01510 WP 000993725.1     ...........DVGFTAATS...SVC...ATYSIDAFTETDGAGKITCTLKGN......PKIATKIVELTRST.......   117
NTDB id 1192 PA4525 NP 253215.1               ST........ATETYVGVEP...DAN...KLGVIAVAIEDSGAGDITFTFQTGT...SSPKNATKVITLNRTA.......   128
NTDB id 1197 PSJM300 03940 AFN76866.1         ..........TDEGYIGITD...STS...Y...CDVDLDTAADGHIECTAKGGN...A.GKFDGKTITLNRTA.......   119
NTDB id 1204 PSJM300 03935 AFN76865.1         ..........SLPGFIGIGA...STN...Y...CTVTLIATATGSITCTTQNGM...P.DRFNGKTITIARTT.......   121
NTDB id 1119 NGFG RS11465 WP 017147169.1      ................AGVASPP.TDIKGKYVKEVE.....VKNGVVTATMLSS...GVNNEIKGKKLSLWG........   117
NTDB id 1109 OK783 RS10670 WP 157147416.1     ................AGVASA..STIKGKYVQKVE.....VAKGVVTAQMAST...GVNKEIQDKKLSLWA........   116
NTDB id 1191 AAC28468.1 484..945( )           NVIFDSANGLDGKYF.................APGGVTV.TPDTGAINIAFDAG.......ANAGKTMTITPTVIA.....   125
NTDB id 1188 NELON RS01755 WP 003772458.1     NKTAAAGGGAGGAAAAGTQH......ASKYVKSV..KVTEASPWDITVAISATEANGIPTGLDGNTIRLFPLVNK.AVP.   143
NTDB id 1424 RS RS02795 WP 011000517.1        .........VGSSVF........T..PTKNVANLTIAGTGTVPGQITVTYT.T.......AAGGGTLALVPTAAGTALPV   126
NTDB id 1002 ACIAD RS15100 WP 004923779.1     ....S....TAGSSCVGVQEIS.ASNATTNVAT..ATCGASSAGQIIVTMDTT.......KAKGANITLTPT........   122
NTDB id 36719 LPE509 RS05930 WP 016356941.1   ....A....TG...YV.......SPAATPNVQS..IAIG..ANGVITITY.TA.......SAGGGTIVMTPTL.......   110
NTDB id 1258 GCO85 RS09745 WP 014844212.1     ....A....TG...YV.......SPAATPNVQS..IAIG..ANGVITITY.TA.......AAGGGTIIMTPTL.......   110
NTDB id 1274 LPP RS09530 WP 011214168.1       ....A....TG...YV.......SPAATPNVAS..IAIG..ANGVITITY.TA.......AAGGGTIVMTPTL.......   110
consensus                                                  ** **     *      *  *       * * ****  **        * *  * *  *
```

<0

```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1435 BW25113 RS00535 WP 000360904.1  .DNANGVTGWTRNCNIQ.................SDSALQQ.ACEDVFRFDDAN...   146
NTDB id 1383 A4U84 RS08530 WP 005711781.1    .FANNN.ITWATSCQGA.................DISLFPANFCGQKATP.......   154
NTDB id 1365 NTHI RS01955 WP 011271973.1     .NAATG.VTWTTTCKGT.................DASLFPANFCGSVTQ........   149
NTDB id 1354 HI 0299 AAC21963.1              .NAAAG.VTWTTTCKGT.................DASLFPANFCGSVTK........   149
NTDB id 1184 GTF74 RS02335 WP 000649326.1    ......NGLWTCSTT...................VTSEIAPKGCTAGATIN......   153
NTDB id 1167 A1552VC RS11065 WP 000649326.1  ......NGLWTCSTT...................VTSEIAPKGCTAGATIN......   153
NTDB id 1160 ABDM36 RS02330 WP 000649326.1   ......NGLWTCSTT...................VTSEIAPKGCTAGATIN......   153
NTDB id 1038 HON27 RS01510 WP 000993725.1    ......DGAWTCVSD...................VPTEFLPKGCTAGTPTEGAITSL   149
NTDB id 1192 PA4525 NP 253215.1              ......DGVWACKST...................QDPMFTPKGCDN...........   149
NTDB id 1197 PSJM300 03940 AFN76866.1        ......DGEWSCAST...................LDAKYKPGKCS............   139
NTDB id 1204 PSJM300 03935 AFN76865.1        ......DGLWDCTSD...................LDSRYKPGKCL............   141
NTDB id 1119 NGFG RS11465 WP 017147169.1     .RRENGSVKWFCGQPVTRADDDTVADA..KDGKEIDTKHLPSTCRDKASDAK.....   166
NTDB id 1109 OK783 RS10670 WP 157147416.1    .KRQDGSVKWFCGQPVTRTGDNDDTVA..DANNAIDTKHLPSTCRDESSAT......   164
NTDB id 1191 AAC28468.1 484..945( )          ..ASGQISTWTCAPGAANG...............IETRRLPTSCQ*...........   153
NTDB id 1188 NELON RS01755 WP 003772458.1    AATSTGAIDWACASAAKETADKRFGTGSGVAVGTLPAKYAPSECK............   188
NTDB id 1424 RS RS02795 WP 011000517.1       SSAPSGPIMWTCYAQNKAQAASSVAPS...GTMSLAAKYAPAECR............   168
NTDB id 1002 ACIAD RS15100 WP 004923779.1    ..YASGAVTWKCTTT...................S.DKKYVPSECRG...........   147
NTDB id 36719 LPE509 RS05930 WP 016356941.1  ..QANGDVTWTCTGG...................TLLAKYRPASCRP...........   136
NTDB id 1258 GCO85 RS09745 WP 014844212.1    ..QANGDVTWTCTGG...................TLLAKYRPASCRP...........   136
NTDB id 1274 LPP RS09530 WP 011214168.1      ..QANGDVTWTCTGG...................TLLAKYRPASCRP...........   136
consensus                                        * * !***                      * *** *  !
```

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