```
logo
NTDB id 462 GPW51 RS00385 WP 012774894.1      ....MKAELIAVGTEILTGQIINTNAQFLSEKCAELGIDVYFHTAVGDNEGRLLSTLEVASKRSNMVVLCGGLGPTEDDL   76
NTDB id 412 SMU RS09535 WP 002262393.1        ....MKSEIIAVGTEILTGQIVNTNSQFLSEKFAELGIDVYFQTAVGDNEERLLSVLKIAKERSDLIVLCGGLGPTEDDL   76
NTDB id 170 SP RS09755 WP 000642718.1         ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEVRLLSLLEIASQRSSLVILTGGLGPTEDDL   76
NTDB id 280 KZH43 RS08670 WP 000642700.1      ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEVRLLSLLEIASQRSSLVILTGGLGATEDDL   76
NTDB id 205 SPR RS08830 WP 000642700.1        ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEVRLLSLLEIASQRSSLVILTGGLGATEDDL   76
NTDB id 239 SPD RS09270 WP 000642701.1        ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEVRLLSLLEIASQRSSLVILTGGLGATEDDL   76
NTDB id 538 SMSK321 RS11060 WP 000642686.1    ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEARLLSLLEIASQRSSLVILTGGLGPTEDDL   76
NTDB id 510 SM12261 RS08320 WP 000642690.1    ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEARLLSLLEIASQRSSLVILTGGLGPTEDDL   76
NTDB id 982384 MHH57 RS10040 WP 039273576.1   ....MKAEIIAVGTELLLGQIVNTNAQYLSQELATIGIDVYFQTVVGDNIDRLQEAIRIAQKRADIILFSGGLGPTQDDL   76
NTDB id 124 BSU 16930 NP 389575.2             MEFPKKAEIIAVGSELLLGQIANTNAQFISKQLAEIGVNVFYHTAVGDNPERLKQVIRIAEERSDFIIFSGGLGPTKDDL   80
consensus                                         *!*!*!!!!*!*!*!!!*!!!*!**!***!**!**!***!*!!!!* !!******!**!*******!!!!*!*!!!

logo
NTDB id 462 GPW51 RS00385 WP 012774894.1      TKQTLATFLGRNLVFDELAMAKLDRFFASRPGRVRTPNNERQAQIVEGSQALQNPAGLAVGGMIEQDGVTYIVLPGPPSE   156
NTDB id 412 SMU RS09535 WP 002262393.1        TKQTLAKFLKRELVFDKTAQERLDEFFASRPTSMRTPNNECQAQIIAGSQPLSNKTGLAVGGLLEADGVTYVVLPGPPSE   156
NTDB id 170 SP RS09755 WP 000642718.1         TKQTLAKFLGKALVFDPQAQEKLDIFFTLRPDYARTPNNERQAQIVEGAIPLPNETGLAVGGKLEVDGVTYVVLPGPPSE   156
NTDB id 280 KZH43 RS08670 WP 000642700.1      TKQTLAKFLGKALVFDPQAQEKLDIFFALRPDYARTPNNERQAQIVEGAIPLPNETGLAVGGKLEVDGVTYVVLPGPPSE   156
NTDB id 205 SPR RS08830 WP 000642700.1        TKQTLAKFLGKALVFDPQAQEKLDIFFALRPDYARTPNNERQAQIVEGAIPLPNETGLAVGGKLEVDGVTYVVLPGPPSE   156
NTDB id 239 SPD RS09270 WP 000642701.1        TKQTLAKFLGKALVFDPQAQEKLDIFFALRPDYARTPNNERQVQIVEGAIPLPNETGLAVGGKLEVDGVTYVVLPGPPSE   156
NTDB id 538 SMSK321 RS11060 WP 000642686.1    TKQTLAKFLGKELVFDPQAQEKLDVFFAQRPDYARTPNNERQAQIVEGATPLPNETGLAVGGILEVDGVTYVVLPGPPSE   156
NTDB id 510 SM12261 RS08320 WP 000642690.1    TKQTLAKFLGKELVFDPQAQEKLDVFFAQRPDYARTPNNERQAQLVEGAIPLPNETGLAVGGILEVDGVTYVVLPGPPSE   156
NTDB id 982384 MHH57 RS10040 WP 039273576.1   TKDAIASVLGRKLHIDRLAMDKLDQFFRNR.GVEMTENNRRQALSIEGATPLENETGLAVGDAIAQDGKFYVVLPGPPKE   155
NTDB id 124 BSU 16930 NP 389575.2             TKETIANTLGRPLVLNDEAFQSIEDYFKRT.KRTMSPNNRKQALVIEGSDVLANHFGMAPGMLTEHESRYYMLLPGPPSE   159
consensus                                     !!***!**!** !*****!******!* ********!!**!*****!***!*!**!*!*!*********!**!!!!!*!

logo
NTDB id 462 GPW51 RS00385 WP 012774894.1      LKAMFSESLLPLLSQS.....QQQLYSRVLRFFGIGESQLVTVLADVIDKQTDPTLAPYAKVGEVTLRLSTKATSQEEAN   231
NTDB id 412 SMU RS09535 WP 002262393.1        LKPMVNKELLPYLSKT.....SEKLYSRVLRFFGIGESHLVTLLHDLIAEQTDPTIAPYAKTGEVTIRLSTKAHRQKEAD   231
NTDB id 170 SP RS09755 WP 000642718.1         LKPMVLNQLLPKLM.T.....GSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEAN   230
NTDB id 280 KZH43 RS08670 WP 000642700.1      LKPMVLNQLLPKLM.T.....GSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEAN   230
NTDB id 205 SPR RS08830 WP 000642700.1        LKPMVLNQLLPKLM.T.....GSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEAN   230
NTDB id 239 SPD RS09270 WP 000642701.1        LKPMVLNQLLPKLM.T.....GSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEAN   230
NTDB id 538 SMSK321 RS11060 WP 000642686.1    LKPMVLNQLLPKLM.T.....GSKLYSRVLRFFGIGESQLVTILSDLIDNQTDPTLAPYAKTGEVTLRLSTKASSQEEAN   230
NTDB id 510 SM12261 RS08320 WP 000642690.1    LKPMVLNQLLPKLM.T.....GSKLHSRVLRFFGIGESQLVTILSDLIDNQTDPTLAPYAKTGEVTLRLSTKASSQEEAN   230
NTDB id 982384 MHH57 RS10040 WP 039273576.1   LKPMFANQAKPWLLQQALSGEEMPIYSKMLKFAGIGESALETRLLDLIQSQTDPTIAPYAKEGEVTIRISTKAASESEAL   235
NTDB id 124 BSU 16930 NP 389575.2             LRPMFENEAKPLLLKKMGS..NEKIVSTVLRFFGIGESQLEADLEDIIDAQTNPTIAPLAADGEVTLRLTAKHADEKETE   237
consensus                                     !**!******!*!* *     *****!**!*!*!!!!!*!***!*!*!**!**!!*!!*!**!!!!*!***!*****!**
```

```
logo

NTDB id 462 GPW51 RS00385 WP 012774894.1     LRLNQLEEDILQHD.....KLADYFYAYGEDNSLVKTVATRLAEKRQTIAIVEQGTGGLLQAELSLALADQPYFSGGKVV   306
NTDB id 412 SMU RS09535 WP 002262393.1       SKLDKLEKKIITID.....NLADYFYGYGEENSLPQVVFDLLKEKGKTITAAESLTAGLFQARLADFAGASDIFKGGFIT   306
NTDB id 170 SP RS09755 WP 000642718.1        QALDILENQILDCQTFEGISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFKGGFVT   310
NTDB id 280 KZH43 RS08670 WP 000642700.1     QALDILENQILDCQTFEGISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFEGGFVT   310
NTDB id 205 SPR RS08830 WP 000642700.1       QALDILENQILDCQTFEGISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFEGGFVT   310
NTDB id 239 SPD RS09270 WP 000642701.1       QALDILENQILDCQTFEGISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFEGGFVT   310
NTDB id 538 SMSK321 RS11060 WP 000642686.1   QVLDILENQILGRQTFEGLSLRDLCYGYGEEASLASIVVEELKKQGKTITAAESLTAGLFQATVADFSGASSIFKGGFVT   310
NTDB id 510 SM12261 RS08320 WP 000642690.1   QVLDILENQILGRQTFEGLSLRDLCYGYGEETSLASIVVEELKRQGKTITSAESLTAGLFQARVADFSGASSIFKGGFVT   310
NTDB id 982384 MHH57 RS10040 WP 039273576.1 IKLTATEVEIQQ.......RLSEFMYASE.DVTLEKVIVDLMANRGLTVSAAESCTGGMLMEHLTSIPGSATMFQGGIVC   307
NTDB id 124 BSU 16930 NP 389575.2            RLLKETEAVILE.......RVGEFFYGYD.DTSLVKELSIACKEKGITISAAESFTGGLFSEWLTDHSGASKLFAGGVVC   309
consensus                                    * !***!**!** ************!*******!************!****!**!*!******* *** ***! !!***

logo

NTDB id 462 GPW51 RS00385 WP 012774894.1     GQLGIES.....................GWLS.EEADCIRQELQADLGLAVSVLIKPESTEDNVLAKVYLTLATPSG.ISQ   364
NTDB id 412 SMU RS09535 WP 002262393.1       YSIEEKARMLGIPFEDLQ...LHGVVSAFTAEKMAERSRQLTQADLAISLTGVAGPDSLEGQPAGTVFIGLSSSKR.TMA   382
NTDB id 170 SP RS09755 WP 000642718.1        YSLEEKSRMLDIPAKNLE...EHGVVSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQG.TEV   386
NTDB id 280 KZH43 RS08670 WP 000642700.1     YSLEEKSRMLDIPAKNLE...EHGVVSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQG.TEV   386
NTDB id 205 SPR RS08830 WP 000642700.1       YSLEEKSRMLDIPAKNLE...EHGVVSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQG.TEV   386
NTDB id 239 SPD RS09270 WP 000642701.1       YSLEEKSRMLDIPAKNLE...EHGVVSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQG.TEV   386
NTDB id 538 SMSK321 RS11060 WP 000642686.1   YSLEEKSKMLDIPVKDLE...EQGVVSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPAGTVFIGLAQEHG.TKV   386
NTDB id 510 SM12261 RS08320 WP 000642690.1   YSLEEKSKMLDIPVKDLE...EQGVVSEFTAQKMAEQARIKTQSDFGLSLTGVAGPDSLEGHPAGTVFIGLAQEQG.TEV   386
NTDB id 982384 MHH57 RS10040 WP 039273576.1 YSNEMKMKLLNVPCDYLEGDQAPGAVSKEVALVLAEQARMIMDSDFGLSVTGVAGPGYSERKPVGLVYIGIAERDKETEV   387
NTDB id 124 BSU 16930 NP 389575.2            YTNDVKQNVLGVKKETLD...RFGAVSKECASELAKGVQKLTGSDIGISFTGVAGPDAQEGHEPGHVFIGISANGK.EEV   385
consensus                                    ************ * **   ************!*********!**********!***!******!********** ***

logo

NTDB id 462 GPW51 RS00385 WP 012774894.1     KEIDLGGYSWQYLRQLACLQAWDFVRNTL.......   393
NTDB id 412 SMU RS09535 WP 002262393.1       IKVLIGGRSRSDVRYIAVLHAFNLVRQTLLSHKNLV   418
NTDB id 170 SP RS09755 WP 000642718.1        IKVNIGGRSRADVRHIAVMHAFNLVRKALLSD....   418
NTDB id 280 KZH43 RS08670 WP 000642700.1     IKVNIGGRSRADVRHIAVMHAFNLVRKALLSD....   418
NTDB id 205 SPR RS08830 WP 000642700.1       IKVNIGGRSRADVRHIAVMHAFNLVRKALLSD....   418
NTDB id 239 SPD RS09270 WP 000642701.1       IKVNIGGRSRADVRHIAVMHAFNLVRKALLSD....   418
NTDB id 538 SMSK321 RS11060 WP 000642686.1   IKVNIGGRSRADVRHIAVMHAFNLVRKALLSD....   418
NTDB id 510 SM12261 RS08320 WP 000642690.1   IKVNIGGRSRADVRHIAVMHAFNLVRKALLSD....   418
NTDB id 982384 MHH57 RS10040 WP 039273576.1 HELRLSG.NRETIRLRSVKAILYRLWRRLVENEKLS   422
NTDB id 124 BSU 16930 NP 389575.2            HEFHFAG.SRTGIRKRGAKYGCHLILK.LLEQK...   416
consensus                                    ******!******!**************!***
```

X non conserved

X similar

X ≥ 50% conserved