```
logo
NTDB id 346636 EXW29 RS18745 WP 097953975.1  ....MNAEIIAVGTELLLGQIANTNAQFLSEKLASIGINVYYHTVVGDNNKRLQQAIEVAAERADMLIFTGGLGPTKDDL  76
NTDB id 124 BSU 16930 NP 389575.2            MEFPKKAEIIAVGSELLLGQIANTNAQFISKQLAEIGVNVFYHTAVGDNPERLKQVIRIAEERSDFIIFSGGLGPTKDDL  80
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
consensus                                     ***!*!!!!*!*!*!!!*!!!*!!*!***!**!**!***!*!!!!* !!******!**!*******!!!!*!*!!!

logo
NTDB id 346636 EXW29 RS18745 WP 097953975.1  TKETIASSLGEELVYDENALALISDYFK.RTGREFTENNKKQALVLNGATVFANDHGMAPGMGLNKNGKVYILLPGPPKE  155
NTDB id 124 BSU 16930 NP 389575.2            TKETIANTLGRPLVLNDEAFQSIEDYFK.RTKRTMSPNNRKQALVIEGSDVLANHFGMAPGMLTEHESRYYMLLPGPPSE  159
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
consensus                                    !!*!*!**!** !!****!*******!* !*******!!**!*****!*****!**!*!*!*********!**!!!!!*!

logo
NTDB id 346636 EXW29 RS18745 WP 097953975.1  MRPMYVSYVEPFL.RNFTTGENIYSRVLRFFGIGESQLEVKVQDLIDGQTNPTIAPLANDGEVTLRLTAKHQNAHEAEKL  234
NTDB id 124 BSU 16930 NP 389575.2            LRPMFENEAKPLLLKKMGSNEKIVSTVLRFFGIGESQLEADLEDIIDAQTNPTIAPLAADGEVTLRLTAKHADEKETERL  239
NTDB id 462 GPW51 RS00385 WP 012774894.1     LKAMFSESLLPLL...SQSQQQLYSRVLRFFGIGESQLVTVLADVIDKQTDPTLAPYAKVGEVTLRLSTKATSQEEANLR  233
NTDB id 412 SMU RS09535 WP 002262393.1       LKPMVNKELLPYL...SKTSEKLYSRVLRFFGIGESHLVTLLHDLIAEQTDPTIAPYAKTGEVTIRLSTKAHRQKEADSK  233
NTDB id 170 SP RS09755 WP 000642718.1        LKPMVLNQLLPKL...M.TGSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQA  232
NTDB id 280 KZH43 RS08670 WP 000642700.1     LKPMVLNQLLPKL...M.TGSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQA  232
NTDB id 205 SPR RS08830 WP 000642700.1       LKPMVLNQLLPKL...M.TGSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQA  232
NTDB id 239 SPD RS09270 WP 000642701.1       LKPMVLNQLLPKL...M.TGSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQA  232
NTDB id 538 SMSK321 RS11060 WP 000642686.1   LKPMVLNQLLPKL...M.TGSKLYSRVLRFFGIGESQLVTILSDLIDNQTDPTLAPYAKTGEVTLRLSTKASSQEEANQV  232
NTDB id 510 SM12261 RS08320 WP 000642690.1   LKPMVLNQLLPKL...M.TGSKLHSRVLRFFGIGESQLVTILSDLIDNQTDPTLAPYAKTGEVTLRLSTKASSQEEANQV  232
consensus                                    ***!******!*!    * ******!*!!!!!!!!!!!*!*****!*!**!**!!*!!*!**!!!!*!!**!*****!***
```

```
logo
```

```
NTDB id 346636 EXW29 RS18745 WP 097953975.1   IQHMEDLILE.......RVGEFFYGYDQE.FLHYKAIELLKKKGLTLACAESLTGGLFGNQVTESAGVSSVFKGGVICYH   306
NTDB id 124 BSU 16930 NP 389575.2             LKETEAVILE.......RVGEFFYGYDDT.SLVKELSIACKEKGITISAAESFTGGLFSEWLTDHSGASKLFAGGVVCYT   311
NTDB id 462 GPW51 RS00385 WP 012774894.1      LNQLEEDILQHD.....KLADYFYAYGEDNSLVKTVATRLAEKRQTIAIVEQGTGGLLQAELSLALADQPYFSGGKVVGQ   308
NTDB id 412 SMU RS09535 WP 002262393.1        LDKLEKKITTID.....NLADYFYGYGEENSLPQVVFDLLKEKGKTITAAESLTAGLFQARLADFAGASDIFKGGFITYS   308
NTDB id 170 SP RS09755 WP 000642718.1         LDILENQILDCQTFEGISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFKGGFVTYS   312
NTDB id 280 KZH43 RS08670 WP 000642700.1      LDILENQILDCQTFEGISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFEGGFVTYS   312
NTDB id 205 SPR RS08830 WP 000642700.1        LDILENQILDCQTFEGISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFEGGFVTYS   312
NTDB id 239 SPD RS09270 WP 000642701.1        LDILENQILDCQTFEGISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFEGGFVTYS   312
NTDB id 538 SMSK321 RS11060 WP 000642686.1    LDILENQILGRQTFEGLSLRDLCYGYGEEASLASIVVEELKKQGKTITAAESLTAGLFQATVADFSGASSIFKGGFVTYS   312
NTDB id 510 SM12261 RS08320 WP 000642690.1    LDILENQILGRQTFEGLSLRDLCYGYGEETSLASIVVEELKRQGKTITSAESLTAGLFQARVADFSGASSIFKGGFVTYS   312
consensus                                     ****!**!** ************!*!*****!************!****!**!*!!**************!*!!*****
```

```
logo
```

```
NTDB id 346636 EXW29 RS18745 WP 097953975.1   NDVKQHVLHVPEEVLSTDGAVSKECARYLAENVKELLKADIGISFTGVAGPDASEHKEPGTVFVGLAIKDEPTVVFPLNL   386
NTDB id 124 BSU 16930 NP 389575.2             NDVKQNVLGVKKETLDRFGAVSKECASELAKGVQKLTGSDIGISFTGVAGPDAQEGHEPGHVFIGISANGKE.EVHEFHF   390
NTDB id 462 GPW51 RS00385 WP 012774894.1      LGIES.................GWLS.EEADCIRQELQADLGLAVSVLIKPESTEDNVLAKVYLTLATPSGIS.QKEIDL   369
NTDB id 412 SMU RS09535 WP 002262393.1        IEEKARMLGIPFEDLQLHGVVSAFTAEKMAERSRQLTQADLAISLTGVAGPDSLEGQPAGTVFIGLSSSKRTM.AIKVLI   387
NTDB id 170 SP RS09755 WP 000642718.1         LEEKSRMLDIPAKNLEEHGVVSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTE.VIKVNI   391
NTDB id 280 KZH43 RS08670 WP 000642700.1      LEEKSRMLDIPAKNLEEHGVVSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTE.VIKVNI   391
NTDB id 205 SPR RS08830 WP 000642700.1        LEEKSRMLDIPAKNLEEHGVVSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTE.VIKVNI   391
NTDB id 239 SPD RS09270 WP 000642701.1        LEEKSRMLDIPAKNLEEHGVVSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTE.VIKVNI   391
NTDB id 538 SMSK321 RS11060 WP 000642686.1    LEEKSKMLDIPVKDLEEQGVVSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPAGTVFIGLAQEHGTK.VIKVNI   391
NTDB id 510 SM12261 RS08320 WP 000642690.1    LEEKSKMLDIPVKDLEEQGVVSEFTAQKMAEQARTKTQSDFGLSLTGVAGPDSLEGHPAGTVFIGLAQEQGTE.VIKVNI   391
consensus                                     *********** * ***************!*********!***********!***!******!************ ******
```

```
logo
```

```
NTDB id 346636 EXW29 RS18745 WP 097953975.1   SG.SRQQIRERSAKYGFYHLYKKLEEI....   412
NTDB id 124 BSU 16930 NP 389575.2             AG.SRTGIRKRGAKYGCHLILKLLEQK....   416
NTDB id 462 GPW51 RS00385 WP 012774894.1      GGYSWQYLRQLACLQAWDFVRNTL.......   393
NTDB id 412 SMU RS09535 WP 002262393.1        GGRSRSDVRYIAVLHAFNLVRQTLLSHKNLV   418
NTDB id 170 SP RS09755 WP 000642718.1         GGRSRADVRHIAVMHAFNLVRKALLSD....   418
NTDB id 280 KZH43 RS08670 WP 000642700.1      GGRSRADVRHIAVMHAFNLVRKALLSD....   418
NTDB id 205 SPR RS08830 WP 000642700.1        GGRSRADVRHIAVMHAFNLVRKALLSD....   418
NTDB id 239 SPD RS09270 WP 000642701.1        GGRSRADVRHIAVMHAFNLVRKALLSD....   418
NTDB id 538 SMSK321 RS11060 WP 000642686.1    GGRSRADVRHIAVMHAFNLVRKALLSD....   418
NTDB id 510 SM12261 RS08320 WP 000642690.1    GGRSRADVRHIAVMHAFNLVRKALLSD....   418
consensus                                     *!*!****!**************!***
```

X non conserved

X similar

X ≥ 50% conserved