```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 80600 L6491 RS18925 WP 236787053.1   ....MNAEIIAVGTELLLGQIANTNAQFLSEKLASIGINVYYHTVVGDNNKRLKQAIEVAEERADMLIFTGGLGPTKDDLTKETI   81
NTDB id 124 BSU 16930 NP 389575.2            MEFPKKAEIIAVGSELLLGQIANTNAQFISKQLAEIGVNVFYHTAVGDNPERLKQVIRIAEERSDFIIFSGGLGPTKDDLTKETI   85
NTDB id 462 GPW51 RS00385 WP 012774894.1     ....MKAELIAVGTEILTGQIINTNAQFLSEKCAELGIDVYFHTAVGDNEGRLLSTLEVASKRSNMVVLCGGLGPTEDDLTKQTL   81
NTDB id 412 SMU RS09535 WP 002262393.1       ....MKSEIIAVGTEILTGQIVNTNSQFLSEKFAELGIDVYFQTAVGDNEERLLSVLKIAKERSDLIVLCGGLGPTEDDLTKQTL   81
NTDB id 170 SP RS09755 WP 000642718.1        ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEVRLLSLLEIASQRSSLVILTGGLGPTEDDLTKQTL   81
NTDB id 280 KZH43 RS08670 WP 000642700.1     ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEVRLLSLLEIASQRSSLVILTGGLGATEDDLTKQTL   81
NTDB id 205 SPR RS08830 WP 000642700.1       ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEVRLLSLLEIASQRSSLVILTGGLGATEDDLTKQTL   81
NTDB id 239 SPD RS09270 WP 000642701.1       ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEVRLLSLLEIASQRSSLVILTGGLGATEDDLTKQTL   81
NTDB id 538 SMSK321 RS11060 WP 000642686.1   ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEARLLSLLEIASQRSSLVILTGGLGPTEDDLTKQTL   81
NTDB id 510 SM12261 RS08320 WP 000642690.1   ....MKAEIIAVGTEILTGQIVNTNAQFLSEKLAEIGVDVYFQTAVGDNEARLLSLLEIASQRSSLVILTGGLGPTEDDLTKQTL   81
consensus                                     ***!*!!!!*!*!*!!!*!!!*!!*!***!**!**!***!*!!!!* !!******!**!*******!!!!*!*!!!!!*!*

logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 80600 L6491 RS18925 WP 236787053.1   ASSLAKELVYDEKALASISDYFK.RTGREFTENNKKQALVLDGAAVFANDHGMAPGMGLNKNGKVYILLPGPPKEMKPMYVSYVE   165
NTDB id 124 BSU 16930 NP 389575.2            ANTLGRPLVLNDEAFQSIEDYFK.RTKRTMSPNNRKQALVIEGSDVLANHFGMAPGMLTEHESRYYMLLPGPPSELRPMFENEAK   169
NTDB id 462 GPW51 RS00385 WP 012774894.1     ATFLGRNLVFDELAMAKLDRFFASRPGRVRTPNNERQAQIVEGSQALQNPAGLAVGGMIEQDGVTYIVLPGPPSELKAMFSESLL   166
NTDB id 412 SMU RS09535 WP 002262393.1       AKFLKRELVFDKTAQERLDEFFASRPTSMRTPNNECQAQIIAGSQPLSNKTGLAVGGLLEADGVTYVVLPGPPSELKPMVNKELL   166
NTDB id 170 SP RS09755 WP 000642718.1        AKFLGKALVFDPQAQEKLDIFFTLRPDYARTPNNERQAQIVEGAIPLPNETGLAVGGKLEVDGVTYVVLPGPPSELKPMVLNQLL   166
NTDB id 280 KZH43 RS08670 WP 000642700.1     AKFLGKALVFDPQAQEKLDIFFALRPDYARTPNNERQAQIVEGAIPLPNETGLAVGGKLEVDGVTYVVLPGPPSELKPMVLNQLL   166
NTDB id 205 SPR RS08830 WP 000642700.1       AKFLGKALVFDPQAQEKLDIFFALRPDYARTPNNERQAQIVEGAIPLPNETGLAVGGKLEVDGVTYVVLPGPPSELKPMVLNQLL   166
NTDB id 239 SPD RS09270 WP 000642701.1       AKFLGKALVFDPQAQEKLDIFFALRPDYARTPNNERQVQIVEGAIPLPNETGLAVGGKLEVDGVTYVVLPGPPSELKPMVLNQLL   166
NTDB id 538 SMSK321 RS11060 WP 000642686.1   AKFLGKELVFDPQAQEKLDVFFAQRPDYARTPNNERQAQIVEGATPLPNETGLAVGGILEVDGVTYVVLPGPPSELKPMVLNQLL   166
NTDB id 510 SM12261 RS08320 WP 000642690.1   AKFLGKELVFDPQAQEKLDVFFAQRPDYARTPNNERQAQLVEGAIPLPNETGLAVGGILEVDGVTYVVLPGPPSELKPMVLNQLL   166
consensus                                    !**!** !!****!*******!* !*******!!**!*****!*****!**!*!*!*********!**!!!!!*!***!******

logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 80600 L6491 RS18925 WP 236787053.1   PFL.RNFTTGENIYSRVLRFFGIGESQLEVKVQDLIDGQTNPTIAPLANDGEVTLRLTAKHQNVDEAEKLIQHVEDLILE.....   244
NTDB id 124 BSU 16930 NP 389575.2            PLLLKKMGSNEKIVSTVLRFFGIGESQLEADLEDIIDAQTNPTIAPLAADGEVTLRLTAKHADEKETERLLKETEAVILE.....   249
NTDB id 462 GPW51 RS00385 WP 012774894.1     PLL...SQSQQQLYSRVLRFFGIGESQLVTVLADVIDKQTDPTLAPYAKVGEVTLRLSTKATSQEEANLRLNQLEEDILQHD...   245
NTDB id 412 SMU RS09535 WP 002262393.1       PYL...SKTSEKLYSRVLRFFGIGESHLVTLLHDLIAEQTDPTIAPYAKTGEVTIRLSTKAHRQKEADSKLDKLEKKIITID...   245
NTDB id 170 SP RS09755 WP 000642718.1        PKL...M.TGSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQALDILENQILDCQTFE   247
NTDB id 280 KZH43 RS08670 WP 000642700.1     PKL...M.TGSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQALDILENQILDCQTFE   247
NTDB id 205 SPR RS08830 WP 000642700.1       PKL...M.TGSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQALDILENQILDCQTFE   247
NTDB id 239 SPD RS09270 WP 000642701.1       PKL...M.TGSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQALDILENQILDCQTFE   247
NTDB id 538 SMSK321 RS11060 WP 000642686.1   PKL...M.TGSKLYSRVLRFFGIGESQLVTILSDLIDNQTDPTLAPYAKTGEVTLRLSTKASSQEEANQVLDILENQILGRQTFE   247
NTDB id 510 SM12261 RS08320 WP 000642690.1   PKL...M.TGSKLHSRVLRFFGIGESQLVTILSDLIDNQTDPTLAPYAKTGEVTLRLSTKASSQEEANQVLDILENQILGRQTFE   247
consensus                                    !*!    * ******!*!!!!!!!!!!*!*****!*!**!**!!*!!*!**!!!!*!!**!*****!*** ****!**!** ****
```

```
logo

NTDB id 80600 L6491 RS18925 WP 236787053.1  ..RVGEFFYGYDQ.EFLHDKAIELLKKKGLTLACAESLTGGLFGNQVTEGAGVSSVFKGGVICYHNDVKQHVLHVPEEVLFTDGA   326
NTDB id 124 BSU 16930 NP 389575.2           ..RVGEFFYGYDD.TSLVKELSIACKEKGITISAAESFTGGLFSEWLTDHSGASKLFAGGVVCYTNDVKQNVLGVKKETLDRFGA   331
NTDB id 462 GPW51 RS00385 WP 012774894.1    ..KLADYFYAYGEDNSLVKTVATRLAEKRQTIAIVEQGTGGLLQAELSLALADQPYFSGGKVVGQLGIES...............   313
NTDB id 412 SMU RS09535 WP 002262393.1      ..NLADYFYGYGEENSLPQVVFDLLKEKGKTITAAESLTAGLFQARLADFAGASDIFKGGFITYSIEEKARMLGIPFEDLQLHGV   328
NTDB id 170 SP RS09755 WP 000642718.1       GISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFKGGFVTYSLEEKSRMLDIPAKNLEEHGV   332
NTDB id 280 KZH43 RS08670 WP 000642700.1    GISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFEGGFVTYSLEEKSRMLDIPAKNLEEHGV   332
NTDB id 205 SPR RS08830 WP 000642700.1      GISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFEGGFVTYSLEEKSRMLDIPAKNLEEHGV   332
NTDB id 239 SPD RS09270 WP 000642701.1      GISLRDFCYGYGEETSLASIVVEELKRQGKTIAAAESLTAGLFQATVANFSGVSSIFEGGFVTYSLEEKSRMLDIPAKNLEEHGV   332
NTDB id 538 SMSK321 RS11060 WP 000642686.1  GLSLRDLCYGYGEEASLASIVVEELKKQGKTITAAESLTAGLFQATVADFSGASSIFKGGFVTYSLEEKSKMLDIPVKDLEEQGV   332
NTDB id 510 SM12261 RS08320 WP 000642690.1  GLSLRDLCYGYGEETSLASIVVEELKRQGKTITSAESLTAGLFQARVADFSGASSIFKGGFVTYSLEEKSKMLDIPVKDLEEQGV   332
consensus                                   ********!*!*****!*************!****!**!*!!**************!*!!****************  *  ******
```

```
logo

NTDB id 80600 L6491 RS18925 WP 236787053.1  VSKECARYLAENVKELLEADIGISFTGVAGPDASEHKEPGTVFVGLAIKDEPTVVFPLNLSG.SRQQIRERSAKYGFYHLYKKLE   410
NTDB id 124 BSU 16930 NP 389575.2           VSKECASELAKGVQKLTGSDIGISFTGVAGPDAQEGHEPGHVFIGISANGKE.EVHEFHFAG.SRTGIRKRGAKYGCHLILKLLE   414
NTDB id 462 GPW51 RS00385 WP 012774894.1    ..GWLS.EEADCIRQELQADLGLAVSVLIKPESTEDNVLAKVYLTLATPSGIS.QKEIDLGGYSWQYLRQLACLQAWDFVRNTL.   393
NTDB id 412 SMU RS09535 WP 002262393.1      VSAFTAEKMAERSRQLTQADLAISLTGVAGPDSLEGQPAGTVFIGLSSSKRTM.AIKVLIGGRSRSDVRYIAVLHAFNLVRQTLL   412
NTDB id 170 SP RS09755 WP 000642718.1       VSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTE.VIKVNIGGRSRADVRHIAVMHAFNLVRKALL   416
NTDB id 280 KZH43 RS08670 WP 000642700.1    VSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTE.VIKVNIGGRSRADVRHIAVMHAFNLVRKALL   416
NTDB id 205 SPR RS08830 WP 000642700.1      VSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTE.VIKVNIGGRSRADVRHIAVMHAFNLVRKALL   416
NTDB id 239 SPD RS09270 WP 000642701.1      VSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTE.VIKVNIGGRSRADVRHIAVMHAFNLVRKALL   416
NTDB id 538 SMSK321 RS11060 WP 000642686.1  VSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPAGTVFIGLAQEHGTK.VIKVNIGGRSRADVRHIAVMHAFNLVRKALL   416
NTDB id 510 SM12261 RS08320 WP 000642690.1  VSEFTAQKMAEQARIKTQSDFGLSLTGVAGPDSLEGHPAGTVFIGLAQEQGTE.VIKVNIGGRSRADVRHIAVMHAFNLVRKALL   416
consensus                                   *********!*********!**********!***!******!*********** *******!*!****!**************!*
```

```
logo

NTDB id 80600 L6491 RS18925 WP 236787053.1  EI....   412
NTDB id 124 BSU 16930 NP 389575.2           QK....   416
NTDB id 462 GPW51 RS00385 WP 012774894.1    ......   393
NTDB id 412 SMU RS09535 WP 002262393.1      SHKNLV   418
NTDB id 170 SP RS09755 WP 000642718.1       SD....   418
NTDB id 280 KZH43 RS08670 WP 000642700.1    SD....   418
NTDB id 205 SPR RS08830 WP 000642700.1      SD....   418
NTDB id 239 SPD RS09270 WP 000642701.1      SD....   418
NTDB id 538 SMSK321 RS11060 WP 000642686.1  SD....   418
NTDB id 510 SM12261 RS08320 WP 000642690.1  SD....   418
consensus                                   **
```

X non conserved

X similar

X $\geq$ 50% conserved