```
logo
NTDB id 124 BSU 16930 NP 389575.2          MEFPKKAEIIAVGSELLLGQIANTNAQFISKQLAEIGVNVFYHTAVGDNPERLKQVIRIAEERSDFIIFSGGLGPTKDDLTKETI   85
NTDB id 462 GPW51 RS00385 WP 012774894.1   ....MKAELIAVGTEILTGQIINTNAQFLSEKCAELGIDVYFHTAVGDNEGRLLSTLEVASKRSNMVVLCGGLGPTEDDLTKQTL   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
NTDB id 26501 SDEG RS10120 WP 003058772.1 ....MKAELITVGTEILTGQIVNTNAQFLSEKMAELGIDVYFQTAVGDNEERLLSVIATASQRSDLVILCGGLGPTEDDLTKQTL   81
NTDB id 412 SMU RS09535 WP 002262393.1     ....MKSEIIAVGTEILTGQIVNTNSQFLSEKFAELGIDVYFQTAVGDNEERLLSVLKIAKERSDLIVLCGGLGPTEDDLTKQTL   81
consensus                                   *!*!*!*!!*!*!*!!!*!!!*!!*!***!!*!**!***!!!!!! !!******!**!!*****!!!!*!*!!!!!*!*
```

```
logo
NTDB id 124 BSU 16930 NP 389575.2          ANTLGRPLVLNDEAFQSIEDYFKR.TKRTMSPNNRKQALVIEGSDVLANHFGMAPGMLTEHESRYYMLLPGPPSELRPMFENEAK   169
NTDB id 462 GPW51 RS00385 WP 012774894.1   ATFLGRNLVFDELAMAKLDRFFASRPGRVRTPNNERQAQIVEGSQALQNPAGLAVGGMIEQDGVTYIVLPGPPSELKAMFSESLL   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
NTDB id 26501 SDEG RS10120 WP 003058772.1 AKYLNRDLVFEEQASQKLDAFYASRKESSRTANNAKQAQIIAGSSPLQNRTGLAVGGLITVNEVTYVVLPGPPSELKPMVNEELL   166
NTDB id 412 SMU RS09535 WP 002262393.1     AKFLKRELVFDKTAQERLDEFFASRPTSMRTPNNECQAQIIAGSQPLSNKTGLAVGGLLEADGVTYVVLPGPPSELKPMVNKELL   166
consensus                                  !**!** !!****!******* ********!!**!*****!***!*!**!*!*!*********!**!!!!!!!**!******
```

```
logo
NTDB id 124 BSU 16930 NP 389575.2          PLLLKKMGSNEKIVSTVLRFFGIGESQLEADLEDIIDAQTNPTIAPLAADGEVTLRLTAKHADEKETERLLKETEAVILE.....   249
NTDB id 462 GPW51 RS00385 WP 012774894.1   PLLS...QSQQQLYSRVLRFFGIGESQLVTVLADVIDKQTDPTLAPYAKVGEVTLRLSTKATSQEEANLRLNQLEEDILQ.....   243
NTDB id 170 SP RS09755 WP 000642718.1      PKLM...T.GSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQALDILENQILDCQTFE   247
NTDB id 280 KZH43 RS08670 WP 000642700.1   PKLM...T.GSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQALDILENQILDCQTFE   247
NTDB id 205 SPR RS08830 WP 000642700.1     PKLM...T.GSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQALDILENQILDCQTFE   247
NTDB id 239 SPD RS09270 WP 000642701.1     PKLM...T.GSKLYSRVLRFFGIGESQLVTILADLIDNQIDPTLAPYAKTGEVTLRLSTKASSQEEANQALDILENQILDCQTFE   247
NTDB id 538 SMSK321 RS11060 WP 000642686.1 PKLM...T.GSKLYSRVLRFFGIGESQLVTILSDLIDNQTDPTLAPYAKTGEVTLRLSTKASSQEEANQVLDILENQILGRQTFE   247
NTDB id 510 SM12261 RS08320 WP 000642690.1 PKLM...T.GSKLHSRVLRFFGIGESQLVTILSDLIDNQTDPTLAPYAKTGEVTLRLSTKASSQEEANQVLDILENQILGRQTFE   247
NTDB id 26501 SDEG RS10120 WP 003058772.1 PFLS...TQSRKLYSRVLRFFGIGESQLVTVLSDLIENQTDPTIAPYAKTGEVTLRLSTKAENQTLADTKLDPLEAQLLSRKTPD   248
NTDB id 412 SMU RS09535 WP 002262393.1     PYLS...KTSEKLYSRVLRFFGIGESHLVTLLHDLIAEQTDPTIAPYAKTGEVTIRLSTKAHRQKEADSKLDKLEKKIIT.....   243
consensus                                  !*!*   * *****!*!!!!!!!!!!*!***!*!*!**!**!!*!!!*!**!!!!*!!**!******** !***!***** ****
```

```
logo

NTDB id 124 BSU 16930 NP 389575.2          ..RVGEFFYGYDD.TSLVKELSIACKEKGITISAAESFTGGLFSEWLTDHSGASKLFAGGVVCYTNDVKQNVLGVKKETLDRFGA   331
NTDB id 462 GPW51 RS00385 WP 012774894.1   HDKLADYFYAYGEDNSLVKTVATRLAEKRQTIAIVEQGTGGLLQAELSLALADQPYFSGGKVVGQLGIE................   312
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
NTDB id 26501 SDEG RS10120 WP 003058772.1 NQSLSDFLYGYREDNSLAREVFELLVKYDKTITAAESLTAGLFQSTLASFSGASQVFNGGFVTYSMEEKARMLGIPLEDLISHGV   333
NTDB id 412 SMU RS09535 WP 002262393.1     IDNLADYFYGYGEENSLPQVVFDLLKEKGKTITAAESLTAGLFQARLADFAGASDIFKGGFITYSIEEKARMLGIPFEDLQLHGV   328
consensus                                  ********!*!****!!**************!!***!**!*!!****** ******** !!**************** * ******

logo

NTDB id 124 BSU 16930 NP 389575.2          VSKECASELAKGVQKLTGSDIGISFTGVAGPDAQEGHEPGHVFIGISANGKEEVHEFHFAGSR.TGIRKRGAKYGCHLILKLLEQ   415
NTDB id 462 GPW51 RS00385 WP 012774894.1   .SGWLS.EEADCIRQELQADLGLAVSVLIKPESTEDNVLAKVYLTLATPSGISQKEIDLGGYSWQYLRQLACLQAWDFVRNTL..   393
NTDB id 170 SP RS09755 WP 000642718.1      VSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTEVIKVNIGGRSRADVRHIAVMHAFNLVRKALLS   417
NTDB id 280 KZH43 RS08670 WP 000642700.1   VSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTEVIKVNIGGRSRADVRHIAVMHAFNLVRKALLS   417
NTDB id 205 SPR RS08830 WP 000642700.1     VSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTEVIKVNIGGRSRADVRHIAVMHAFNLVRKALLS   417
NTDB id 239 SPD RS09270 WP 000642701.1     VSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPVGTVFIGLAQDQGTEVIKVNIGGRSRADVRHIAVMHAFNLVRKALLS   417
NTDB id 538 SMSK321 RS11060 WP 000642686.1 VSEFTAQKMAEQARSKTQSDFGISLTGVAGPDSLEGHPAGTVFIGLAQEHGTKVIKVNIGGRSRADVRHIAVMHAFNLVRKALLS   417
NTDB id 510 SM12261 RS08320 WP 000642690.1 VSEFTAQKMAEQARIKTQSDFGLSLTGVAGPDSLEGHPAGTVFIGLAQEQGTEVIKVNIGGRSRADVRHIAVMHAFNLVRKALLS   417
NTDB id 26501 SDEG RS10120 WP 003058772.1 VSAYTAEKMAEQARLLTGADIGVSLTGVAGPDMLEEQPAGTVFIGLATQNKVESIKVLISGRSRSDVRHIATLHAFNMVRKTLLK   418
NTDB id 412 SMU RS09535 WP 002262393.1     VSAFTAEKMAERSRQLTQADLAISLTGVAGPDSLEGQPAGTVFIGLSSSKRTMAIKVLIGGRSRSDVRYIAVLHAFNLVRQTLLS   413
consensus                                  *!*******!*********!**********!***!******!*******************!******!**************!**

logo

NTDB id 124 BSU 16930 NP 389575.2          .K...   416
NTDB id 462 GPW51 RS00385 WP 012774894.1   .....   393
NTDB id 170 SP RS09755 WP 000642718.1      D....   418
NTDB id 280 KZH43 RS08670 WP 000642700.1   D....   418
NTDB id 205 SPR RS08830 WP 000642700.1     D....   418
NTDB id 239 SPD RS09270 WP 000642701.1     D....   418
NTDB id 538 SMSK321 RS11060 WP 000642686.1 D....   418
NTDB id 510 SM12261 RS08320 WP 000642690.1 D....   418
NTDB id 26501 SDEG RS10120 WP 003058772.1  PENLL   423
NTDB id 412 SMU RS09535 WP 002262393.1     HKNLV   418
consensus                                  *
```

X non conserved

X similar

X ≥ 50% conserved