```
logo

NTDB id 587 KW2 RS10850 WP 042211510.1        .....................MQTDILRLLRPKGKKLALIKQAKLIQLMGNLLNNGFNLGEVINFLALSKLVEKEFVFKMHQGLS   64
NTDB id 178234 NX99 RS07575 WP 148263031.1    MPVKISKATRQPAGTSSWKAWLNKDISLKGISKGKKLKINQQLKVIQLFKQLLKAGFTLTEIVAFLERSHLLKESSLSLMKASLM   85
NTDB id 395 FSA28 RS09400 WP 257638827.1      ..................MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKMRQGLL   67
NTDB id 386 SMU RS09030 WP 255262721.1        ..................MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKMRQGLL   67
NTDB id 430 SGO RS09415 WP 012130941.1        ................MISFLQQDISILSKQKQKKLGTSKQKQVIELFNNLFSSGFHLAETVDFLGRSALLEKNYVQQMRQGLA   68
NTDB id 271 KZH43 RS09260 WP 074196785.1      ......................MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLS   62
NTDB id 230 SPD RS09890 WP 074196785.1        ......................MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLS   62
NTDB id 196 SPR RS09425 WP 074196785.1        ......................MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLS   62
NTDB id 161 SP RS10375 WP 074196785.1         ......................MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLS   62
NTDB id 529 SMSK321 RS09235 WP 080550783.1    ......................MDISQVFRLKRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRTDLS   62
NTDB id 501 SM12261 RS00950 WP 004238896.1    ......................MDISQVFRLKRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRAGLS   62
consensus                                     *!!********!!!****!***!*!***!***!!*!*!***!!**!*!********!*  *!*

logo

NTDB id 587 KW2 RS10850 WP 042211510.1        SGKSLSEILESLSFSKNVVTQLALVEVHGNLVGTMQLVELHLKKQLKVKKKLIEVATYPVVLLVFLIGIMWGLKNYLLPQLDKG.   148
NTDB id 178234 NX99 RS07575 WP 148263031.1    RGDRLDQMFASVGFSDNIVTQIALADKHGNLLGSLTKIETYMLRMTKVRKKLMEVATYPILLLGFLILIMLGLKNYLLPQLLEGD   170
NTDB id 395 FSA28 RS09400 WP 257638827.1      NGLHLAEIMSSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKNYLLPQLEK..   150
NTDB id 386 SMU RS09030 WP 255262721.1        NGLHLAEIMSSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKNYLLPQLER..   150
NTDB id 430 SGO RS09415 WP 012130941.1        NGQAFSEIMASLGFSDAVVTQLSLAELHGNLSLALLKIEEYLDNLAKVKKKLIEVATYPMMLLGFLVLIMIGLRNYLLPQLSS..   151
NTDB id 271 KZH43 RS09260 WP 074196785.1      QGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDS..   145
NTDB id 230 SPD RS09890 WP 074196785.1        QGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDS..   145
NTDB id 196 SPR RS09425 WP 074196785.1        QGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDS..   145
NTDB id 161 SP RS10375 WP 074196785.1         QGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDS..   145
NTDB id 529 SMSK321 RS09235 WP 080550783.1    QGKSFSEMMESLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLSIMLGLRNYLLPQLDS..   145
NTDB id 501 SM12261 RS00950 WP 004238896.1    QGKSFSEMMESLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDS..   145
consensus                                     *!********!***!***!!!**!***!!!********!********!*!!!*!!*!!!**!!*!!**!!*!!*!!!!!!!**

logo

NTDB id 587 KW2 RS10850 WP 042211510.1        ..NNFATLLINHLPLVFFSVGALIVLLTSLSIIIFKHISALTNFTFLVKVPLVSSFIRLYLTAYFSREWGNLIAQGVELRQIIEL   231
NTDB id 178234 NX99 RS07575 WP 148263031.1    GKENWAVQLVQIFPQLFFVTLCGLLVLSLILYLWVKRQPALVFYRRMAKIPFIGQTVRLYTTAYYAREWGNLLGQGIDLLDLVAL   255
NTDB id 395 FSA28 RS09400 WP 257638827.1      ..GNFATRLISNFPILFLLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFVGKYLQLYLTAYYAREWGNLIGQGVEMAQIVRL   233
NTDB id 386 SMU RS09030 WP 255262721.1        ..GNFATRLISNFPILFLLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFAGKYLQLYLTAYYAREWGNLIGQGVEMAQIVRL   233
NTDB id 430 SGO RS09415 WP 012130941.1        ..QNFATQLIGHLPTIFLLTVLMLLGLTGAIYLVFKGQKRIPVYSFLARLPFVGSFVRIYLTAYYAREWGNMIGQGLELSQIFQI   234
NTDB id 271 KZH43 RS09260 WP 074196785.1      ..SNIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQM   228
NTDB id 230 SPD RS09890 WP 074196785.1        ..SNIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQM   228
NTDB id 196 SPR RS09425 WP 074196785.1        ..SNIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQM   228
NTDB id 161 SP RS10375 WP 074196785.1         ..SNIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQM   228
NTDB id 529 SMSK321 RS09235 WP 080550783.1    ..SNIATQIIGNLPQIFLGMVGLVSLLTLLALTFYKRSSKMRVFSILARIPFLGIFVQTYLTAYYAREWGNMISQGMELTQIFQI   228
NTDB id 501 SM12261 RS00950 WP 004238896.1    ..SNIATQIIGNLPQIFLGMVGFVSVGVLLALTFYKRGSKMRVFSILARIPFLGIFVQTYLTAYYAREWGNMISQGMELTQIFQI   228
consensus                                      *!*!*******!**!********** ********* ***  ********!********!*!!!**!!!!!***!!*********
```

```
logo
NTDB id 587 KW2 RS10850 WP 042211510.1        MKKQKSRIFAEVGIKLDLGLKAGQNFEQAVSHFSIFLPELSLMIEYGAIKDKLGLELSVYADECWEQFFSKIDRLMQLIQPLIFI   316
NTDB id 178234 NX99 RS07575 WP 148263031.1    MKEQKSKLFRELGTDLEEALMLGQSFPDRIASHPFFTKELSLIIAYGEANARLGYELEVYAEEVWQAFFNRLNKATTFVQPLIFV   340
NTDB id 395 FSA28 RS09400 WP 257638827.1      MQDQKSQLFREIGYDMEKALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETWEHFFAKLKKATQFVQPLIFV   318
NTDB id 386 SMU RS09030 WP 255262721.1        MQDQKSQLFREIGYDMEKALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETWEHFFAKLKKATQFVQPLIFV   318
NTDB id 430 SGO RS09415 WP 012130941.1        MQEQRSVLFQEIGQDLGQALQNGQEFSDKIASYPFFKKELSLIIEYGEVKSKLGSELEIYALKTWEEFFGRVNRTMNLIQPLVFV   319
NTDB id 271 KZH43 RS09260 WP 074196785.1      MQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFI   313
NTDB id 230 SPD RS09890 WP 074196785.1        MQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFI   313
NTDB id 196 SPR RS09425 WP 074196785.1        MQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFI   313
NTDB id 161 SP RS10375 WP 074196785.1         MQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFI   313
NTDB id 529 SMSK321 RS09235 WP 080550783.1   MQEQGSQLFKEIGQDLAQSLQNGREFSQTIATYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFI   313
NTDB id 501 SM12261 RS00950 WP 004238896.1   MQEQGSQLFKEIGQDMAHALQNGQEFSQTIGTYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFI   313
consensus                                     !**!*!**!*!*!******! *!**!**********!**!!!!*!*!!*****!!*!!**!!***!**!!**********!!!*!*
```

```
logo
NTDB id 587 KW2 RS10850 WP 042211510.1        FVALMIVLLYAAMLLPIYSNMGSGI.   341
NTDB id 178234 NX99 RS07575 WP 148263031.1    IVAVVIVMIYAAMLLPMYQNMEGMMS   366
NTDB id 395 FSA28 RS09400 WP 257638827.1      FVAIVIVMIYAAMLLPIYQNMEVNL.   343
NTDB id 386 SMU RS09030 WP 255262721.1        FVAIVIVMIYAAMLLPIYQNMEVNL.   343
NTDB id 430 SGO RS09415 WP 012130941.1        FVALMIVLLYAAMLLPLYQNMEVHL.   344
NTDB id 271 KZH43 RS09260 WP 074196785.1      FVALIIVLLYAAMLMPMYQNMEVNF.   338
NTDB id 230 SPD RS09890 WP 074196785.1        FVALIIVLLYAAMLMPMYQNMEVNF.   338
NTDB id 196 SPR RS09425 WP 074196785.1        FVALIIVLLYAAMLMPMYQNMEVNF.   338
NTDB id 161 SP RS10375 WP 074196785.1         FVALIIVLLYAAMLMPMYQNMEVNF.   338
NTDB id 529 SMSK321 RS09235 WP 080550783.1   FVALIIVLLYAAMLMPMYQNMEVNF.   338
NTDB id 501 SM12261 RS00950 WP 004238896.1   FVALIIVLLYAAMLMPMYQNMEVNF.   338
consensus                                     *!!**!!**!!!!!*!*!*!!****
```

X non conserved

X similar

X $\geq$ 50% conserved