logo

```
NTDB id 587 KW2 RS10850 WP 042211510.1            .....................MQTDILRLLRPKGKKLALIKQAKLIQLMGNLLNNGFNLGEVINFLALSKLVEKEFVFKM   59
NTDB id 1119852 EL086 RS09685 WP 126405090.1      MPVKISKAIRQSAGTSSWKAWLNKDISLKGISKGKKLKINQQLKVIQLFKQLLKAGFTLTEIVAFLERSHLLKESSLSLM   80
NTDB id 395 FSA28 RS09400 WP 257638827.1          ..................MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKM   62
NTDB id 386 SMU RS09030 WP 255262721.1            ..................MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKM   62
NTDB id 430 SGO RS09415 WP 012130941.1            .................MISFLQQDISILSKQKQKKLGTSKQKQVIELFNNLFSSGFHLAETVDFLGRSALLEKNYVQQM   63
NTDB id 271 KZH43 RS09260 WP 074196785.1          .......................MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM   57
NTDB id 230 SPD RS09890 WP 074196785.1            .......................MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM   57
NTDB id 196 SPR RS09425 WP 074196785.1            .......................MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM   57
NTDB id 161 SP RS10375 WP 074196785.1             .......................MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM   57
NTDB id 529 SMSK321 RS09235 WP 080550783.1        .......................MDISQVFRLKRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM   57
NTDB id 501 SM12261 RS00950 WP 004238896.1        .......................MDISQVFRLKRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM   57
consensus                                                                *!!********!!!****!***!*!***!***!!*!*!***!!**!*!********!
```

logo

```
NTDB id 587 KW2 RS10850 WP 042211510.1            HQGLSSGKSLSEILESLSFSKNVVTQLALVEVHGNLVGTMQLVELHLKKQLKVKKKLIEVATYPVVLLVFLIGIMWGLKN   139
NTDB id 1119852 EL086 RS09685 WP 126405090.1      KTSLMRGDRLDQMFAAVGFSDNIVTQIALADKHGNLLGSLTKIETYMLRMTKVRKKLMEVATYPILLLGFLILIMLGLKN   160
NTDB id 395 FSA28 RS09400 WP 257638827.1          RQGLLNGLHLAEIMSSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKN   142
NTDB id 386 SMU RS09030 WP 255262721.1            RQGLLNGLHLAEIMSSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKN   142
NTDB id 430 SGO RS09415 WP 012130941.1            RQGLANGQAFSEIMASLGFSDAVVTQLSLAELHGNLSLALLKIEEYLDNLAKVKKKLIEVATYPMMLLGFLVLIMIGLRN   143
NTDB id 271 KZH43 RS09260 WP 074196785.1          RVGLSQGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRN   137
NTDB id 230 SPD RS09890 WP 074196785.1            RVGLSQGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRN   137
NTDB id 196 SPR RS09425 WP 074196785.1            RVGLSQGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRN   137
NTDB id 161 SP RS10375 WP 074196785.1             RVGLSQGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRN   137
NTDB id 529 SMSK321 RS09235 WP 080550783.1        RTDLSQGKSFSEMMESLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLSIMLGLRN   137
NTDB id 501 SM12261 RS00950 WP 004238896.1        RAGLSQGKSFSEMMESLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRN   137
consensus                                         * *!**!************!***!!!**!***!!!********!********!*!!!*!!*!!!**!!*!!**!!*!!*!
```

logo

```
NTDB id 587 KW2 RS10850 WP 042211510.1            YLLPQLDKG...NNFATLLINHLPLVFFSVGALIVLLTSLSIIIFKHISALTNFTFLVKVPLVSSFIRLYLTAYFSREWG   216
NTDB id 1119852 EL086 RS09685 WP 126405090.1      YLLPQLLEGDGKENWAVQLVQIFPQLFFATLCGLLVLSLILYLWVKRQPALVFYRRMAKIPFIGQTVRLYTTAYYAREWG   240
NTDB id 395 FSA28 RS09400 WP 257638827.1          YLLPQLEK....GNFATRLISNFPILFLLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFVGKYLQLYLTAYYAREWG   218
NTDB id 386 SMU RS09030 WP 255262721.1            YLLPQLER....GNFATRLISNFPILFLLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFAGKYLQLYLTAYYAREWG   218
NTDB id 430 SGO RS09415 WP 012130941.1            YLLPQLSS....QNFATQLIGHLPTIFLLTVLMLLGLTGAIYLVFKGQKRIPVYSFLARLPFVGSFVRIYLTAYYAREWG   219
NTDB id 271 KZH43 RS09260 WP 074196785.1          YLLPQLDS....SNIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWG   213
NTDB id 230 SPD RS09890 WP 074196785.1            YLLPQLDS....SNIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWG   213
NTDB id 196 SPR RS09425 WP 074196785.1            YLLPQLDS....SNIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWG   213
NTDB id 161 SP RS10375 WP 074196785.1             YLLPQLDS....SNIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWG   213
NTDB id 529 SMSK321 RS09235 WP 080550783.1        YLLPQLDS....SNIATQIIGNLPQIFLGMVGLVSLLTLLALTFYKRSSKMRVFSILARIPFLGIFVQTYLTAYYAREWG   213
NTDB id 501 SM12261 RS00950 WP 004238896.1        YLLPQLDS....SNIATQIIGNLPQIFLGMVGFVSVGVLLALTFYKRGSKMRVFSILARIPFLGIFVQTYLTAYYAREWG   213
consensus                                         !!!!!!**    *!*!*******!**!********** ********* *** ********!********!*!!!**!!!!
```

```
logo
NTDB id 587 KW2 RS10850 WP 042211510.1        NLIAQGVELRQIIELMKKQKSRIFAEVGIKLDLGLKAGQNFEQAVSHFSIFLPELSLMIEYGAIKDKLGLELSVYADECW   296
NTDB id 1119852 EL086 RS09685 WP 126405090.1  NLLGQGIDLLDLVALMKEQKSKLFRELGADLEEALMLGQSFPDRIASHPFFTKELSLIIAYGEANARLGYELEVYAEEVW   320
NTDB id 395 FSA28 RS09400 WP 257638827.1      NLIGQGVEMAQIVRLMQDQKSQLFREIGYDMEKALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETW   298
NTDB id 386 SMU RS09030 WP 255262721.1        NLIGQGVEMAQIVRLMQDQKSQLFREIGYDMEKALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETW   298
NTDB id 430 SGO RS09415 WP 012130941.1        NMIGQGLELSQIFQIMQEQRSVLFQEIGQDLGQALQNGQEFSDKIASYPFFKKELSLIIEYGEVKSKLGSELEIYALKTW   299
NTDB id 271 KZH43 RS09260 WP 074196785.1      NMISQGMELTQIFQMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTW   293
NTDB id 230 SPD RS09890 WP 074196785.1        NMISQGMELTQIFQMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTW   293
NTDB id 196 SPR RS09425 WP 074196785.1        NMISQGMELTQIFQMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTW   293
NTDB id 161 SP RS10375 WP 074196785.1         NMISQGMELTQIFQMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTW   293
NTDB id 529 SMSK321 RS09235 WP 080550783.1    NMISQGMELTQIFQIMQEQGSQLFKEIGQDLAQSLQNGREFSQTIATYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTW   293
NTDB id 501 SM12261 RS00950 WP 004238896.1    NMISQGMELTQIFQIMQEQGSQLFKEIGQDMAHALQNGQEFSQTIGTYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTW   293
consensus                                     !***!!*********!**!*!**!*!*!******! *!**!*********!**!!!!*!*!!*****!!*!!**!!***!
```

```
logo
NTDB id 587 KW2 RS10850 WP 042211510.1        EQFFSKIDRLMQLIQPLIFIFVALMIVLLYAAMLLPIYSNMGSGI.   341
NTDB id 1119852 EL086 RS09685 WP 126405090.1  QAFFNRLNKATTFVQPLIFVIVAVVIVMIYAAMLLPMYQNMEGMMS   366
NTDB id 395 FSA28 RS09400 WP 257638827.1      EHFFAKLKKATQFVQPLIFVFVAIVIVMIYAAMLLPIYQNMEVNL.   343
NTDB id 386 SMU RS09030 WP 255262721.1        EHFFAKLKKATQFVQPLIFVFVAIVIVMIYAAMLLPIYQNMEVNL.   343
NTDB id 430 SGO RS09415 WP 012130941.1        EEFFGRVNRTMNLIQPLVFVFVALMIVLLYAAMLLPLYQNMEVHL.   344
NTDB id 271 KZH43 RS09260 WP 074196785.1      EAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF.   338
NTDB id 230 SPD RS09890 WP 074196785.1        EAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF.   338
NTDB id 196 SPR RS09425 WP 074196785.1        EAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF.   338
NTDB id 161 SP RS10375 WP 074196785.1         EAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF.   338
NTDB id 529 SMSK321 RS09235 WP 080550783.1    EAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF.   338
NTDB id 501 SM12261 RS00950 WP 004238896.1    EAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF.   338
consensus                                     **!!**********!!!*!**!!**!!**!!!!!*!*!*!!****
```

X non conserved
X similar
X $\geq$ 50% conserved