```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1160559 ACI607 RS11380 WP 010906319.1  MSLGHQKIGIKKLISYLQMDISHLLKPKGKKLRLIKQAKLIQLMGNLLNSGFNLGEVINFLSLSKLVEKEFTLKMKEGLA   80
NTDB id 587 KW2 RS10850 WP 042211510.1         ................MQTDILRLLRPKGKKLALIKQAKLIQLMGNLLNNGFNLGEVINFLALSKLVEKEFVFKMHQGLS   64
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 1160559 ACI607 RS11380 WP 010906319.1  SGQALSELLESLSFSKNVVTQLALVEVHGNLSGTMQLVELHLKKQLKVKNKLVEVATYPILLLIFLVGIMWGLKNYLLPQ  160
NTDB id 587 KW2 RS10850 WP 042211510.1         SGKSLSEILESLSFSKNVVTQLALVEVHGNLVGTMQLVELHLKKQLKVKKKLIEVATYPVLLVFLIGIMWGLKNYLLPQ  144
NTDB id 395 FSA28 RS09400 WP 257638827.1       NGLHLAEIMSSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKNYLLPQ  147
NTDB id 386 SMU RS09030 WP 255262721.1         NGLHLAEIMSSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKNYLLPQ  147
NTDB id 430 SGO RS09415 WP 012130941.1         NGQAFSEIMASLGFSDAVVTQLSLAELHGNLSLALLKIEEYLDNLAKVKKKLIEVATYPMMLLGFLVLIMIGLRNYLLPQ  148
NTDB id 271 KZH43 RS09260 WP 074196785.1       QGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQ  142
NTDB id 230 SPD RS09890 WP 074196785.1         QGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQ  142
NTDB id 196 SPR RS09425 WP 074196785.1         QGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQ  142
NTDB id 161 SP RS10375 WP 074196785.1          QGKSFSEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQ  142
NTDB id 529 SMSK321 RS09235 WP 080550783.1     QGKSFSEMMESLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLSIMLGLRNYLLPQ  142
NTDB id 501 SM12261 RS00950 WP 004238896.1     QGKSFSEMMESLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQ  142
consensus                                      *!****!***!!**!***!!!!*!*!*!!!********!**!*****!!*!!*!!*!!!**!!*!!**!!*!!*!!!!!!

logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1160559 ACI607 RS11380 WP 010906319.1  LNSGSNFATLLINHLPLVFFSFGAFIFLLTALSVTLFKRKSAIMNFTFLVKLPLVHSFIRLYLTAYFAREWGNLIAQGVE  240
NTDB id 587 KW2 RS10850 WP 042211510.1         LDKGNNFATLLINHLPLVFFSVGALIVLLTSLSIIIFKHISALTNFTFLVKVPLVSSFIRLYLTAYFSREWGNLIAQGVE  224
NTDB id 395 FSA28 RS09400 WP 257638827.1       LEKG.NFATRLISNFPILFLLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFVGKYLQLYLTAYYAREWGNLIGQGVE  226
NTDB id 386 SMU RS09030 WP 255262721.1         LERG.NFATRLISNFPILFLLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFAGKYLQLYLTAYYAREWGNLIGQGVE  226
NTDB id 430 SGO RS09415 WP 012130941.1         LSSQ.NFATQLIGHLPTIFLLTVLMLLGLTGAIYLVFKGQKRIPVYSFLARLPFVGSFVRIYLTAYYAREWGNMIGQGLE  227
NTDB id 271 KZH43 RS09260 WP 074196785.1       LDSS.NIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGME  221
NTDB id 230 SPD RS09890 WP 074196785.1         LDSS.NIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGME  221
NTDB id 196 SPR RS09425 WP 074196785.1         LDSS.NIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGME  221
NTDB id 161 SP RS10375 WP 074196785.1          LDSS.NIATQIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGME  221
NTDB id 529 SMSK321 RS09235 WP 080550783.1     LDSS.NIATQIIGNLPQIFLGMVGLVSLLTLLALTFYKRSSKMRVFSILARIPFLGIFVQTYLTAYYAREWGNMISQGME  221
NTDB id 501 SM12261 RS00950 WP 004238896.1     LDSS.NIATQIIGNLPQIFLGMVGFVSVGVLLALTFYKRGSKMRVFSILARIPFLGIFVQTYLTAYYAREWGNMISQGME  221
consensus                                      !*** !*!!**!***!**!********** ********* *** ********!********!!!!!**!!!!!*!*!!*!
```

```
logo
NTDB id 1160559 ACI6O7 RS11380 WP 010906319.1  LRQIINLMKKQKSRIFSEVGKNLDLELNAGRSFEQAVSKLALFLPELSLMIEYGAIKDKLGLELSLYADECWEQFFTKID  320
NTDB id 587 KW2 RS10850 WP 042211510.1         LRQIIELMKKQKSRIFAEVGIKLDLGLKAGQNFEQAVSHFSIFLPELSLMIEYGAIKDKLGLELSVYADECWEQFFSKID  304
NTDB id 395 FSA28 RS09400 WP 257638827.1       MAQIVRLMQDQKSQLFREIGYDMEKALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETWEHFFAKLK  306
NTDB id 386 SMU RS09030 WP 255262721.1         MAQIVRLMQDQKSQLFREIGYDMEKALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETWEHFFAKLK  306
NTDB id 430 SGO RS09415 WP 012130941.1         LSQIFQIMQEQRSVLFQEIGQDLGQALQNGQEFSDKIASYPFFKKELSLIIEYGEVKSKLGSELEIYALKTWEEFFGRVN  307
NTDB id 271 KZH43 RS09260 WP 074196785.1       LTQIFQMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVN  301
NTDB id 230 SPD RS09890 WP 074196785.1         LTQIFQMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVN  301
NTDB id 196 SPR RS09425 WP 074196785.1         LTQIFQMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVN  301
NTDB id 161 SP RS10375 WP 074196785.1          LTQIFQMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVN  301
NTDB id 529 SMSK321 RS09235 WP 080550783.1    LTQIFQIMQEQGSQLFKEIGQDLAQSLQNGREFSQTIATYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVN  301
NTDB id 501 SM12261 RS00950 WP 004238896.1    LTQIFQIMQEQGSQLFKEIGQDMAHALQNGQEFSQTIGTYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVN  301
consensus                                      **!!***!**!*!**!*!*!***** ! *!**!**********!**!!!!*!!!!**!*!!!*!!**!!***!!*!!****

logo
NTDB id 1160559 ACI6O7 RS11380 WP 010906319.1  RLMQLIQPLVFIFVALMIILLYAAMLLPIYSNMGSGI  357
NTDB id 587 KW2 RS10850 WP 042211510.1         RLMQLIQPLIFIFVALMIVLLYAAMLLPIYSNMGSGI  341
NTDB id 395 FSA28 RS09400 WP 257638827.1       KATQFVQPLIFVFVAIVIVMIYAAMLLPIYQNMEVNL  343
NTDB id 386 SMU RS09030 WP 255262721.1         KATQFVQPLIFVFVAIVIVMIYAAMLLPIYQNMEVNL  343
NTDB id 430 SGO RS09415 WP 012130941.1         RTMNLIQPLVFVFVALMIVLLYAAMLLPLYQNMEVHL  344
NTDB id 271 KZH43 RS09260 WP 074196785.1       RTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF  338
NTDB id 230 SPD RS09890 WP 074196785.1         RTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF  338
NTDB id 196 SPR RS09425 WP 074196785.1         RTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF  338
NTDB id 161 SP RS10375 WP 074196785.1          RTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF  338
NTDB id 529 SMSK321 RS09235 WP 080550783.1    RTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF  338
NTDB id 501 SM12261 RS00950 WP 004238896.1    RTMNLVQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF  338
consensus                                      ******!!!*!*!!!**!***!!!!!*!*!*!!****
```

X non conserved

X similar

X ≥ 50% conserved