```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 587 KW2 RS10850 WP 042211510.1          ...........MQTDILRLLRPKGKKLALIKQAKLIQLMGNLLNNGFNLGEVINFLALSKLVEKEFVFKMHQGLSSGKSL   69
NTDB id 1139777 DQM45 RS00695 WP 370737019.1    MKNGIKNLITYLQKDISLNNRHSRKKLATKKQAKLIQLLHNLSQSGFNLAEMIAFLEKTQILDRKHLSLMKTDLLNGCSL   80
NTDB id 395 FSA28 RS09400 WP 257638827.1        ........MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKMRQGLLNGLHL   72
NTDB id 386 SMU RS09030 WP 255262721.1          ........MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKMRQGLLNGLHL   72
NTDB id 430 SGO RS09415 WP 012130941.1          .......MISFLQQDISILSKQKQKKLGTSKQKQVIELFNNLFSSGFHLAETVDFLGRSALLEKNYVQQMRQGLANGQAF   73
NTDB id 271 KZH43 RS09260 WP 074196785.1        .............MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSF   67
NTDB id 230 SPD RS09890 WP 074196785.1          .............MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSF   67
NTDB id 196 SPR RS09425 WP 074196785.1          .............MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSF   67
NTDB id 161 SP RS10375 WP 074196785.1           .............MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSF   67
NTDB id 529 SMSK321 RS09235 WP 080550783.1      .............MDISQVFRLKRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRTDLSQGKSF   67
NTDB id 501 SM12261 RS00950 WP 004238896.1      .............MDISQVFRLKRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRAGLSQGKSF   67
consensus                                                    *!!********!!!***!!***!*!**!!***!!*!*!***!!**************!* *!**!***

logo
NTDB id 587 KW2 RS10850 WP 042211510.1          SEILESLSFSKNVVTQLALVEVHGNLVGTMQLVELHLKKQLKVKKKLIEVATYPVVLLVFLIGIMWGLKNYLLPQLDKGN  149
NTDB id 1139777 DQM45 RS00695 WP 370737019.1    SEMMRHLGFPDGIITQLSLAEAHGNTKKCLGKIEDYLVQTQKIRQKTIEVVTYPIILLTFLIIIILGLRHYLMPQMEKQ.  159
NTDB id 395 FSA28 RS09400 WP 257638827.1        AEIMSSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKNYLLPQLEKG.  151
NTDB id 386 SMU RS09030 WP 255262721.1          AEIMSSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKNYLLPQLERG.  151
NTDB id 430 SGO RS09415 WP 012130941.1          SEIMASLGFSDAVVTQLSLAELHGNLSLALLKIEEYLDNLAKVKKKLIEVATYPMMLLGFLVLIMIGLRNYLLPQLSSQ.  152
NTDB id 271 KZH43 RS09260 WP 074196785.1        SEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.  146
NTDB id 230 SPD RS09890 WP 074196785.1          SEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.  146
NTDB id 196 SPR RS09425 WP 074196785.1          SEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.  146
NTDB id 161 SP RS10375 WP 074196785.1           SEMMESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.  146
NTDB id 529 SMSK321 RS09235 WP 080550783.1      SEMMESLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLSIMLGLRNYLLPQLDSS.  146
NTDB id 501 SM12261 RS00950 WP 004238896.1      SEMMESLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.  146
consensus                                       *!****!******!!!*!*!*!!!********!**!********!**!!*!!!**!!*!!**!**!!**!!*!!****

logo
NTDB id 587 KW2 RS10850 WP 042211510.1          NFATLLINHLPLVFFSVGALIVLLTSLSIIIFKHISALTNFTFLVKVPLVSSFIRLYLTAYFSREWGNLIAQGVELRQII  229
NTDB id 1139777 DQM45 RS00695 WP 370737019.1    STLTYFLNNFPVYLLSLSIILLLTVIALVIRWRKLGKMKQMIQYSQIPLLAPFLKLYMTAFYAREWGNLISQGIELSQIV  239
NTDB id 395 FSA28 RS09400 WP 257638827.1        NFATRLISNFPILFLLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFVGKYLQLYLTAYYAREWGNLIGQGVEMAQIV  231
NTDB id 386 SMU RS09030 WP 255262721.1          NFATRLISNFPILFLLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFAGKYLQLYLTAYYAREWGNLIGQGVEMAQIV  231
NTDB id 430 SGO RS09415 WP 012130941.1          NFATQLIGHLPTIFLLTVLMLLGLTGAIYLVFKGQKRIPVYSFLARLPFVGSFVRIYLTAYYAREWGNMIGQGLELSQIF  232
NTDB id 271 KZH43 RS09260 WP 074196785.1        NIATQIIGNLPQIFLGMVGLVSVLALLLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIF  226
NTDB id 230 SPD RS09890 WP 074196785.1          NIATQIIGNLPQIFLGMVGLVSVLALLLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIF  226
NTDB id 196 SPR RS09425 WP 074196785.1          NIATQIIGNLPQIFLGMVGLVSVLALLLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIF  226
NTDB id 161 SP RS10375 WP 074196785.1           NIATQIIGNLPQIFLGMVGLVSVLALLLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIF  226
NTDB id 529 SMSK321 RS09235 WP 080550783.1      NIATQIIGNLPQIFLGMVGLVSLLTLLALTFYKRSSKMRVFSILARIPFLGIFVQTYLTAYYAREWGNMISQGMELTQIF  226
NTDB id 501 SM12261 RS00950 WP 004238896.1      NIATQIIGNLPQIFLGMVGFVSVGVLLALTFYKRGSKMRVFSILARIPFLGIFVQTYLTAYYAREWGNMISQGMELTQIF  226
consensus                                       ***!******!************* ********* *** ********!********!*!!***!!!!!*!*!!*!**!!*
```

```
logo
```

```
NTDB id 587 KW2 RS10850 WP 042211510.1          ELMKKQKSRIFAEVGIKLDLGLKAGQNFEQAVSHFSIFLPELSLMIEYGAIKDKLGLELSVYADECWEQFFSKIDRLMQL   309
NTDB id 1139777 DQM45 RS00695 WP 370737019.1    TIMSIEKSDLIKEIGLDMRQSFLEGQSFHEKVRGYPFFSDELSLMIEYGEIKGKLGQELDIYGQLTWDAYFRKLFQATQI   319
NTDB id 395 FSA28 RS09400 WP 257638827.1        RLMQDQKSQLFREIGYDMEKALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETWEHFFAKLKKATQF   311
NTDB id 386 SMU RS09030 WP 255262721.1          RLMQDQKSQLFREIGYDMEKALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETWEHFFAKLKKATQF   311
NTDB id 430 SGO RS09415 WP 012130941.1          QIMQEQRSVLFQEIGQDLGQALQNGQEFSDKIASYPFFKKELSLIIEYGEVKSKLGSELEIYALKTWEEFFGRVNRTMNL   312
NTDB id 271 KZH43 RS09260 WP 074196785.1        QMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNL   306
NTDB id 230 SPD RS09890 WP 074196785.1          QMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNL   306
NTDB id 196 SPR RS09425 WP 074196785.1          QMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNL   306
NTDB id 161 SP RS10375 WP 074196785.1           QMMQEQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNL   306
NTDB id 529 SMSK321 RS09235 WP 080550783.1      QIMQEQGSQLFKEIGQDLAQSLQNGREFSQTIATYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNL   306
NTDB id 501 SM12261 RS00950 WP 004238896.1      QIMQEQGSQLFKEIGQDMAHALQNGQEFSQTIGTYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNL   306
consensus                                       **!****!****!*!******* *!**!**********!**!!!!*!!!!**!*!!!*!!**!****!***!*********
```

```
logo
```

```
NTDB id 587 KW2 RS10850 WP 042211510.1          IQPLIFIFVALMIVLLYAAMLLPIYSNMGSGI   341
NTDB id 1139777 DQM45 RS00695 WP 370737019.1    IQPFIFMIVALIIVMIYAAMLLPMYNTIGGTI   351
NTDB id 395 FSA28 RS09400 WP 257638827.1        VQPLIFVFVAIVIVMIYAAMLLPIYQNMEVNL   343
NTDB id 386 SMU RS09030 WP 255262721.1          VQPLIFVFVAIVIVMIYAAMLLPIYQNMEVNL   343
NTDB id 430 SGO RS09415 WP 012130941.1          IQPLVFVFVALMIVLLYAAMLLPLYQNMEVHL   344
NTDB id 271 KZH43 RS09260 WP 074196785.1        VQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF   338
NTDB id 230 SPD RS09890 WP 074196785.1          VQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF   338
NTDB id 196 SPR RS09425 WP 074196785.1          VQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF   338
NTDB id 161 SP RS10375 WP 074196785.1           VQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF   338
NTDB id 529 SMSK321 RS09235 WP 080550783.1      VQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF   338
NTDB id 501 SM12261 RS00950 WP 004238896.1      VQPLVFIFVALIIVLLYAAMLMPMYQNMEVNF   338
consensus                                       *!!**!**!!**!!**!!!!!*!*!*******
```

X non conserved

X similar

X $\geq$ 50% conserved