```
logo
NTDB id 587 KW2 RS10850 WP 042211510.1          .......MQTDILRLLRPKGKKLALIKQAKLIQLMGNLLNNGFNLGEVINFLALSKLVEKEFVFKMHQGLSSGKSLSEIL   73
NTDB id 430 SGO RS09415 WP 012130941.1          ...MISFLQQDISILSKQKQKKLGTSKQKQVIELFNNLFSSGFHLAETVDFLGRSALLEKNYVQQMRQGLANGQAFSEIM   77
NTDB id 271 KZH43 RS09260 WP 074196785.1        .........MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMM   71
NTDB id 230 SPD RS09890 WP 074196785.1          .........MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMM   71
NTDB id 196 SPR RS09425 WP 074196785.1          .........MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMM   71
NTDB id 161 SP RS10375 WP 074196785.1           .........MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMM   71
NTDB id 529 SMSK321 RS09235 WP 080550783.1      .........MDISQVFRLKRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRTDLSQGKSFSEMM   71
NTDB id 501 SM12261 RS00950 WP 004238896.1      .........MDISQVFRLKRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRAGLSQGKSFSEMM   71
NTDB id 1097346 ACM3HZ RS01675 WP 223295889.1  MDKWISWLKKDISVRNRHKSKKLSLKKQRKVVQLFNNLFASGFSLTDMVTFLKRSKLLSDCYTDSMNKALLEGKDLSKML   80
NTDB id 395 FSA28 RS09400 WP 257638827.1        ....MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKMRQGLLNGLHLAEIM   76
NTDB id 386 SMU RS09030 WP 255262721.1          ....MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKMRQGLLNGLHLAEIM   76
consensus                                                *!!********!!!***!!*****!**!!***!!*!*****!!**!*!********!* *!**!*******

logo
NTDB id 587 KW2 RS10850 WP 042211510.1          ESLSFSKNVVTQLALVEVHGNLVGTMQLVELHLKKQLKVKKKLIEVATYPVVLLVFLIGIMWGLKNYLLPQLDKGNNFAT  153
NTDB id 430 SGO RS09415 WP 012130941.1          ASLGFSDAVVTQLSLAELHGNLSLALLKIEEYLDNLAKVKKKLIEVATYPMMLLGFLVLIMIGLRNYLLPQLSSQ.NFAT  156
NTDB id 271 KZH43 RS09260 WP 074196785.1        ESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.NIAT  150
NTDB id 230 SPD RS09890 WP 074196785.1          ESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.NIAT  150
NTDB id 196 SPR RS09425 WP 074196785.1          ESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.NIAT  150
NTDB id 161 SP RS10375 WP 074196785.1           ESLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.NIAT  150
NTDB id 529 SMSK321 RS09235 WP 080550783.1      ESLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLSIMLGLRNYLLPQLDSS.NIAT  150
NTDB id 501 SM12261 RS00950 WP 004238896.1      ESLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.NIAT  150
NTDB id 1097346 ACM3HZ RS01675 WP 223295889.1  GELGFSDTVITQVALADLHGNISRSLLKIESYLANLLLVRKKVIEVATYPLILLSFLVLIMIGLRNYLMPQLGEN.NFAT  159
NTDB id 395 FSA28 RS09400 WP 257638827.1        SSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKNYLLPQLEKG.NFAT  155
NTDB id 386 SMU RS09030 WP 255262721.1          SSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKNYLLPQLERG.NFAT  155
consensus                                       **!**!****!!**!***!!!********!**!*****!*!!**!!*!!!**!!*!!**!!*!!*!!!*!!!*** !*!!

logo
NTDB id 587 KW2 RS10850 WP 042211510.1          LLINHLPLVFFSVGALIVLLTSLSIIIFKHISALTNFTFLVKVPLVSSFIRLYLTAYFSREWGNLIAQGVELRQIIELMK  233
NTDB id 430 SGO RS09415 WP 012130941.1          QLIGHLPTIFLLTVLMLLGLTGAIYLVFKGQKRIPVYSFLARLPFVGSFVRIYLTAYYAREWGNMIGQGLELSQIFQIMQ  236
NTDB id 271 KZH43 RS09260 WP 074196785.1        QIIGNLPQIFLGMVGLVSVLALLLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQ  230
NTDB id 230 SPD RS09890 WP 074196785.1          QIIGNLPQIFLGMVGLVSVLALLLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQ  230
NTDB id 196 SPR RS09425 WP 074196785.1          QIIGNLPQIFLGMVGLVSVLALLLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQ  230
NTDB id 161 SP RS10375 WP 074196785.1           QIIGNLPQIFLGMVGLVSVLALLLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQ  230
NTDB id 529 SMSK321 RS09235 WP 080550783.1      QIIGNLPQIFLGMVGLVSLLTLLALTFYKRSSKMRVFSILARIPFLGIFVQTYLTAYYAREWGNMISQGMELTQIFQIMQ  230
NTDB id 501 SM12261 RS00950 WP 004238896.1      QIIGNLPQIFLGMVGFVSVGVLLALTFYKRGSKMRVFSILARIPFLGIFVQTYLTAYYAREWGNMISQGMELTQIFQIMQ  230
NTDB id 1097346 ACM3HZ RS01675 WP 223295889.1  RLITNVPNIFLLLLAVVLIFSLIFYIIQKRLSRIKVACFLTTIPLVGSYVKLYLTAYYAREWGNLLSQGIELDQIVKVMQ  239
NTDB id 395 FSA28 RS09400 WP 257638827.1        RLISNFPILFLLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFVGKYLQLYLTAYYAREWGNLIGQGVEMAQIVRLMQ  235
NTDB id 386 SMU RS09030 WP 255262721.1          RLISNFPILFLLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFAGKYLQLYLTAYYAREWGNLIGQGVEMAQIVRLMQ  235
consensus                                       **!***!**!********** ********* *** ********!*******!!!!!**!!!!!***!!*!**!!***!*
```

```
logo
```

```
NTDB id 587 KW2 RS10850 WP 042211510.1          KQKSRIFAEVGIKLDLGLKAGQNFEQAVSHFSIFLPELSLMIEYGAIKDKLGLELSVYADECWEQFFSKIDRLMQLIQPL   313
NTDB id 430 SGO RS09415 WP 012130941.1          EQRSVLFQEIGQDLGQALQNGQEFSDKIASYPFFKKELSLIIEYGEVKSKLGSELEIYALKTWEEFFGRVNRTMNLIQPL   316
NTDB id 271 KZH43 RS09260 WP 074196785.1        EQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPL   310
NTDB id 230 SPD RS09890 WP 074196785.1          EQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPL   310
NTDB id 196 SPR RS09425 WP 074196785.1          EQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPL   310
NTDB id 161 SP RS10375 WP 074196785.1           EQGSQLFKEVGQDLAQTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPL   310
NTDB id 529 SMSK321 RS09235 WP 080550783.1      EQGSQLFKEIGQDLAQSLQNGREFSQTIATYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPL   310
NTDB id 501 SM12261 RS00950 WP 004238896.1      EQGSQLFKEIGQDMAHALQNGQEFSQTIGTYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPL   310
NTDB id 1097346 ACM3HZ RS01675 WP 223295889.1  NQKSKLFREIGYDMEEGFLSGKAFHQKVLDYPFFLTELSLMIEYGQVKAKLGTELDIYADEKWEDFFTKLARATQLIQPV   319
NTDB id 395 FSA28 RS09400 WP 257638827.1        DQKSQLFREIGYDMEKALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETWEHFFAKLKKATQFVQPL   315
NTDB id 386 SMU RS09030 WP 255262721.1          DQKSQLFREIGYDMEKALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETWEHFFAKLKKATQFVQPL   315
consensus                                       *!*!**!*!*!******* *!**!*********!**!!!!*!!!!**!*!!!*!!**!!***!!*!!**********!!*
```

```
logo
```

```
NTDB id 587 KW2 RS10850 WP 042211510.1          IFIFVALMIVLLYAAMLLPIYSNMGSGI   341
NTDB id 430 SGO RS09415 WP 012130941.1          VFVFVALMIVLLYAAMLLPLYQNMEVHL   344
NTDB id 271 KZH43 RS09260 WP 074196785.1        VFIFVALIIVLLYAAMLMPMYQNMEVNF   338
NTDB id 230 SPD RS09890 WP 074196785.1          VFIFVALIIVLLYAAMLMPMYQNMEVNF   338
NTDB id 196 SPR RS09425 WP 074196785.1          VFIFVALIIVLLYAAMLMPMYQNMEVNF   338
NTDB id 161 SP RS10375 WP 074196785.1           VFIFVALIIVLLYAAMLMPMYQNMEVNF   338
NTDB id 529 SMSK321 RS09235 WP 080550783.1      VFIFVALIIVLLYAAMLMPMYQNMEVNF   338
NTDB id 501 SM12261 RS00950 WP 004238896.1      VFIFVALIIVLLYAAMLMPMYQNMEVNF   338
NTDB id 1097346 ACM3HZ RS01675 WP 223295889.1  IFIFVALIIVMIYAAMLLPMYQNMEILS   347
NTDB id 395 FSA28 RS09400 WP 257638827.1        IFVFVAIVIVMIYAAMLLPIYQNMEVNL   343
NTDB id 386 SMU RS09030 WP 255262721.1          IFVFVAIVIVMIYAAMLLPIYQNMEVNL   343
consensus                                       *!*!!!**!!**!!!!!*!*!*!!****
```

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