```
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 406226 GO596 RS02340 WP 198289264.1  MSKLIALLETDISVLKRQKSKKLPFKKQQKVIQLFNNLFNSGFTLTEIVSFLRRSQLLQESYVDSMQESLLSGATLADMM   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 406226 GO596 RS02340 WP 198289264.1  ARLGFSDTIVTQIALADVHGNCQQSLVKIDRYLASMSVVRKKLIEVATYPLILLSFLILIMLGLKNYLLPQLESQ.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      QIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQ   230
NTDB id 230 SPD RS09890 WP 074196785.1        QIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQ   230
NTDB id 196 SPR RS09425 WP 074196785.1        QIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQ   230
NTDB id 161 SP RS10375 WP 074196785.1         QIIGNLPQIFLGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQ   230
NTDB id 529 SMSK321 RS09235 WP 080550783.1    QIIGNLPQIFLGMVGLVSLLTLLALTFYKRSSKMRVFSILARIPFLGIFVQTYLTAYYAREWGNMISQGMELTQIFQIMQ   230
NTDB id 501 SM12261 RS00950 WP 004238896.1    QIIGNLPQIFLGMVGFVSVGVLLALTFYKRGSKMRVFSILARIPFLGIFVQTYLTAYYAREWGNMISQGMELTQIFQIMQ   230
NTDB id 406226 GO596 RS02340 WP 198289264.1  QIIAHFPMIFLGSFVLLGLAVVLGFFYARRLSPIYLFSQISRLPIVGRFIRLYLTAYYAREWGNLIGQGIDLMEIVALMQ   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 406226 GO596 RS02340 WP 198289264.1   HQKSRLFQEIGKDIQQALLSGQSFHQKVLDYPFFLRELSLMIEYGEVKSKLGRELDIYAEETWQTFFSQLTQATQLIQPL   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 406226 GO596 RS02340 WP 198289264.1   VFVFVALIIVLIYVAMLLPMYQNMGGNF   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