```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 587 KW2 RS10850 WP 042211510.1      .......MQTDILRLLRPKGKKLALIKQAKLIQLMGNLLNNGFNLGEVINFLALSKLVEKEFVFKMHQGLSSGKSLSEILESLSF   78
NTDB id 430 SGO RS09415 WP 012130941.1      ...MISFLQQDISILSKQKQKKLGTSKQKQVIELFNNLFSSGFHLAETVDFLGRSALLEKNYVQQMRQGLANGQAFSEIMASLGF   82
NTDB id 271 KZH43 RS09260 WP 074196785.1    .........MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMMESLGC   76
NTDB id 230 SPD RS09890 WP 074196785.1      .........MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMMESLGC   76
NTDB id 196 SPR RS09425 WP 074196785.1      .........MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMMESLGC   76
NTDB id 161 SP RS10375 WP 074196785.1       .........MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRVGLSQGKSFSEMMESLGC   76
NTDB id 529 SMSK321 RS09235 WP 080550783.1 .........MDISQVFRLKRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRTDLSQGKSFSEMMESLGF   76
NTDB id 501 SM12261 RS00950 WP 004238896.1 .........MDISQVFRLKRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQMRAGLSQGKSFSEMMESLGF   76
NTDB id 140375 RDF RS01090 WP 223295889.1  MDKWISWLKKDISVRNRHKSKKLSLKKQRKVVQLFNNLFASGFSLTDMVTFLKRSKLLSDCYTDSMNKALLEGKDLSKMLGELGF   85
NTDB id 395 FSA28 RS09400 WP 257638827.1   ....MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKMRQGLLNGLHLAEIMSSLGF   81
NTDB id 386 SMU RS09030 WP 255262721.1     ....MTFLQQDISLKEKHKQKKLKIKKQRKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKMRQGLLNGLHLAEIMSSLGF   81
consensus                                            *!!*******!!!***!!*****!**!!***!!*!*****!!**!*!********!* *!**!*********!**
```

```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 587 KW2 RS10850 WP 042211510.1      SKNVVTQLALVEVHGNLVGTMQLVELHLKKQLKVKKKLIEVATYPVVLLVFLIGIMWGLKNYLLPQLDKGNNFATLLINHLPLVF   163
NTDB id 430 SGO RS09415 WP 012130941.1      SDAVVTQLSLAELHGNLSLALLKIEEYLDNLAKVKKKLIEVATYPMMLLGFLVLIMIGLRNYLLPQLSSQ.NFATQLIGHLPTIF   166
NTDB id 271 KZH43 RS09260 WP 074196785.1    SSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.NIATQIIGNLPQIF   160
NTDB id 230 SPD RS09890 WP 074196785.1      SSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.NIATQIIGNLPQIF   160
NTDB id 196 SPR RS09425 WP 074196785.1      SSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.NIATQIIGNLPQIF   160
NTDB id 161 SP RS10375 WP 074196785.1       SSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.NIATQIIGNLPQIF   160
NTDB id 529 SMSK321 RS09235 WP 080550783.1 SSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLSIMLGLRNYLLPQLDSS.NIATQIIGNLPQIF   160
NTDB id 501 SM12261 RS00950 WP 004238896.1 SSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRNYLLPQLDSS.NIATQIIGNLPQIF   160
NTDB id 140375 RDF RS01090 WP 223295889.1  SDTVITQVALADLHGNISRSLLKIESYLANLLLVRKKVIEVATYPLILLSFLVLIMIGLRNYLMPQLGEN.NFATRLITNVPNIF   169
NTDB id 395 FSA28 RS09400 WP 257638827.1   SDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKNYLLPQLEKG.NFATRLISNFPILF   165
NTDB id 386 SMU RS09030 WP 255262721.1     SDDVVTQLALSEVHGNTQKSLLKIESYLNNLILVKKKLVEVITYPIILLIFLVVIMLGLKNYLLPQLERG.NFATRLISNFPILF   165
consensus                                  !****!!**!***!!!********!**!*****!*!!**!!*!!!**!!*!!**!!*!!*!!!*!!!***  !*!!**!***!**!
```

```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 587 KW2 RS10850 WP 042211510.1      FSVGALIVLLTSLSIIIFKHISALTNFTFLVKVPLVSSFIRLYLTAYFSREWGNLIAQGVELRQIIELMKKQKSRIFAEVGIKLD   248
NTDB id 430 SGO RS09415 WP 012130941.1      LLTVLMLLGLTGAIYLVFKGQKRIPVYSFLARLPFVGSFVRIYLTAYYAREWGNMIGQGLELSQIFQIMQEQRSVLFQEIGQDLG   251
NTDB id 271 KZH43 RS09260 WP 074196785.1    LGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQEQGSQLFKEVGQDLA   245
NTDB id 230 SPD RS09890 WP 074196785.1      LGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQEQGSQLFKEVGQDLA   245
NTDB id 196 SPR RS09425 WP 074196785.1      LGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQEQGSQLFKEVGQDLA   245
NTDB id 161 SP RS10375 WP 074196785.1       LGMVGLVSVLALLALTFYKRSSKMSVFSILARLPFIGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMQEQGSQLFKEVGQDLA   245
NTDB id 529 SMSK321 RS09235 WP 080550783.1 LGMVGLVSLLTLLALTFYKRSSKMRVFSILARLPFLGIFVQTYLTAYYAREWGNMISQGMELTQIFQIMQEQGSQLFKEIGQDLA   245
NTDB id 501 SM12261 RS00950 WP 004238896.1 LGMVGFVSVGVLLALTFYKRGSKMRVFSILARLPFLGIFVQTYLTAYYAREWGNMISQGMELTQIFQIMQEQGSQLFKEIGQDMA   245
NTDB id 140375 RDF RS01090 WP 223295889.1  LLLLAVVLIFSLIFYIIQKRLSRIKVACFLTTIPLVGSYVKLYLTAYYAREWGNLLSQGIELDQIVKVMQNQKSKLFREIGYDME   254
NTDB id 395 FSA28 RS09400 WP 257638827.1   LLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFVGKYLQLYLTAYYAREWGNLIGQGVEMAQIVRLMQDQKSQLFREIGYDME   250
NTDB id 386 SMU RS09030 WP 255262721.1     LLGCCFFILLVGIFTFFSRKISRLHLIGFCSHLPFAGKYLQLYLTAYYAREWGNLIGQGVEMAQIVRLMQDQKSQLFREIGYDME   250
consensus                                  ********** ********* *** ********!********!!!!!**!!!!!***!!*!**!!***!**!*!**!*!*!****
```

```
logo
NTDB id 587 KW2 RS10850 WP 042211510.1      LGLKAGQNFEQAVSHFSIFLPELSLMIEYGAIKDKLGLELSVYADECWEQFFSKIDRLMQLIQPLIFIFVALMIVLLYAAMLLPI   333
NTDB id 430 SGO RS09415 WP 012130941.1      QALQNGQEFSDKIASYPFFKKELSLIIEYGEVKSKLGSELEIYALKTWEEFFGRVNRTMNLIQPLVFVFVALMIVLLYAAMLLPL   336
NTDB id 271 KZH43 RS09260 WP 074196785.1    QTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPM   330
NTDB id 230 SPD RS09890 WP 074196785.1      QTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPM   330
NTDB id 196 SPR RS09425 WP 074196785.1      QTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPM   330
NTDB id 161 SP RS10375 WP 074196785.1       QTLKNGREFSQTIGTYPFFRKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPM   330
NTDB id 529 SMSK321 RS09235 WP 080550783.1 QSLQNGREFSQTIATYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPM   330
NTDB id 501 SM12261 RS00950 WP 004238896.1 HALQNGQEFSQTIGTYPFFKKELSLIIEYGEVKSKLGSELEIYAEKTWEAFFTRVNRTMNLVQPLVFIFVALIIVLLYAAMLMPM   330
NTDB id 140375 RDF RS01090 WP 223295889.1  EGFLSGKAFHQKVLDYPFFLTELSLMIEYGQVKAKLGTELDIYADEKWEDFFTKLARATQLIQPVIFIFVALIIVMIYAAMLLPM   339
NTDB id 395 FSA28 RS09400 WP 257638827.1   KALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETWEHFFAKLKKATQFVQPLIFVFVAIVIVMIYAAMLLPI   335
NTDB id 386 SMU RS09030 WP 255262721.1     KALLSGQEFHQKVLDYPFFLKELSLMIEYGEVKSKLGNELEIYAEETWEHFFAKLKKATQFVQPLIFVFVAIVIVMIYAAMLLPI   335
consensus                                  *** *!**!**********!**!!!!*!!!!**!*!!!*!!**!!***!!*!!**********!!**!*!!!**!!**!!!!!*!*
```

```
logo
NTDB id 587 KW2 RS10850 WP 042211510.1      YSNMGSGI   341
NTDB id 430 SGO RS09415 WP 012130941.1      YQNMEVHL   344
NTDB id 271 KZH43 RS09260 WP 074196785.1    YQNMEVNF   338
NTDB id 230 SPD RS09890 WP 074196785.1      YQNMEVNF   338
NTDB id 196 SPR RS09425 WP 074196785.1      YQNMEVNF   338
NTDB id 161 SP RS10375 WP 074196785.1       YQNMEVNF   338
NTDB id 529 SMSK321 RS09235 WP 080550783.1  YQNMEVNF   338
NTDB id 501 SM12261 RS00950 WP 004238896.1  YQNMEVNF   338
NTDB id 140375 RDF RS01090 WP 223295889.1   YQNMEILS   347
NTDB id 395 FSA28 RS09400 WP 257638827.1    YQNMEVNL   343
NTDB id 386 SMU RS09030 WP 255262721.1      YQNMEVNL   343
consensus                                   !*!!****
```

X non conserved
X similar
X ≥ 50% conserved