```
logo
NTDB id 1029 TT RS02230 WP 011228203.1      ................MPVYQYKARDRQG.RLVEATIEAEDLRTAARLLRDRGLFVAEIKEPGKGLQAEVRIPALERGPG   63
NTDB id 1402 DSB67 RS12670 WP 010643257.1   ...M......KTIAPQLKNYRWKGINSSG.KKTSGNVLAMTEIEVRERLDAQHIKIKKLKKGSISFITK.....ISHRVK   65
NTDB id 1169 A1552VC RS11075 WP 000648511.1 ..MK......ATQTLPLKNYRWKGINSNG.KKVSGQMLAISEIEVRDKLKDQHIQIKKLKKGSVSLLAR.....LTHRVK   66
NTDB id 1112 NGFG RS09215 WP 003689811.1    ...MAKNGGFSLFAKKEKRFIFEGRHSASDKLVNGEVSAFTEEEARKKLAKRGIRPLQITRVKTS.........SKRKIT   68
NTDB id 1113 AAA85695.1 219..1451( )        ...MAKNGGFSLFAKKEKRFIFEGRHSASDKLVNGEVSAFTEEEARKKLAKRGIRPLQITRVKTS.........SKRKIT   68
NTDB id 42374 NH8B RS17075 WP 014088350.1   MATLAK....KLPTTAAHIWEWEGKDRAG.KVVRGEMRAESEIVAKTQLRRQGITVQKLKKRKAG.........FGKRIT   66
NTDB id 1252 GC085 RS07730 WP 011213805.1   ...MDK......NSPPLLTFHYQGINKAG.QKMEGDIQARSLAIAKADLRKQGIVTNKVVKKRKPLFDR.....KNKKIT   65
NTDB id 1198 PSJM300 03950 AFN76868.1       ...MAQ......KAIKNSVFTWEGLDRQG.AKIKGELSGVSPALVKAQLRKQGINPQKVRKKSISLFS......AGKKIK   64
NTDB id 1016 ACIAD RS01680 WP 004920476.1   ..MAAK......KTQVMPVFAYEGVDRKG.IKLKGELPARNMALAKVTLRKQGITIRTIREKRKNIFEGL....LKKKVK   67
NTDB id 1059 ABD1 RS01610 WP 000279215.1    ..MAVK......KAQMMPTFAYEGVDRKG.VKIKGELPAKNMALAKVTLRKQGVTVRNIREKRKNILEGL....FKKKVT   67
consensus                                     ***        *  *  * ******* * *** *** * ** ***  !***** * ****** **          ****

logo
NTDB id 1029 TT RS02230 WP 011228203.1      LKDLAIFSRQLATMLGAGLTLLQALAILERQTENRKFREILKQVRTDVEGGMAFSEALSKHK.IFSRLYVNLVRAGETSG  142
NTDB id 1402 DSB67 RS12670 WP 010643257.1   GKDITIFTRQIATMLMTGVPIVQALKLVSENHKKAEMKSILMSVTRAVEAGTPMSKAMRTASTHFDPLYTDLIATGEQSG  145
NTDB id 1169 A1552VC RS11075 WP 000648511.1 SKDITILTRQLATMLTTGVPIVQALKLVGDNHRKAEMKSILAQITKSVEAGTPLSKAMRTASAHFDTLYVDLVETGEMSG  146
NTDB id 1112 NGFG RS09215 WP 003689811.1    QEDITVFTRQLSTMIKAGLPLMQAFEIVARGHGNPSMTEMLMEIRGQVEQGSSLSRAFSNHPKYFDRFYCNLVAAGETGG  148
NTDB id 1113 AAA85695.1 219..1451( )        QEDITVFTRQLSTMINAGLPLMQAFEIVARGHGNPSMTEMLMEIRGQVEQGSSLSRAFSNHPKYFDRFYCNLVAAGETGG  148
NTDB id 42374 NH8B RS17075 WP 014088350.1   DRDITLFTRQLATMMKAGVPLLQSFDISAKGHSNPAVTKMLLEVRADVETGMSLAEAFRKRPLYFDKLFCNLIAAGETGG  146
NTDB id 1252 GC085 RS07730 WP 011213805.1   QADITVFSRQLATMIESGIPLVQAFDIVAKGQSNKRLKDLIETIKHDIETGLTLAESLIKHPLYFNELFCNLVDAGEKSG  145
NTDB id 1198 PSJM300 03950 AFN76868.1       PMDIALFTRQMATMMKAGVPLLQSFDIIGEGFDNPNMRKLVDDLKQEVAAGNSFASSLRKKPQYFDDLYCNLVDSGEQSG  144
NTDB id 1016 ACIAD RS01680 WP 004920476.1   PLDIAIFTRQLATMMKAGVPLVQAFEIVAEGLENPAMRDVVLGLKNEVEGGNTFAGALRKYPQYFDNLFCSLIESGEQSG  147
NTDB id 1059 ABD1 RS01610 WP 000279215.1    TLDITIFTRQLATMMKAGVPLVQGFEIVAEGLENPAMREVVLGIKGEVEGGSTFASALRKYPQHFDNLFCSLVESGEQSG  147
consensus                                     !*****!!**!!***!****!****** ** ** ****** ** ****!***  **** * *!* ****!***!! *!

logo
NTDB id 1029 TT RS02230 WP 011228203.1      GLDLILDRLASFLEKELELRGKIRSAMTYPVIVFVFAVGVAYFLLTGIVPQFAQILTDLGSELPLLTRFLIAVSDLLRAA  222
NTDB id 1402 DSB67 RS12670 WP 010643257.1   NLSQVFERLATYREKSEQLRAKVIKALIYPAMVVLVALGVSYLMLTRVIPEFEKMFTGFGADLPAFTQMVLNLSAWTQNW  225
NTDB id 1169 A1552VC RS11075 WP 000648511.1 NLPEVFERLATYREKSEQLRAKVIKALIYPSMVVLVALGVSYLMLTMVIPEFESMFKGFGAELPWFTQQVLKLSHWVQAY  226
NTDB id 1112 NGFG RS09215 WP 003689811.1    VLESLLDKLAIYKEKTQAIRKKVKTALTYPVSVIAVAIGLVFVMMIFVLPAFKEVYANMGAELPPLTQTVMDMSDFFVSY  228
NTDB id 1113 AAA85695.1 219..1451( )        VLESLLDKLAIYKEKTQAIRKKVKTALTYPVSVIAVAIGLVFVMMIFVLPAFKEVYANMGAELPALTQTVMDMSDFFVSY  228
NTDB id 42374 NH8B RS17075 WP 014088350.1   VLDSLLDKLATYREKIMAIKGKIKSAMIYPSAIIATAFIITTIIMLYVIPAFKDLFSSFGADLPAPTLLVIWLSDAFVKF  226
NTDB id 1252 GC085 RS07730 WP 011213805.1   SLDIMLDKVATYKEKIEIIKKKIKKALTYPIAVMVVALLVTAGLLIYVVPQFESLFKGFGADLPAMTRAVITMSEFMQAY  225
NTDB id 1198 PSJM300 03950 AFN76868.1       SLETLLDRVATYKEKTEALKAKIKKAMNYPIAVVLVAVIVTAILLIKVVPQFQDVFANFGAELPAFTLMVIGLSEALQAW  224
NTDB id 1016 ACIAD RS01680 WP 004920476.1   SLEIMLDRVAVYKEKSEVLKQKIKKAMKYPATVIVVAIVVTIILMVKVVPVFKDLFTSFGADLPAFTQLVVNMSNWMQDY  227
NTDB id 1059 ABD1 RS01610 WP 000279215.1    ALETMLDRVAIYKEKSELLKQKIKKAMKYPATVIVVAIVVTIILMVKVVPVFQDLFASFGADLPAFTQMVVNMSKWMQEY  227
consensus                                    !*******!***!!** ***!***!* !!* ****!********** **! ! ***  *!**!!**!**** *!**** *
```

```
logo
NTDB id 1029 TT RS02230 WP 011228203.1        TLPLLLLAVALFFAYRW.YYGTPQGRRVIDRLKLRLPVFGNLNRKTAVARFSRTLALLLSSGVNIVEALDITKGTAGNSV   301
NTDB id 1402 DSB67 RS12670 WP 010643257.1     GPFIGLSFVSLLISGKIMSQRSDSFRLLAARSSLRVPILGPVLSKAAIAKFSRTLATSFSAGIPILTALKTTSKTSGNMH   305
NTDB id 1169 A1552VC RS11075 WP 000648511.1   SLWAFIAIAAAIFGLKALRKNSFQIRLKTSRLGLKFPIIGNVLAKASIAKFSRTLATSFAAGIPILASLKTTAKTSGNVH   306
NTDB id 1112 NGFG RS09215 WP 003689811.1      GWMVLIALGFAIYGFLKLKARSIKIQRRMDAILLRMPIFGDIVRKGTIARWGRTTATLFAAGVPLVDVLDSTAGAAGNLI   308
NTDB id 1113 AAA85695.1 219..1451( )          GWMVLIALGFAIYRFLKLKARSIKIQRRMDAILLRMPIFGDIVRKGTIARWGRTTATLFAAGVPLVDVLDSTAGAAGNLI   308
NTDB id 42374 NH8B RS17075 WP 014088350.1     WWLVFGIIFGIIFGTMFFFKRSPKFQEQVDRLLLKLPVLGEVVQKATIARWSRTLATMFTAGVPLVEALDSVGGASGNQV   306
NTDB id 1252 GC085 RS07730 WP 011213805.1     WYIIFGALGGVVYSFFYAKNHSLEFAQTIDRVMLKLPVIGPILEKAAIARFARTLSITFAAGLPLVEALKSVAGATGNII   305
NTDB id 1198 PSJM300 03950 AFN76868.1         WYVVLAGFVGAAYAFKQAHTRSEKFRNWFDRLMLKVPVVGDILYKSSVARFARTLSTTFAAGVPLVDALDSVAGATGNVV   304
NTDB id 1016 ACIAD RS01680 WP 004920476.1     WFILILVIGAAIAGFLEARKRSKRFRDQLDRLVLRLPIVGDLVYKAIIARYSRTLATTFAAGVPLIDALASTAGATNNTV   307
NTDB id 1059 ABD1 RS01610 WP 000279215.1      WFIMIIAIGAVIAAFLEAKKRSKKFRDGLDKLALKLPIFGDLVYKAIIARYSRTLATTFAAGVPLIDALESTAGATNNVI   307
consensus                                     ****************  * **  ***  *****!**!**!***  !***!***!!*******!******!********!**
```

```
logo
NTDB id 1029 TT RS02230 WP 011228203.1        VEEIVEAAKLKIQQGDPLNLTLAQHPFVFPPMVSSMVAIGEETGALDTMLSKVADFYEREVDEAVASLTAAIEPLMIIFL   381
NTDB id 1402 DSB67 RS12670 WP 010643257.1     YQLAIEEVYRDTAAGMPMYIAM.RHCHVFPELVLQMVMIGEESGRLDDMLNKIAAIYEFEVDNTVDNLSKILEPLIIVFL   384
NTDB id 1169 A1552VC RS11075 WP 000648511.1   FETAINEVYRDTAAGMPMYIAM.RNTEAFPEMVLQMVMIGEESGQLDDMLNKVATIYEFEVDNTVDNLGKILEPLIIVFL   385
NTDB id 1112 NGFG RS09215 WP 003689811.1      YEEATREIRTRVIQGLSMTSGM.RATELFPNMMLQMSSIGEESGSLDDMLNKAAEFYEDEVDNAVGRLSAMMEPIIIVIL   387
NTDB id 1113 AAA85695.1 219..1451( )          YEEATREIRTRVIQGLSMTSGM.RATELFPNMMLQMSSIGEESGSLDDMLNKAAEFYEDEVDNAVGWLSAMMEPIIILIL   387
NTDB id 42374 NH8B RS17075 WP 014088350.1     YAEATKRIQAEVSIGSSLSFAM.QRTNLFPNMVMQMTAIGEESGSLDHMLDKVADFYEEEVDNAVAAMSSLMEPVIMIVL   385
NTDB id 1252 GC085 RS07730 WP 011213805.1     YAKATDKIREEVATGQQMFIAM.ENTHLFPNMVIQMVAIGEESGALEKMLSKVADFYEEEVNNAVDALSSLLEPIIMSIL   384
NTDB id 1198 PSJM300 03950 AFN76868.1         FRSATNKIKSDVSSGMQLNFSM.RTTGTFPSMAVQMTAIGEESGALDEMLSKVATFYEDEVDNMVDGLTALMEPMIMAVL   383
NTDB id 1016 ACIAD RS01680 WP 004920476.1     YEQAVLKIREDVSTGQQLNFAM.RVSNRFPTMAIQMVAIGEESGALDEMLDKVANYYESEVDHAVDGLTSMMEPLIMAIL   386
NTDB id 1059 ABD1 RS01610 WP 000279215.1      YEKAVMKIREDVATGQQLQFAM.RISNRFPSMAIQMVAIGEESGALDSMLDKVATYYENEVDNAVDGLTSMMEPLIMAIL   386
consensus                                     ** **  *** **  !* *  ** * * *!! ****!**!!!!*!*!**!! !*!**!!*!!***!**** **!!*****!
```

```
   <0
logo
NTDB id 1029 TT RS02230 WP 011228203.1        GVIVGMIVAGMFLPLFKIIGTLSVQ   406
NTDB id 1402 DSB67 RS12670 WP 010643257.1     GVVVGGLVTAMYLPIFNLMSVLG..   407
NTDB id 1169 A1552VC RS11075 WP 000648511.1   GTVVGGLVVAMYLPIFNLMSVLG..   408
NTDB id 1112 NGFG RS09215 WP 003689811.1      GLVIGTLLVAMYLPLFNLGNVVA..   410
NTDB id 1113 AAA85695.1 219..1451( )          GLVIGTLLVAMYLPLFNLGNVVA*.   410
NTDB id 42374 NH8B RS17075 WP 014088350.1     GVLIGGLVVAMYMPIFKMGQVVG..   408
NTDB id 1252 GC085 RS07730 WP 011213805.1     GILVGGLVVAMYLPIFKLGSAV...   406
NTDB id 1198 PSJM300 03950 AFN76868.1         GVLVGGLIIAMYLPIFQMGSVV...   405
NTDB id 1016 ACIAD RS01680 WP 004920476.1     GILVGGLVIAMYLPIFQMGSVV...   408
NTDB id 1059 ABD1 RS01610 WP 000279215.1      GVLVGGLVIAMYLPIFQMGSVV...   408
consensus                                     !***!*****!**!*!******
```

X non conserved

X similar

X ≥ 50% conserved