```
logo

NTDB id 1185 GTF74 RS11940 WP 000350195.1     .......MDIAELLEFSVKHNASDLHLSAGVPPMVRIDGEVRKLGVPAFTHSDVHRLIFEIMNDAQRSEYEEKLEVDFSF   73
NTDB id 1176 A1552VC RS01160 WP 000350195.1  .......MDIAELLEFSVKHNASDLHLSAGVPPMVRIDGEVRKLGVPAFTHSDVHRLIFEIMNDAQRSEYEEKLEVDFSF   73
NTDB id 1283 ACE17W RS02630 WP 010947729.1   .......MDIAELLAFSVKNKSSDLHISAGMPPMIRVDGDLRKINLPPLEHKDVIKIIYDIMNDRQRKEYEEFFETDFSF   73
NTDB id 1259 GC085 RS10305 WP 010947729.1    .......MDIAELLAFSVKNKSSDLHISAGMPPMIRVDGDLRKINLPPLEHKDVIKIIYDIMNDRQRKEYEEFFETDFSF   73
NTDB id 1194 PAKAF RS01995 WP 003084552.1    .......MDITELLAFSAKQGASDLHLSAGLPPMIRVDGDVRRINLPPLEHKQVHALIYDIMNDKQRKDFEEFLETDFSF   73
NTDB id 1202 PSJM300 01600 AFN76400.1        .......MDITELLAFSAKQGASDLHLSSGLPPMIRVDGDVRRINLPAMDHKQVHALIYDIMNDKQRKDFEEFLETDFSF   73
NTDB id 1020 ACIAD RS04210 WP 011182164.1    .......MDITELLAFSVQNRASDLHLSAGIPPMIRVDGEVRRINLPAMDHSEVHNLIYDIMNDKQRRDYEEKLETDFSF   73
NTDB id 1081 FDQ49 RS05335 WP 006581387.1    .......MDITELLAFSVKNGASDLHLSAGMPPMIRVDGEVRRINLPALEHKDVHRLVYDIMNDKQRRDYEEKLETDFSF   73
NTDB id 1060 ABD1 RS04380 WP 000355489.1     .......MDITELLAFSVKNGASDLHLSAGMPPMIRVDGEVRRINLPALEHKDVHRLVYDIMNDKQRRDYEEKLETDFSF   73
NTDB id 1040 HON27 RS13360 WP 000355489.1    .......MDITELLAFSVKNGASDLHLSAGMPPMIRVDGEVRRINLPALEHKDVHRLVYDIMNDKQRRDYEEKLETDFSF   73
NTDB id 37398 M301 RS13590 WP 013149360.1   MTNDQALTYMHNLLRAMLDKKASDLFISADFPPAMKIDGKMTPVTQQKLTGELTKAFADAIMNDKQKAEFAVEKECNFAI   80
NTDB id 1177 A1552VC RS01165 WP 000422572.1  .......MELNQYLDGMLTHKASDLYITVGAPILYRVDGELRAQGEAL.SVADVTALLHAMMDDARQAEFKQTREANFAV   72
NTDB id 1203 PSJM300 01605 AFN76401.1        .......MEFEKLLRLMVEKGGSDLFITAGVPPSMKVNGKILPVNKTPMSPEMTRETVHGVMNEQQRREFTENHECNFAI   73
NTDB id 1019 ACIAD RS04205 WP 004922051.1    .......MDFNDLLNLMAKHKASDLFITAGVEPSLKINGEITPVSKTKLDGDMIAQLIDSITTQKQRQEFIETHECNFAI   73
consensus                                      *** **!****** *!!!*************!******** *** *** ***************** *!**!**
```

```
logo

NTDB id 1185 GTF74 RS11940 WP 000350195.1    ELPN.VGRFRVNAFHQARGCSAVFRTIPTVIPTLEQLDAPEIFSKIANYEKGLVLVTGPTGSGKSTTLAAMVNYVNAHHN   152
NTDB id 1176 A1552VC RS01160 WP 000350195.1 ELPN.VGRFRVNAFHQARGCSAVFRTIPTVIPTLEQLDAPEIFSKIANYEKGLVLVTGPTGSGKSTTLAAMVNYVNAHHN   152
NTDB id 1283 ACE17W RS02630 WP 010947729.1  EIAN.LARFRVNAFNQSRGAAAVFRTIPSEILSMEDLGLPPIFKEMASFSRGLVLVTGPTGSGKSTTLAAVIDYINSSRY   152
NTDB id 1259 GC085 RS10305 WP 010947729.1   EIAN.LARFRVNAFNQSRGAAAVFRTIPSEILSMEDLGLPPIFKEMASFSRGLVLVTGPTGSGKSTTLAAVIDYINSSRY   152
NTDB id 1194 PAKAF RS01995 WP 003084552.1   EVPG.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEELGMGEVFKRVSDVPRGLVLVTGPTGSGKSTTLAAMLDYLNNTKY   152
NTDB id 1202 PSJM300 01600 AFN76400.1       EVPG.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGMGEVFRKITDVPRGLVLVTGPTGSGKSTTLAAMLDYLNNTKY   152
NTDB id 1020 ACIAD RS04210 WP 011182164.1   EVPN.LARFRVNVFNQNRGAGAVFRTIPSQVLTLEELGLGKIFRDICDYPRGLVLVTGPTGSGKSTTLAAMLDYINNHRY   152
NTDB id 1081 FDQ49 RS05335 WP 006581387.1   EVPN.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGLGQIFKDICDYPRGIVLVTGPTGSGKSTTLAAMLDYINENRY   152
NTDB id 1060 ABD1 RS04380 WP 000355489.1    EVPN.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGLGQIFKDICDYPRGIVLVTGPTGSGKSTTLAAMLDYINENRY   152
NTDB id 1040 HON27 RS13360 WP 000355489.1   EVPN.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGLGQIFKDICDYPRGIVLVTGPTGSGKSTTLAAMLDYINENRY   152
NTDB id 37398 M301 RS13590 WP 013149360.1   WPKE.IGRFRVNVFLQQEKIGMVLRTITTKIPNFEDLGLPKVLKEVMMTKRGLVILVGGTGSGKSTTLAALIDYRNEHSF   159
NTDB id 1177 A1552VC RS01165 WP 000422572.1 VRD..SGRFRVSAFFQRELPGAVIRRIETRIPTFEELKLPEVLQNLAIAKRGLVLVVGATGSGKSTTMAAMTGYRNQHRT   150
NTDB id 1203 PSJM300 01605 AFN76401.1       SARG.IGRFRVSAFYQRNLAGMVLRRIETNIPTIEDLKLPDVLKKLALTKRGLVLFVGATGTGKSTSLAAMIGYRNKNSS   152
NTDB id 1019 ACIAD RS04205 WP 004922051.1   LNREKNERFRVSAFQQRDMPGMVIRRIETKIPSPDDLHLPPILKELAMSKRGIIIFSGATGTGKSTSLASMIQHRNQHSK   153
consensus                                   **** **!!!!**!*! *****!*!*!********!*** *****  * *!*****!*!!*!!!!**!******!  **
```

```
logo

NTDB id 1185 GTF74 RS11940 WP 000350195.1    KHILTIEDPIEFVHSNNKCLINQREVHRDTHSFKNALRSALREDPDVILVGELRDQETISLALTAAETGHLVFGTLHTSS   232
NTDB id 1176 A1552VC RS01160 WP 000350195.1 KHILTIEDPIEFVHSNNKCLINQREVHRDTHSFKNALRSALREDPDVILVGELRDQETISLALTAAETGHLVFGTLHTSS   232
NTDB id 1283 ACE17W RS02630 WP 010947729.1  EHILTVEDPIEFVHQSKKCLVNQREVHKDTLSFNAALRSALREDPDIILVGELRDLETIRLAMTAAETGHLVFGTLHTNS   232
NTDB id 1259 GC085 RS10305 WP 010947729.1   EHILTVEDPIEFVHQSKKCLVNQREVHKDTLSFNAALRSALREDPDIILVGELRDLETIRLAMTAAETGHLVFGTLHTNS   232
NTDB id 1194 PAKAF RS01995 WP 003084552.1   HHILTIEDPIEFVHESKKCLVNQREVHRDTLGFSEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTS   232
NTDB id 1202 PSJM300 01600 AFN76400.1       HHILTIEDPIEFVHESKKCLVNQREVHRDTLGFSEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTS   232
NTDB id 1020 ACIAD RS04210 WP 011182164.1   DHILTVEDPIEFVHEPKKCLINQREVHRDTLGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTS   232
NTDB id 1081 FDQ49 RS05335 WP 006581387.1   DHILTVEDPIEFVHQSKKCLINQREVHRDTHGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTS   232
NTDB id 1060 ABD1 RS04380 WP 000355489.1    DHILTVEDPIEFVHQSKKCLINQREVHRDTHGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTS   232
NTDB id 1040 HON27 RS13360 WP 000355489.1   DHILTVEDPIEFVHQSKKCLINQREVHRDTHGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTS   232
NTDB id 37398 M301 RS13590 WP 013149360.1   GHIITVEDPVEYVHQSKNCLVTHREVGRDTNGWFNALKNTLRQAPDVILIGEIRDRETMEFALAFAETGHLCMATLHANS   239
NTDB id 1177 A1552VC RS01165 WP 000422572.1 GHILTVEDPIEFVHEHKRCIVTQREVGLDTESYEVALKNSLRQAPDMILIGEIRSRETMEYAMTFAETGHLCMATLHANN   230
NTDB id 1203 PSJM300 01605 AFN76401.1       GHIISIEDPIEFIHQHQNCIVTQREVGIDTDSFEVALKNTLRQAPDVILIGEVRTRETMDHAVAFAETGHLCLATLHANN   232
NTDB id 1019 ACIAD RS04205 WP 004922051.1   GHIITIEDPIEFIHEHAGCIITQREVGIDTDSFEIALKNTLRQAPDVILIGEIRSREVMDYALAFAETGHLVFATLHANN   233
consensus                                    !!***!!!*!**!  ***!****!!!**!!   *   !!***!!**!!*!!*!!*!**!****!***!!!!!!***!!!***
```

```
logo
```

```
NTDB id 1185 GTF74 RS11940 WP 000350195.1     AAKTIDRIIDVFPGSDKDMVRSMLSESLRAVIAQKLLK.RVGGGRVACHEIMLATPAIRNLIREDKVAQMYSIIQTGAAH   311
NTDB id 1176 A1552VC RS01160 WP 000350195.1  AAKTIDRIIDVFPGSDKDMVRSMLSESLRAVIAQKLLK.RVGGGRVACHEIMLATPAIRNLIREDKVAQMYSIIQTGAAH   311
NTDB id 1283 ACE17W RS02630 WP 010947729.1   ATKTINRIIDVFPAEEKSMVRSMLSESLQAVVAQSLLK.KNKGGRVAALEIMMCTGAIRNLIREDKIAQMYSSIQTGQAK   311
NTDB id 1259 GC085 RS10305 WP 010947729.1    ATKTINRIIDVFPAEEKSMVRSMLSESLQAVVAQSLLK.KNKGGRVAALEIMMCTGAIRNLIREDKIAQMYSSIQTGQAK   311
NTDB id 1194 PAKAF RS01995 WP 003084552.1    AAKTIDRVVDVFPAEEKAMVRSMLSESLQSVISQTLIK.KIGGGRVAAHEIMIGTPAIRNLIREDKVAQMYSAIQTGGSL   311
NTDB id 1202 PSJM300 01600 AFN76400.1        AAKTIDRVVDVFPAEEKSMVRSMLSESLQAVISQTLLK.KVGGGRVAAHEIMIGTPAIRNLIREDKVAQMYSSIQTGGSL   311
NTDB id 1020 ACIAD RS04210 WP 011182164.1    AAKTIDRIIDVFPAEEKDMVRTMLSESLQAVISQTLLK.KEGGGRVAAHEIMIGIPAIRNLIREGKVAQMYSSIQTGATH   311
NTDB id 1081 FDQ49 RS05335 WP 006581387.1    AAKTIDRVIDVFPAEEKDMVRAMLSESLQAVISQTLLK.KNGGGRVAAHEIMIGIPAIRNLIRENKVAQMYSAIQTGANH   311
NTDB id 1060 ABD1 RS04380 WP 000355489.1     AAKTIDRVIDVFPAEEKDMVRAMLSESLQAVISQTLLK.KNGGGRVAAHEIMIGIPAIRNLIRENKVAQMYSAIQTGANH   311
NTDB id 1040 HON27 RS13360 WP 000355489.1    AAKTIDRVIDVFPAEEKDMVRAMLSESLQAVISQTLLK.KNGGGRVAAHEIMIGIPAIRNLIRENKVAQMYSAIQTGANH   311
NTDB id 37398 M301 RS13590 WP 013149360.1    ANQALDRIINFFPEERHAQLHMDLSLNLRAFVSQRLVS.KVGGGRSAAVEILLNSPLISDLILRGETGMVKEIMAKSTEQ   318
NTDB id 1177 A1552VC RS01165 WP 000422572.1  ANQALERILHLVPKEQREQFLLDLSLNLKGVIAQQLLRDKNGKGRHGVFEVLLNSPRIADLIRRGELHELKATMARSQEV   310
NTDB id 1203 PSJM300 01605 AFN76401.1        ANQALDRIINFFPADRQNQVWMDLSLNLKAIVAQQLVPTPDGKGRRAVIEVLINTPLAADLIRKGEVHELKGLMKRSTDL   312
NTDB id 1019 ACIAD RS04205 WP 004922051.1    ANQTLERIIHFFDADRHQQIFMDLSLNLKAVISQQLIPTHDGQSRRAAVEVLINTPLLSDYIRQGEIYKIKELMARSGEL   313
consensus                                    !*****!********** *** *!!**!*****!*!** * ***!****!************!** ******* *****
```

```
logo
```

```
NTDB id 1185 GTF74 RS11940 WP 000350195.1     GMQTMEQNAKQLIARGVVDAQEVQSKIELDLKAF.......................................   345
NTDB id 1176 A1552VC RS01160 WP 000350195.1  GMQTMEQNAKQLIARGVVDAQEVQSKIELDLKAF.......................................   345
NTDB id 1283 ACE17W RS02630 WP 010947729.1   GMQTLDQHLTELVNKNIISKHTAHEAALN.KSLF.......................................   344
NTDB id 1259 GC085 RS10305 WP 010947729.1    GMQTLDQHLTELVNKNIISKHTAHEAALN.KSLF.......................................   344
NTDB id 1194 PAKAF RS01995 WP 003084552.1    GMQTLDMCLKGLVAKGLISRENAREKAKI.PENF.......................................   344
NTDB id 1202 PSJM300 01600 AFN76400.1        GMQTLDSCLKGLLAKGLISRDSAKEKAKQ.PENF.......................................   344
NTDB id 1020 ACIAD RS04210 WP 011182164.1    GMTTLDQSLKQLLAKGIINLPTARAVAKS.PESF.......................................   344
NTDB id 1081 FDQ49 RS05335 WP 006581387.1    GMTTLDQSLKGLVSRGVISPQTARTAAKQ.PESFL......................................   345
NTDB id 1060 ABD1 RS04380 WP 000355489.1     GMTTLDQSLKGLVARGVISPQTARTAAKQ.PESFL......................................   345
NTDB id 1040 HON27 RS13360 WP 000355489.1    GMTTLDQSLKGLVARGVISPQTARTAAKQ.PESFL......................................   345
NTDB id 37398 M301 RS13590 WP 013149360.1    GMQTFDQALFQLCEDGVISEEDALRNADSLTELRLRFKLKGKNAGAKSTSM..FALHEEPKEEKAPEVQAAM   388
NTDB id 1177 A1552VC RS01165 WP 000422572.1  GMQTFDQALYQLVVDDKISEQDALHSADSANDLRLMLKTKRGDDY...GSGSLQNVKIDME...........   368
NTDB id 1203 PSJM300 01605 AFN76401.1        GMQTFDQALYNLYVQGEITYEDALLHADSSNDLRLMIKLGSETDGEHLTSVS.QGLTLEMSDD.DPGRSFR.   381
NTDB id 1019 ACIAD RS04205 WP 004922051.1    GMQTFDQALFDLYDHQHISYADALKHADSPNNLRLQIKLSEEANKPLDNRERMSEMERKMTFD.GQRRNLK.   383
consensus                                    !!*!*** ** !* *****   *   *    * *
```

X non conserved

X similar

X ≥ 50% conserved