```
logo
NTDB id 1177 A1552VC RS01165 WP 000422572.1  .......MELNQYLDGMLTHKASDLYITVGAPILYRVDGELRAQGEA.LSVADVTALLHAMMDDARQAEFKQTREANFAV   72
NTDB id 232927 CDA09 RS18805 WP 121430044.1 MERDQALKFMHDLLRLMVQKNGSDLFITAGFPPAIKIDGRVIPQSNQSLTQQHTAELARAVMNDRQAAEFESSKECNFAI   80
NTDB id 1203 PSJM300 01605 AFN76401.1        .......MEFEKLLRLMVEKGGSDLFITAGVPPSMKVNGKILPVNKTPMSPEMTRETVHGVMNEQQRREFTENHECNFAI   73
NTDB id 1019 ACIAD RS04205 WP 004922051.1    .......MDFNDLLNLMAKHKASDLFITAGVEPSLKINGEITPVSKTKLDGDMIAQLIDSITTQKQRQEFIETHECNFAI   73
NTDB id 1307 DR RS10055 WP 010888596.1       ...MTSGIDITDILRLAADKGASDIILAAGLPPQFKLSGDYDAQGFEPLSASDTRKLMYSMMNERQQRIFEEKRELDFSF   77
NTDB id 1283 ACE17W RS02630 WP 010947729.1   .......MDIAELLAFSVKNKSSDLHISAGMPPMIRVDGDLRKINLPPLEHKDVIKIIYDIMNDRQRKEYEEFFETDFSF   73
NTDB id 1259 GC085 RS10305 WP 010947729.1    .......MDIAELLAFSVKNKSSDLHISAGMPPMIRVDGDLRKINLPPLEHKDVIKIIYDIMNDRQRKEYEEFFETDFSF   73
NTDB id 1020 ACIAD RS04210 WP 011182164.1    .......MDITELLAFSVQNRASDLHLSAGIPPMIRVDGEVRRINLPAMDHSEVHNLIYDIMNDKQRRDYEEKLETDFSF   73
NTDB id 1194 PAKAF RS01995 WP 003084552.1    .......MDITELLAFSAKQGASDLHLSAGLPPMIRVDGDVRRINLPPLEHKQVHALIYDIMNDKQRKDFEEFLETDFSF   73
NTDB id 1202 PSJM300 01600 AFN76400.1        .......MDITELLAFSAKQGASDLHLSSGLPPMIRVDGDVRRINLPAMDHKQVHALIYDIMNDKQRKDFEEFLETDFSF   73
consensus                                          *** **!********!!*****!*******!************ **  ****************  !**!**
```

```
logo
NTDB id 1177 A1552VC RS01165 WP 000422572.1  VRD..SGRFRVSAFFQRELPGAVIRRIETRIPTFEELKLPEVLQNLAIAKRGLVLVVCATGSGKSTTMAAMTGYRNQHRT  150
NTDB id 232927 CDA09 RS18805 WP 121430044.1 SPAG.IGRFRANAFIQQGKVGLVLRTIAQKIPTFDELGMPAVLRDVAMAKRGLVIFVCGTGTGKTTSLAAMVDFRNEHSY  159
NTDB id 1203 PSJM300 01605 AFN76401.1        SARG.IGRFRVSAFYQRNLAGMVLRRIETNIPTIEDLKLPDVLKKLALTKRGLVLFVCATGTGKSTSLAAMIGYRNKNSS  152
NTDB id 1019 ACIAD RS04205 WP 004922051.1    LNREKNERFRVSAFQQRDMPGMVIRRIETKIPSPDDLHLPPILKELAMSKRGIIIFSCATGTGKSTSLASMIQHRNQHSK  153
NTDB id 1307 DR RS10055 WP 010888596.1       ALGD.KARFRVNAFMQRGNVGGVMRLIPTTVRTIAEMGLPQTVIDIANAPRGLVLVTGPTGSGKSTTLASMIDHINTTKK  156
NTDB id 1283 ACE17W RS02630 WP 010947729.1   EIAN.LARFRVNAFNQSRGAAAVFRTIPSEILSMEDLGLPPIFKEMASFSRGLVLVTGPTGSGKSTTLAAVIDYINSSRY  152
NTDB id 1259 GC085 RS10305 WP 010947729.1    EIAN.LARFRVNAFNQSRGAAAVFRTIPSEILSMEDLGLPPIFKEMASFSRGLVLVTGPTGSGKSTTLAAVIDYINSSRY  152
NTDB id 1020 ACIAD RS04210 WP 011182164.1    EVPN.LARFRVNVFNQNRGAGAVFRTIPSQVLTLEELGLGKIFRDICDYPRGLVLVTGPTGSGKSTTLAAMLDYINNHRY  152
NTDB id 1194 PAKAF RS01995 WP 003084552.1    EVPG.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEELGMGEVFKRVSDVPRGLVLVTGPTGSGKSTTLAAMLDYLNNTKY  152
NTDB id 1202 PSJM300 01600 AFN76400.1        EVPG.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGMGEVFRKITDVPRGLVLVTGPTGSGKSTTLAAMLDYLNNTKY  152
consensus                                    **   **!!!***!*! *****!*!*!************ ******   !!*****!*!!*!!*!**!******!****
```

```
logo
NTDB id 1177 A1552VC RS01165 WP 000422572.1  GHILTVEDPIEFVHEHKRCIVTQREVGLDTESYEVALKNSLRQAPDMILIGEIRSRETMEYAMTFAETGHLCMATLHANN  230
NTDB id 232927 CDA09 RS18805 WP 121430044.1 GHIITVEDPIEYVHLHKNCIVTQREIGLDTDSWEAALKNTLRQAPDVILMGEIRDRETMDYAIAFAETGHLCLATLHANS  239
NTDB id 1203 PSJM300 01605 AFN76401.1        GHISIEDPIEFIHQHQNCIVTQREVGIDTDSFEVALKNTLRQAPDVILIGEVRTRETMDHAVAFAETGHLCLATLHANN  232
NTDB id 1019 ACIAD RS04205 WP 004922051.1    GHIITIEDPIEFIHEHAGCIITQREVGIDTDSFEIALKNTLRQAPDVILIGEIRSREVMDYALAFAETGHLVFATLHANN  233
NTDB id 1307 DR RS10055 WP 010888596.1       LHILTIEDPIEFMHPNKASIINQREVGSDTLSFDDALRAALRQAPDVILVGEMRDYETIKAAVTAAETGHLVMGTLHTNS  236
NTDB id 1283 ACE17W RS02630 WP 010947729.1   EHILTVEDPIEFVHQSKKCLVNQREVHKDTLSFNAALRSALREDPDIILVGELRDLETIRLAMTAAETGHLVFGTLHTNS  232
NTDB id 1259 GC085 RS10305 WP 010947729.1    EHILTVEDPIEFVHQSKKCLVNQREVHKDTLSFNAALRSALREDPDIILVGELRDLETIRLAMTAAETGHLVFGTLHTNS  232
NTDB id 1020 ACIAD RS04210 WP 011182164.1    DHILTVEDPIEFVHEPKKCLINQREVHRDTLGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTS  232
NTDB id 1194 PAKAF RS01995 WP 003084552.1    HHILTIEDPIEFVHESKKCLVNQREVHRDTLGFSEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTS  232
NTDB id 1202 PSJM300 01600 AFN76400.1        HHILTIEDPIEFVHESKKCLVNQREVHRDTLGFSEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTS  232
consensus                                     !!***!!!!!**!* ******!!!**!!**** !!***!!  !!*!!*!!*!**!****!***!!!!!!***!!!***
```

```
logo
NTDB id 1177 A1552VC RS01165 WP 000422572.1   ANQALERILHLVPKEQREQFLLDLSLNLKGVIAQQLLRDKNGKGRHGVFEVLLNSPRIADLIRRGELHELKATMARSQEV   310
NTDB id 232927 CDA09 RS18805 WP 121430044.1  ANQALDRIINFFPEERRQQLLMDLSLNLRSLISQRLLPKKAEKGRVPAVEVLLNSPLISDLIFKGEVPGIKEVMKRSREL   319
NTDB id 1203 PSJM300 01605 AFN76401.1        ANQALDRIINFFPADRQNQVWMDLSLNLKAIVAQQLVPTPDGKGRRAVIEVLINTPLAADLIRKGEVHELKGLMKRSTDL   312
NTDB id 1019 ACIAD RS04205 WP 004922051.1    ANQTLERIIHFFDADRHQQIFMDLSLNLKAVISQQLIPTHDGQSRRAAVEVLINTPLLSDYIRQGEIYKIKELMARSGEL   313
NTDB id 1307 DR RS10055 WP 010888596.1       APESIDRIVDVFPEEQQEQIRVQLANNLVAVMTQQLLPRADGQGRVLAYEILLANPAVRALIREGKTFQITSVMQTGARE   316
NTDB id 1283 ACE17W RS02630 WP 010947729.1   ATKTINRIIDVFPAEEKSMVRSMLSESLQAVVAQSLLK.KNKGGRVAALEIMMCTGAIRNLIREDKIAQMYSSIQTGQAK   311
NTDB id 1259 GC085 RS10305 WP 010947729.1    ATKTINRIIDVFPAEEKSMVRSMLSESLQAVVAQSLLK.KNKGGRVAALEIMMCTGAIRNLIREDKIAQMYSSIQTGQAK   311
NTDB id 1020 ACIAD RS04210 WP 011182164.1    AAKTIDRIIDVFPAEEKDMVRTMLSESLQAVISQTLLK.KEGGGRVAAHEIMIGIPAIRNLIREGKVAQMYSSIQTGATH   311
NTDB id 1194 PAKAF RS01995 WP 003084552.1    AAKTIDRVVDVFPAEEKAMVRSMLSESLQSVISQTLIK.KIGGGRVAAHEIMIGTPAIRNLIREDKVAQMYSAIQTGGSL   311
NTDB id 1202 PSJM300 01600 AFN76400.1        AAKTIDRVVDVFPAEEKSMVRSMLSESLQAVISQTLLK.KVGGGRVAAHEIMIGTPAIRNLIREDKVAQMYSSIQTGGSL   311
consensus                                    ! ****!***********  ** *!** !*****!*!** * ***!****!*** *******!***************  *

logo
NTDB id 1177 A1552VC RS01165 WP 000422572.1   GMQTFDQALYQLVVDDKISEQDALHSADSANDLRLMLK.TKRG...DDYGSGSLQN..V.KIDME...............   368
NTDB id 232927 CDA09 RS18805 WP 121430044.1  GMQTFDQALFDLYEDEKITYEDALRNADSVNDLRLQIK.LHSKLGEKDLVSG.IQH..L.DIV.................   377
NTDB id 1203 PSJM300 01605 AFN76401.1        GMQTFDQALYNLYVQGEITYEDALLHADSSNDLRLMIK.LGSETDGEHLTSVS.QG..L.TLEMSDDDPGRSFR......   381
NTDB id 1019 ACIAD RS04205 WP 004922051.1    GMQTFDQALFDLYDHQHISYADALKHADSPNNLRLQIK.LSEEANKPLDNRERMSE..M.ERKMTFDGQRRNLK......   383
NTDB id 1307 DR RS10055 WP 010888596.1       GMVTMDAYLAGLFRRHLITYDKGLERAIDPKEFARLANDASAGLGGASMTPAAPPVPAYNSASSSSTGRGGDFGRGAAAP   396
NTDB id 1283 ACE17W RS02630 WP 010947729.1   GMQTLDQHLTELVNKNIISKHTAHEAALNKSLF..............................................   344
NTDB id 1259 GC085 RS10305 WP 010947729.1    GMQTLDQHLTELVNKNIISKHTAHEAALNKSLF..............................................   344
NTDB id 1020 ACIAD RS04210 WP 011182164.1    GMTTLDQSLKQLLAKGIINLPTARAVAKSPESF..............................................   344
NTDB id 1194 PAKAF RS01995 WP 003084552.1    GMQTLDMCLKGLVAKGLISRENAREKAKIPENF..............................................   344
NTDB id 1202 PSJM300 01600 AFN76400.1        GMQTLDSCLKGLLAKGLISRDSAKEKAKQPENF..............................................   344
consensus                                    !!*!*!* !  !* * *!* * *** ! **  *

logo
                                             ATPAAPAAGRSEPGRAGGFGRR
NTDB id 1177 A1552VC RS01165 WP 000422572.1  .......................   368
NTDB id 232927 CDA09 RS18805 WP 121430044.1  .......................   377
NTDB id 1203 PSJM300 01605 AFN76401.1        .......................   381
NTDB id 1019 ACIAD RS04205 WP 004922051.1    .......................   383
NTDB id 1307 DR RS10055 WP 010888596.1       ATPAAPAAGRSEPGRAGGFGRR   418
NTDB id 1283 ACE17W RS02630 WP 010947729.1   .......................   344
NTDB id 1259 GC085 RS10305 WP 010947729.1    .......................   344
NTDB id 1020 ACIAD RS04210 WP 011182164.1    .......................   344
NTDB id 1194 PAKAF RS01995 WP 003084552.1    .......................   344
NTDB id 1202 PSJM300 01600 AFN76400.1        .......................   344
consensus
```

X non conserved

X similar

X ≥ 50% conserved