```
logo
NTDB id 1177 A1552VC RS01165 WP 000422572.1     ....MELNQYLDGMLTHKASDLYITVGAPILYRVDGELRAQGE.ALSVADVTALLHAMMDDARQAEFKQTREANFAVVRD   75
NTDB id 1019 ACIAD RS04205 WP 004922051.1       ....MDFNDLLNLMAKHKASDLFITAGVEPSLKINGEITPVSKTKLDGDMIAQLIDSITTQKQRQEFIETHECNFAILNR   76
NTDB id 1096325 ACMXYV RS01435 WP 415890006.1  ....MDFTQLLKVMVERDASDLFVTAGARPTIKVDGTLKPLTKDTLKPSQARALVYSTMNDKQLAEFEGSHECNFAISAP   76
NTDB id 1203 PSJM300 01605 AFN76401.1           ....MEFEKLLRLMVEKGGSDLFITAGVPPSMKVNGKILPVNKTPMSPEMTRETVHGVMNEQQRREFTENHECNFAISAR   76
NTDB id 1307 DR RS10055 WP 010888596.1          MTSGIDITDILRLAADKGASDIILAAGLPPQFKLSGDYDAQGFEPLSASDTRKLMYSMMNERQQRIFEEKRELDFSFALG   80
NTDB id 1202 PSJM300 01600 AFN76400.1           ....MDITELLAFSAKQGASDLHLSSGLPPMIRVDGDVRRINLPAMDHKQVHALIYDIMNDKQRKDFEEFLETDFSFEVP   76
NTDB id 1194 PAKAF RS01995 WP 003084552.1       ....MDITELLAFSAKQGASDLHLSAGLPPMIRVDGDVRRINLPPLEHKQVHALIYDIMNDKQRKDFEEFLETDFSFEVP   76
NTDB id 1020 ACIAD RS04210 WP 011182164.1       ....MDITELLAFSVQNRASDLHLSAGIPPMIRVDGEVRRINLPAMDHSEVHNLIYDIMNDKQRRDYEEKLETDFSFEVP   76
NTDB id 1081 FDQ49 RS05335 WP 006581387.1       ....MDITELLAFSVKNGASDLHLSAGMPPMIRVDGEVRRINLPALEHKDVHRLVYDIMNDKQRRDYEEKLETDFSFEVP   76
NTDB id 1060 ABD1 RS04380 WP 000355489.1        ....MDITELLAFSVKNGASDLHLSAGMPPMIRVDGEVRRINLPALEHKDVHRLVYDIMNDKQRRDYEEKLETDFSFEVP   76
NTDB id 1040 HON27 RS13360 WP 000355489.1       ....MDITELLAFSVKNGASDLHLSAGMPPMIRVDGEVRRINLPALEHKDVHRLVYDIMNDKQRRDYEEKLETDFSFEVP   76
consensus                                        ******!********!!*****!*******!************ *** ***************** *!**!*****
```

```
logo
NTDB id 1177 A1552VC RS01165 WP 000422572.1     ..SGRFRVSAFFQRELPGAVIRRIETRIPTFEELKLPEVLQNLAIAKRGLVLVVGATGSGKSTTMAAMTGYRNQHRTGHI   153
NTDB id 1019 ACIAD RS04205 WP 004922051.1       EKNERFRVSAFQQRDMPGMVIRRIETKIPSPDDLHLPPILKELAMSKRGIIIFSGATGTGKSTSLASMIQHRNQHSKGHI   156
NTDB id 1096325 ACMXYV RS01435 WP 415890006.1  G.LGRFRVSAFFQRNSAGMVLRKINNYIPSLEELNLPPILRDLSMTKRGLILFVGGTSTGKSTSLASMIDYRNTNHRGHI   155
NTDB id 1203 PSJM300 01605 AFN76401.1           G.IGRFRVSAFYQRNLAGMVLRRIETNIPTIEDLKLPDVLKKLALTKRGLVLFVGATGTGKSTSLAAMIGYRNKNSSGHI   155
NTDB id 1307 DR RS10055 WP 010888596.1          D.KARFRVNAFMQRGNVGGVMRLIPTTVRTIAEMGLPQTVIDIANAPRGLVLVTGPTGSGKSTTLASMIDHINTTKKLHI   159
NTDB id 1202 PSJM300 01600 AFN76400.1           G.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGMGEVFRKITDVPRGLVLVTGPTGSGKSTTLAAMLDYLNNTKYHHI   155
NTDB id 1194 PAKAF RS01995 WP 003084552.1       G.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEELGMGEVFKRVSDVPRGLVLVTGPTGSGKSTTLAAMLDYLNNTKYHHI   155
NTDB id 1020 ACIAD RS04210 WP 011182164.1       N.LARFRVNVFNQNRGAGAVFRTIPSQVLTLEELGLGKIFRDICDYPRGLVLVTGPTGSGKSTTLAAMLDYINNHRYDHI   155
NTDB id 1081 FDQ49 RS05335 WP 006581387.1       N.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGLGQIFKDICDYPRGIVLVTGPTGSGKSTTLAAMLDYINENRYDHI   155
NTDB id 1060 ABD1 RS04380 WP 000355489.1        N.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGLGQIFKDICDYPRGIVLVTGPTGSGKSTTLAAMLDYINENRYDHI   155
NTDB id 1040 HON27 RS13360 WP 000355489.1       N.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEDLGLGQIFKDICDYPRGIVLVTGPTGSGKSTTLAAMLDYINENRYDHI   155
consensus                                         **!!!!**!*!****!*!*!*!************ ***** * *!!******!*!**!!!!**!*!****!   ** !!
```

```
logo
NTDB id 1177 A1552VC RS01165 WP 000422572.1     LTVEDPIEFVHEHKRCIVTQREVGLDTESYEVALKNSLRQAPDMILIGEIRSRETMEYAMTFAETGHLCMATLHANNANQ   233
NTDB id 1019 ACIAD RS04205 WP 004922051.1       ITIEDPIEFIHEHAGCIITQREVGIDTDSFEIALKNTLRQAPDVILIGEIRSREVMDYALAFAETGHLVFATLHANNANQ   236
NTDB id 1096325 ACMXYV RS01435 WP 415890006.1  ITIEDPIEYIHEHKQSIITQREVGIDTDSFDVALKNTLRQAPDVILMGEIRTRETMQHGIVFAETGHLTLATLHANNANQ   235
NTDB id 1203 PSJM300 01605 AFN76401.1           ISIEDPIEFIHQHQNCIVTQREVGIDTDSFEVALKNTLRQAPDVILIGEVRTRETMDHAVAFAETGHLCLATLHANNANQ   235
NTDB id 1307 DR RS10055 WP 010888596.1          LTIEDPIEFMHPNKASIINQREVGSDTLSFDDALRAALRQAPDVILVGEMRDYETIKAAVTAAETGHLVMGTLHTNSAPE   239
NTDB id 1202 PSJM300 01600 AFN76400.1           LTIEDPIEFVHESKKCLVNQREVHRDTLGFSEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSAAK   235
NTDB id 1194 PAKAF RS01995 WP 003084552.1       LTIEDPIEFVHESKKCLVNQREVHRDTLGFSEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSAAK   235
NTDB id 1020 ACIAD RS04210 WP 011182164.1       LTVEDPIEFVHEPKKCLINQREVHRDTLGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSAAK   235
NTDB id 1081 FDQ49 RS05335 WP 006581387.1       LTVEDPIEFVHQSKKCLINQREVHRDTHGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSAAK   235
NTDB id 1060 ABD1 RS04380 WP 000355489.1        LTVEDPIEFVHQSKKCLINQREVHRDTHGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSAAK   235
NTDB id 1040 HON27 RS13360 WP 000355489.1       LTVEDPIEFVHQSKKCLINQREVHRDTHGFNEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSAAK   235
consensus                                       ***!!!!!**!* ******!!!!**!! ** *!!***!!**!!*!!*!!*!**!*********!!!!!!***!!!***!**
```

```
logo

NTDB id 1177 A1552VC RS01165 WP 000422572.1     ALERILHLVPKEQREQFLLDLSLNLKGVIAQQLLRDKNGKGRHGVFEVLLNSPRIADLIRRGELHELKATMARSQEVGMQ   313
NTDB id 1019 ACIAD RS04205 WP 004922051.1       TLERIIHFFDADRHQQIFMDLSLNLKAVISQQLIPTHDGQSRRAAVEVLINTPLLSDYIRQGEIYKIKELMARSGELGMQ   316
NTDB id 1096325 ACMXYV RS01435 WP 415890006.1  ALDRVISFFPPEHHDQLWMDLSLNLKAIIAQQLLPTKDGKGRRAAIEVLINTPLIQDLIRKGEVHEIKDVVKKSTNLGMQ   315
NTDB id 1203 PSJM300 01605 AFN76401.1           ALDRIINFFPADRQNQVWMDLSLNLKAIVAQQLVPTPDGKGRRAVIEVLINTPLAADLIRKGEVHELKGLMKRSTDLGMQ   315
NTDB id 1307 DR RS10055 WP 010888596.1          SIDRIVDVFPEEQQEQIRVQLANNLVAVMTQQLLPRADGQGRVLAYEILLANPAVRALIREGKTFQITSVMQTGAREGMV   319
NTDB id 1202 PSJM300 01600 AFN76400.1           TIDRVVDVFPAEEKSMVRSMLSESLQAVISQTLLK.KVGGGRVAAHEIMIGTPAIRNLIREDKVAQMYSSIQTGGSLGMQ   314
NTDB id 1194 PAKAF RS01995 WP 003084552.1       TIDRVVDVFPAEEKAMVRSMLSESLQSVISQTLIK.KIGGGRVAAHEIMIGTPAIRNLIREDKVAQMYSAIQTGGSLGMQ   314
NTDB id 1020 ACIAD RS04210 WP 011182164.1       TIDRIIDVFPAEEKDMVRTMLSESLQAVISQTLLK.KEGGGRVAAHEIMIGIPAIRNLIREGKVAQMYSSIQTGATHGMT   314
NTDB id 1081 FDQ49 RS05335 WP 006581387.1       TIDRVIDVFPAEEKDMVRAMLSESLQAVISQTLLK.KNGGGRVAAHEIMIGIPAIRNLIRENKVAQMYSAIQTGANHGMT   314
NTDB id 1060 ABD1 RS04380 WP 000355489.1        TIDRVIDVFPAEEKDMVRAMLSESLQAVISQTLLK.KNGGGRVAAHEIMIGIPAIRNLIRENKVAQMYSAIQTGANHGMT   314
NTDB id 1040 HON27 RS13360 WP 000355489.1       TIDRVIDVFPAEEKDMVRAMLSESLQAVISQTLLK.KNGGGRVAAHEIMIGIPAIRNLIRENKVAQMYSAIQTGANHGMT   314
consensus                                       ***!**************  *!***!*****!*!**  *  !**!****!*****!*****!!*********  *****  *!!*

logo

NTDB id 1177 A1552VC RS01165 WP 000422572.1     TFDQALYQLVVDDKISEQDALHSADSANDLRLMLKT.KRGDDYGSGSLQNVKIDM.....E...................   368
NTDB id 1019 ACIAD RS04205 WP 004922051.1       TFDQALFDLYDHQHISYADALKHADSPNNLRLQIKL.SEEANKPLDNRERMS......EMERKMTFDGQRRNLK......   383
NTDB id 1096325 ACMXYV RS01435 WP 415890006.1  TFDQSLFTLYKDGVITYDVALAHADSPNDLRLMIKL.SADTNPELAPDEDNQ.SFYLQDEEDYLHNEG.DANVK.GM...   388
NTDB id 1203 PSJM300 01605 AFN76401.1           TFDQALYNLYVQGEITYEDALLHADSSNDLRLMIKL.GSETDGEHLTSVSQGLTLEMSDDDP.....G..RSFR......   381
NTDB id 1307 DR RS10055 WP 010888596.1          TMDAYLAGLFRRHLITYDKGLERAIDPKEFARLANDASAGLGGASMTPAAPPVPAYNSASSS...STGRGGDFGRGAAAP   396
NTDB id 1202 PSJM300 01600 AFN76400.1           TLDSCLKGLLAKGLISRDSAKEKAKQPENF.......................................................   344
NTDB id 1194 PAKAF RS01995 WP 003084552.1       TLDMCLKGLVAKGLISRENAREKAKIPENF.......................................................   344
NTDB id 1020 ACIAD RS04210 WP 011182164.1       TLDQSLKQLLAKGIINLPTARAVAKSPESF.......................................................   344
NTDB id 1081 FDQ49 RS05335 WP 006581387.1       TLDQSLKGLVSRGVISPQTARTAAKQPESFL......................................................   345
NTDB id 1060 ABD1 RS04380 WP 000355489.1        TLDQSLKGLVARGVISPQTARTAAKQPESFL......................................................   345
NTDB id 1040 HON27 RS13360 WP 000355489.1       TLDQSLKGLVARGVISPQTARTAAKQPESFL......................................................   345
consensus                                       !*!* !**!* ***!*   **  !* ** *

logo

NTDB id 1177 A1552VC RS01165 WP 000422572.1     .......................   368
NTDB id 1019 ACIAD RS04205 WP 004922051.1       .......................   383
NTDB id 1096325 ACMXYV RS01435 WP 415890006.1  .......................   388
NTDB id 1203 PSJM300 01605 AFN76401.1           .......................   381
NTDB id 1307 DR RS10055 WP 010888596.1          ATPAAPAAGRSEPGRAGGFGRR   418
NTDB id 1202 PSJM300 01600 AFN76400.1           .......................   344
NTDB id 1194 PAKAF RS01995 WP 003084552.1       .......................   344
NTDB id 1020 ACIAD RS04210 WP 011182164.1       .......................   344
NTDB id 1081 FDQ49 RS05335 WP 006581387.1       .......................   345
NTDB id 1060 ABD1 RS04380 WP 000355489.1        .......................   345
NTDB id 1040 HON27 RS13360 WP 000355489.1       .......................   345
consensus
```

X non conserved
X similar
X ≥ 50% conserved