```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1177 A1552VC RS01165 WP 000422572.1     ....MELNQYLDGMLTHKASDLYITVGAPILYRVDGELRAQGEA.LSVADVTALLHAMMDDARQAEFKQTREANFAVVRD    75
NTDB id 1019 ACIAD RS04205 WP 004922051.1       ....MDFNDLLNLMAKHKASDLFITAGVEPSLKINGEITPVSKTKLDGDMIAQLIDSITTQKRQEFIETHECNFAILNR    76
NTDB id 1170742 ACOCLE RS19020 WP 419533791.1  ....MDIEKLLKLVSVKKASDLFITAGFPPSVKLDGRLMPVTKTPLTATEAKDMVLGVMDEKQRLEFELKQECNFAIAKV    76
NTDB id 1203 PSJM300 01605 AFN76401.1           ....MEFEKLLRLMVEKGGSDLFITAGVPPSMKVNGKILPVNKTPMSPEMTRETVHGVMNEQQRREFTENHECNFAISAR    76
NTDB id 1307 DR RS10055 WP 010888596.1          MTSGIDITDILRLAADKGASDIILAAGLPPQFKLSGDYDAQGFEPLSASDTRKLMYSMMNERQQRIFEEKRELDFSFALG    80
NTDB id 1283 ACE17W RS02630 WP 010947729.1      ....MDIAELLAFSVKNKSSDLHISAGMPPMIRVDGDLRKINLPPLEHKDVIKIIYDIMNDRQRKEYEEFFETDFSFEIA    76
NTDB id 1259 GCO85 RS10305 WP 010947729.1       ....MDIAELLAFSVKNKSSDLHISAGMPPMIRVDGDLRKINLPPLEHKDVIKIIYDIMNDRQRKEYEEFFETDFSFEIA    76
NTDB id 1194 PAKAF RS01995 WP 003084552.1       ....MDITELLAFSAKQGASDLHLSAGLPPMIRVDGDVRRINLPPLEHKQVHALIYDIMNDKQRKDFEEFLETDFSFEVP    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 1170742 ACOCLE RS19020 WP 419533791.1  G.IGRFRVSAFQQRNQSGMVLRRIEEKIPSFEDLKLPHILKDLTMTKRGLVILVGATGTGKSTTLAAMLGYRNENETGHI   155
NTDB id 1203 PSJM300 01605 AFN76401.1           G.IGRFRVSAFYQRNLAGMVLRRIETNIPTIEDLKLPDVLKKLALTKRGLVLFVGATGTGKSTSLAAMIGYRNKNSSGHI   155
NTDB id 1307 DR RS10055 WP 010888596.1          D.KARFRVNAFMQRGNVGGVMRLIPTTVRTIAEMGLPQTVIDIANAPRGLVLVTGPTGSGKSTTLASMIDHINTTKKLHI   159
NTDB id 1283 ACE17W RS02630 WP 010947729.1      N.LARFRVNAFNQSRGAAAVFRTIPSEILSMEDLGLPPIFKEMASFSRGLVLVTGPTGSGKSTTLAAVIDYINSSRYEHI   155
NTDB id 1259 GCO85 RS10305 WP 010947729.1       N.LARFRVNAFNQSRGAAAVFRTIPSEILSMEDLGLPPIFKEMASFSRGLVLVTGPTGSGKSTTLAAVIDYINSSRYEHI   155
NTDB id 1194 PAKAF RS01995 WP 003084552.1       G.VARFRVNAFNQNRGAGAVFRTIPSKVLTMEELGMGEVFKRVSDVPRGLVLVTGPTGSGKSTTLAAMLDYLNNTKYHHI   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 1170742 ACOCLE RS19020 WP 419533791.1  ISIEDPIEFIHQHKKCIVTQREVGIDTKSYEVALKNTLRQAPDVIMIGEIRSQDTMQYALNFAETGHLCLATLHANNANQ   235
NTDB id 1203 PSJM300 01605 AFN76401.1           ISIEDPIEFIHQHQNCIVTQREVGIDTDSFEVALKNTLRQAPDVILIGEVRTRETMDHAVAFAETGHLCLATLHANNANQ   235
NTDB id 1307 DR RS10055 WP 010888596.1          LTIEDPIEFMHPNKASIINQREVGSDTLSFDDALRAALRQAPDVILVGEMRDYETIKAAVTAAETGHLVMGTLHTNSAPE   239
NTDB id 1283 ACE17W RS02630 WP 010947729.1      LTVEDPIEFVHQSKKCLVNQREVHKDTLSFNAALRSALREDPDIILVGELRDLETIRLAMTAAETGHLVFGTLHTNSATK   235
NTDB id 1259 GCO85 RS10305 WP 010947729.1       LTVEDPIEFVHQSKKCLVNQREVHKDTLSFNAALRSALREDPDIILVGELRDLETIRLAMTAAETGHLVFGTLHTNSATK   235
NTDB id 1194 PAKAF RS01995 WP 003084552.1       LTIEDPIEFVHESKKCLVNQREVHRDTLGFSEALRSALREDPDIILVGEMRDLETIRLALTAAETGHLVFGTLHTTSAAK   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 1170742 ACOCLE RS19020 WP 419533791.1  ALDRILHFFPPEHHHQVWMDLSLNLKGIVAQQLIPSLDGTGRRPAIEVLLNTPLAQDMIRKGDVHALKELMKKSRELGMQ   315
NTDB id 1203 PSJM300 01605 AFN76401.1           ALDRIINFFPADRQNQVWMDLSLNLKAIVAQQLVPTPDGKGRRAVIEVLINTPLAADLIRKGEVHELKGLMKRSTDLGMQ   315
NTDB id 1307 DR RS10055 WP 010888596.1          SIDRIVDVFPEEQQEQIRVQLANNLVAVMTQQLLPRADGQGRVLAYEILLANPAVRALIREGKTFQITSVMQTGAREGMV   319
NTDB id 1283 ACE17W RS02630 WP 010947729.1      TINRIIDVFPAEEKSMVRSMLSESLQAVVAQSLLK.KNKGGRVAALEIMMCTGAIRNLIREDKIAQMYSSIQTGQAKGMQ   314
NTDB id 1259 GCO85 RS10305 WP 010947729.1       TINRIIDVFPAEEKSMVRSMLSESLQAVVAQSLLK.KNKGGRVAALEIMMCTGAIRNLIREDKIAQMYSSIQTGQAKGMQ   314
NTDB id 1194 PAKAF RS01995 WP 003084552.1       TIDRVVDVFPAEEKAMVRSMLSESLQSVISQTLIK.KIGGGRVAAHEIMIGTPAIRNLIREDKVAQMYSAIQTGGSLGMQ   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     TFDQALYQLVVDDKISEQDALHSADSANDLRLMLK.TKRGDDYG...SGSLQN...VKIDME..................   368
NTDB id 1019 ACIAD RS04205 WP 004922051.1       TFDQALFDLYDHQHISYADALKHADSPNNLRLQIK.LSEEANKPLDNRERMSE...MERKMTFDGQRRNLK.........   383
NTDB id 1170742 ACOCLE RS19020 WP 419533791.1  TFDQALFDLYNSGEISYEEAIRHADSANDLRLMIK.LGSEVDGDYLTE.RSGK...LTLQMDEA................   374
NTDB id 1203 PSJM300 01605 AFN76401.1           TFDQALYNLYVQGEITYEDALLHADSSNDLRLMIK.LGSETDGEHLTS.VSQG...LTLEMSDDDPGRSFR.........   381
NTDB id 1307 DR RS10055 WP 010888596.1          TMDAYLAGLFRRHLITYDKGLERAIDPKEFARLANDASAGLGGASMTPAAPPVPAYNSASSSSTGRGGDFGRGAAAPATP   399
NTDB id 1283 ACE17W RS02630 WP 010947729.1      TLDQHLTELVNKNIISKHTAHEAALNKSLF...................................................   344
NTDB id 1259 GCO85 RS10305 WP 010947729.1       TLDQHLTELVNKNIISKHTAHEAALNKSLF...................................................   344
NTDB id 1194 PAKAF RS01995 WP 003084552.1       TLDMCLKGLVAKGLISRENAREKAKIPENF...................................................   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 1170742 ACOCLE RS19020 WP 419533791.1  ....................   374
NTDB id 1203 PSJM300 01605 AFN76401.1           ....................   381
NTDB id 1307 DR RS10055 WP 010888596.1          AAPAAGRSEPGRAGGFGRR   418
NTDB id 1283 ACE17W RS02630 WP 010947729.1      ....................   344
NTDB id 1259 GCO85 RS10305 WP 010947729.1       ....................   344
NTDB id 1194 PAKAF RS01995 WP 003084552.1       ....................   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