```
logo
NTDB id 1307 DR RS10055 WP 010888596.1      MTSGIDITDILRLAADKGASDIILAAGLPPQFKLSGDYDAQGFEPLSASDTRKLMYSMMNERQQRIFEEKRELDFSFALG   80
NTDB id 1177 A1552VC RS01165 WP 000422572.1 ....MELNQYLDGMLTHKASDLYITVGAPILYRVDGELRAQGEA.LSVADVTALLHAMMDDARQAEFKQTREANFAVVRD   75
NTDB id 1019 ACIAD RS04205 WP 004922051.1  ....MDFNDLLNLMAKHKASDLFITAGVEPSLKINGEITPVSKTKLDGDMIAQLIDSITTQKQRQEFIETHECNFAILNR   76
NTDB id 40601 A0K RS02015 WP 003100959.1    ....MEFEKLLRLMVEKGGSDLFITAGVPPSMKVNGRVMPVTKTPLSPEQTRETVLGVMNEQQRRDFAENHECNFAISAR   76
NTDB id 1203 PSJM300 01605 AFN76401.1       ....MEFEKLLRLMVEKGGSDLFITAGVPPSMKVNGKILPVNKTPMSPEMTRETVHGVMNEQQRREFTENHECNFAISAR   76
consensus                                       ***  *!********!!*****!********!** ** ***** * ** ** ***** ****! * *!**!**  *

logo
NTDB id 1307 DR RS10055 WP 010888596.1      .DKARFRVNAFMQRGNVGGVMRLIPTTVRTIAEMGLPQTVIDIANAPRGLVLVTGPTGSGKSTTLASMIDHINTTKKLHI  159
NTDB id 1177 A1552VC RS01165 WP 000422572.1 ..SGRFRVSAFFQRELPGAVIRRIETRIPTFEELKLPEVLQNLAIAKRGLVLVVGATGSGKSTTMAAMTGYRNQHRTGHI  153
NTDB id 1019 ACIAD RS04205 WP 004922051.1  EKNERFRVSAFQQRDMPGMVIRRIETKIPSPDDLHLPPILKELAMSKRGIIIFSGATGTGKSTSLASMIQHRNQHSKGHI  156
NTDB id 40601 A0K RS02015 WP 003100959.1    G.IGRFRVSAFYQRNLVGMVLRRIETNIPTLEELKLPEILKKLALTKRGLVIFVGATGTGKSTSLAAMIGYRNKNSTGHI  155
NTDB id 1203 PSJM300 01605 AFN76401.1       G.IGRFRVSAFYQRNLAGMVLRRIETNIPTIEDLKLPDVLKKLALTKRGLVLFVGATGTGKSTSLAAMIGYRNKNSSGHI  155
consensus                                     *!!!!*!!*!! * !*!*!*!*! ********!!**** *!***!!*****!*!!*!!!!**!*!****!  ***!!

logo
NTDB id 1307 DR RS10055 WP 010888596.1      LTIEDPIEFMHPNKASIINQREVGSDTLSFDDALRAALRQAPDVILVGEMRDYETIKAAVTAAETGHLVMGTLHTNSAPE  239
NTDB id 1177 A1552VC RS01165 WP 000422572.1 LTVEDPIEFVHEHKRCIVTQREVGLDTESYEVALKNSLRQAPDMILIGEIRSRETMEYAMTFAETGHLCMATLHANNANQ  233
NTDB id 1019 ACIAD RS04205 WP 004922051.1  ITIEDPIEFIHEHAGCIITQREVGIDTDSFEIALKNTLRQAPDVILIGEIRSREVMDYALAFAETGHLVFATLHANNANQ  236
NTDB id 40601 A0K RS02015 WP 003100959.1    ISIEDPIEYIHQHQGCIVTQREVGLDTDSFEVALKNTLRQAPDVIMIGEVRSRETMDHAVAFAETGHLCLATLHANNANQ  235
NTDB id 1203 PSJM300 01605 AFN76401.1       ISIEDPIEFIHQHQNCIVTQREVGIDTDSFEVALKNTLRQAPDVILIGEVRTRETMDHAVAFAETGHLCLATLHANNANQ  235
consensus                                   ***!!!!!**! * **!**!!!!!*!!*!***!!***!!!!!!*!**!!*!**!*** !***!!!!!!***!!!*!*!**

logo
NTDB id 1307 DR RS10055 WP 010888596.1      SIDRIVDVFPEEQQEQIRVQLANNLVAVMTQQLLPRADGQGRVLAYEILLANPAVRALIREGKTFQITSVMQTGAREGMV  319
NTDB id 1177 A1552VC RS01165 WP 000422572.1 ALERILHLVPKEQREQFLLDLSLNLKGVIAQQLLRDKNGKGRHGVFEVLLNSPRIADLIRRGELHELKATMARSQEVGMQ  313
NTDB id 1019 ACIAD RS04205 WP 004922051.1  TLERIIHFFDADRHQQIFMDLSLNLKAVISQQLIPTHDGQSRRAAVEVLINTPLLSDYIRQGEIYKIKELMARSGELGMQ  316
NTDB id 40601 A0K RS02015 WP 003100959.1    ALERIIHFFPADRHGQVWMDLSLNLKAIVAQQLVPTPDGKGRRAVIEVLLNTPLAADLIRKGEVHELKPLMKRSTEQGMQ  315
NTDB id 1203 PSJM300 01605 AFN76401.1       ALDRIINFFPADRQNQVWMDLSLNLKAIVAQQLVPTPDGKGRRAVIEVLINTPLAADLIRKGEVHELKGLMKRSTDLGMQ  315
consensus                                   ***!!********  !****!**!!*****!!!*** *!**!****!*!***!*****!!*!******  *!  **  **!!*

logo
NTDB id 1307 DR RS10055 WP 010888596.1      TMDAYLAGLFRRHLITYDKGLERAIDPKEFARLAND...ASAGLGGASMTPAAPPVPAYNSASSSSTGRGGDFGRGAAAP  396
NTDB id 1177 A1552VC RS01165 WP 000422572.1 TFDQALYQLVVDDKISEQDALHSADSANDLRLMLKTKRGDDYGSGS.....................LQNVKIDME....  368
NTDB id 1019 ACIAD RS04205 WP 004922051.1  TFDQALFDLYDHQHISYADALKHADSPNNLRLQIKLSEEANKPLDNRE...............RMSEMERKMTFDGQ....  378
NTDB id 40601 A0K RS02015 WP 003100959.1    TFDQALYQLYTQGEITYEDALAHADSANDLRLMIKLGSESDADHL...................SSLTQGLSLEITDDD.  375
NTDB id 1203 PSJM300 01605 AFN76401.1       TFDQALYNLYVQGEITYEDALLHADSSNDLRLMIKLGSETDGEHL...................TSVSQGLTLEMSDDD.  375
consensus                                   !*!**!**!*     !*****!  *!** *********   * **                     ***  *******
```

```
logo
                                                  DA GRS          FR
                                                 ATPAA GARINEPGRAGGLGRR
NTDB id 1307 DR RS10055 WP 010888596.1           ATPAAPAAGRSEPGRAGGFGRR   418
NTDB id 1177 A1552VC RS01165 WP 000422572.1      ......................   368
NTDB id 1019 ACIAD RS04205 WP 004922051.1        ........RRN.......LK..   383
NTDB id 40601 A0K RS02015 WP 003100959.1         .....PA.GRR.......FR..   382
NTDB id 1203 PSJM300 01605 AFN76401.1            .....PG..RS.......FR..   381
consensus                                             **  *         **
```

X non conserved

X similar

X $\geq$ 50% conserved