```
NTDB id 1177 A1552VC RS01165 WP 000422572.1   ...........MELNQYLDGMLTHKASDLYITVGAPILYRVDGELRAQGEALSVAD.VTALLHAMDDARQAEFKQTREA   68
NTDB id 390253 FSC11 RS07005 WP 048881092.1   MFTAELLEEARKFMHHMLTKVVEYGGSDLFITADFPPSIKHQGLMKPFGQQELTPEKTKLFAYAIMNEKQRKEYEAELEC   80
NTDB id 1203 PSJM300 01605 AFN76401.1         .........MEFEKLLRLMVEKGGSDLFITAGVPPSMKVNGKILPVNKTPMSPEMTRETVHGVMNEQQRREFTENHEC     69
NTDB id 1019 ACIAD RS04205 WP 004922051.1     .........MDFNDLLNLMAKHKASDLFITAGVEPSLKINGEITPVSKTKLDGDMIAQLIDSITTQKQRQEFIETHEC     69
consensus                                               **** *! ***** *!!!*!!*********!**!*****!*!*****!******!******!*******!!* ***!!*
```

```
NTDB id 1177 A1552VC RS01165 WP 000422572.1   NFAVVRD..SGRFRVSAFFQRELPGAVIRRIETRIPTFEELKLPEVLQNLAIAKRGLVLVVGATGSGKSTTMAAMTGYRN   146
NTDB id 390253 FSC11 RS07005 WP 048881092.1   NFAITVPG.VSRFRVNVFQQQLNVGMVIRTTITAEIPNFQKLKLPESLKHVIMEKRGLVLVVGGTGSGKSTSLAAMIDYRN   159
NTDB id 1203 PSJM300 01605 AFN76401.1         NFAISARG.IGRFRVSAFYQRNLAGMVLRRIETNIPTIEDLKLPDVLKKLALTKRGLVLFVGATGTGKSTSLAAMIGYRN   148
NTDB id 1019 ACIAD RS04205 WP 004922051.1     NFAILNREKNERFRVSAFQQRDMPGMVIRRIETKIPSPDDLHLPPILKELAMSKRGIIIFSGATGTGKSTSLASMIQHRN   149
consensus                                       !!!* ** ** **!!!!*!!* !**!!!!***!*!* *!** *!!* *****!!!***! *!*!!*!*****!***!!
```

```
NTDB id 1177 A1552VC RS01165 WP 000422572.1   QHRTGHILTVEDPIEFVHEHKRCIVTQREVGLDTESYEVALKNSLRQAPDMILIGEIRSRETMEYAMTFAETGHLCMATL   226
NTDB id 390253 FSC11 RS07005 WP 048881092.1   ENSAGHIITVEDPVEYVHKHKKSMITHREVGVDSHSWHNALKNTLRQAPDVILIGEIRDTETMEHAIAFAETGHLCLGTL   239
NTDB id 1203 PSJM300 01605 AFN76401.1         KNSSGHIISIEDPIEFIHQHQNCIVTQREVGIDTDSFEVALKNTLRQAPDVILIGEVRTRETMDHAVAFAETGHLCLATL   228
NTDB id 1019 ACIAD RS04205 WP 004922051.1     QHSKGHIITIEDPIEFIHEHAGCIITQREVGIDTDSFEIALKNTLRQAPDVILIGEIRSREVMDYALAFAETGHLVFATL   229
consensus                                       * ***!!!!***!*!***!*  ! *!****!*!**!!!***!****!!******!!**!!*!****!!!******!!!
```

```
NTDB id 1177 A1552VC RS01165 WP 000422572.1   HANNANQALERILHLVPKEQREQFLLDLSLNLKGVIAQQLLRDKNGKGRHGVFEVLLNSPRIADLIRRGELHELKATMAR   306
NTDB id 390253 FSC11 RS07005 WP 048881092.1   HSNNANQTLDRIINFFPEERRNQLMDLSSNMKAIVSQRLVRTEDGKGRRAAVEIMLNTPLVSDLIKGDFHELKAIMGK    319
NTDB id 1203 PSJM300 01605 AFN76401.1         HANNANQALDRIINFFPADRQNQVWMDLSLNLKAIVAQQLVPTPDGKGRRAVIEVLINTPLAADLIRKGEVHELKGLMKR   308
NTDB id 1019 ACIAD RS04205 WP 004922051.1     HANNANQTLERIIHFFDADRHQQIFMDLSLNLKAVISQQLIPTHDGQSRRAAVEVLINTPLLSDYIRQGEIYKIKELMAR   309
consensus                                       !*!!!!!  *!*!!****  *!!! *!**!!*!*  **!!* !**!*!*!**  *!***!****  !*!*!!***!!**!**
```

```
NTDB id 1177 A1552VC RS01165 WP 000422572.1   SQEVGMQTFDQALYQLVDDKISEQDALHSADSANDLRLMLKTKRGDDYGSGSL...QN..VKIDME.............   368
NTDB id 390253 FSC11 RS07005 WP 048881092.1   SRELGMQTFDQALFDLYNEGAISYEEALRNADSTNELRLQIKLKSTRANPAMNNTATAFSMVEEKKPDNETDEDASSTEQ   399
NTDB id 1203 PSJM300 01605 AFN76401.1         STDLGMQTFDQALYNLYVQGEITYEDALLHADSSNDLRLMIKLGSETDGEHLTSVS.QG..LTLEMSDDDPGRSFR....   381
NTDB id 1019 ACIAD RS04205 WP 004922051.1     SGELGMQTFDQALFDLYDHQHISYADALKHADSPNNLRLQIKLSEEANKPLDNRERMSE..MERKMIFDGQRRNLK....   383
consensus                                       ! **!!!!!!!!** !!!    !*!*!! !***!!*!**!!*!!   *   **    * *      ** ******** * *
```

```
NTDB id 1177 A1552VC RS01165 WP 000422572.1   ..   368
NTDB id 390253 FSC11 RS07005 WP 048881092.1   SS   401
NTDB id 1203 PSJM300 01605 AFN76401.1         ..   381
NTDB id 1019 ACIAD RS04205 WP 004922051.1     ..   383
consensus
```
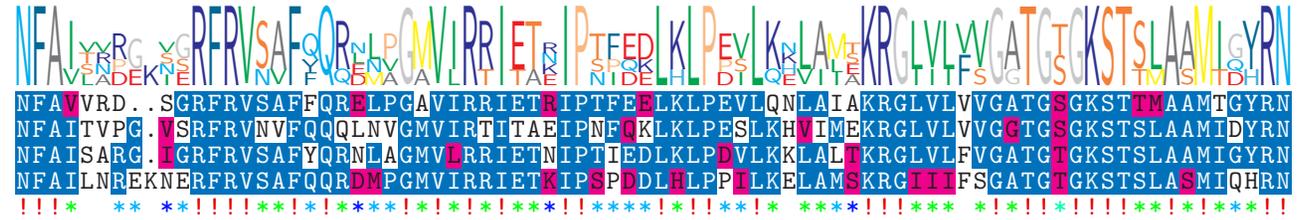
X non conserved
X similar
X ≥ 50% conserved