```
logo
NTDB id 34697 SMUGS5 RS01130 WP 002265822.1  ..MSKEKILQVNNLHVNFHTYAGEVKAIRDVSFYLEKGETLAIVGESGSGKSVTTRTLMGLSAKNAE.IFGDIEFKGRNL   77
NTDB id 361 SMU RS01310 WP 002262737.1       ..MSKEKILQVNNLHVNFHTYAGEVKAIRDVSFYLEKGETLAIVGESGSGKSVTTRTLMGLSAKNAE.IFGDIEFKGHNL   77
NTDB id 478 HSISS4 RS06985 WP 021143811.1   MTENKNVILSARDIVVEFDVRDRVLTAIRGVSLDLVEGEVLALVGESGSGKSVLTKTFTGMLEENGRVASGSIDYRGQDL   80
NTDB id 327 STU RS16115 WP 011226304.1      MTENKNVILSARDIVVEFDVRDRVLTAIRGVSLDLVEGEVLALVGESGSGKSVLTKTFTGMLEENGRVASGSIDYRGKDL   80
NTDB id 295 STER RS06915 WP 011226304.1     MTENKNVILSARDIVVEFDVRDRVLTAIRGVSLDLVEGEVLALVGESGSGKSVLTKTFTGMLEENGRVASGSIDYRGKDL   80
consensus                                   ****!**!!******!*!********!!!*!!**!**!!*!!*!!!!!!!!!!*!*!**!****!*****!*!***!**!
```

```
logo
NTDB id 34697 SMUGS5 RS01130 WP 002265822.1  NDLK.EEDWVHIRGNDISMIFQDPMTSLDPTMRIGLQIAEPIIKHEKVTKKEALKRALDMMEKVGIPNAQEHINDYPHQW   156
NTDB id 361 SMU RS01310 WP 002262737.1       NDLK.EEDWVHIRGNDISMIFQDPMTSLDPTMRIGLQIAEPIIKHEKVTKKEALKRALDMMEKVGIPNAQEHINDYPHQW   156
NTDB id 478 HSISS4 RS06985 WP 021143811.1   TKLKSHQDWAHIRGAKIATIFQDPMTSLDPIKTIGSQIVEVIVKHQGKSAKEAKKMAIDYMDKVGIPDAEKRFNEYPFQY   160
NTDB id 327 STU RS16115 WP 011226304.1      TKFKSHQDWAAIRGAKIATIFQDPMTSLNPIKTIGSQIIEVIVKHQGKTAKEAKKMAIDYMDKVGIPDAEKRFNEYPFQY   160
NTDB id 295 STER RS06915 WP 011226304.1     TKFKSHQDWAAIRGAKIATIFQDPMTSLNPIKTIGSQIIEVIVKHQGKTAKEAKKMAIDYMDKVGIPDAEKRFNEYPFQY   160
consensus                                   ***!***!!**!!!**!**!!!!!!!!!!*!***!!*!!*!*!!*****!!!*!*!*!*!*!!!!!!*!****!*!!*!*
```

```
logo
NTDB id 34697 SMUGS5 RS01130 WP 002265822.1  SGGMRQRAVIAIALATNPEILIADEPTTALDVTIQAQILHLMKEIQKNTDSSIIFITHDLGVVAGMADRVAVMYAGKIVE   236
NTDB id 361 SMU RS01310 WP 002262737.1       SGGMRQRAVIAIALATNPEILVADEPTTALDVTIQAQILHLMKEIQKNTDSSIIFITHDLGVVAGMADRVAVMYAGKIVE   236
NTDB id 478 HSISS4 RS06985 WP 021143811.1   SGGMRQRIVIAIALACRPDVLICDEPTTALDVTIQAQIIDLLKSLKEEYGFSVIFITHDLGVVASIADKVAVMYAGEIIE   240
NTDB id 327 STU RS16115 WP 011226304.1      SGGMRQRIVIAIALACRPDVLICDEPTTALDVTIQAQIIDLLKSLKEEYGFSVIFITHDLGVVASIADKVAVMYAGEIIE   240
NTDB id 295 STER RS06915 WP 011226304.1     SGGMRQRIVIAIALACRPDVLICDEPTTALDVTIQAQIIDLLKSLKEEYGFSVIFITHDLGVVASIADKVAVMYAGEIIE   240
consensus                                   !!!!!!!*!!!!!!!**!**!**!!!!!!!!!!!!!!!**!*!********!*!!!!!!!!!!!!**!!*!!!!!!!*!*!
```

```
logo
NTDB id 34697 SMUGS5 RS01130 WP 002265822.1  YGTVDEVFYNPQHPYTWGLLNSMPTTNTASGSLHSIPGTPPDLLQPPQGDAFAPRNEFALDIDLKEEPPFFKVSDSHYAA   316
NTDB id 361 SMU RS01310 WP 002262737.1       YGTVDEVFYNPQHPYTWGLLNSMPTTNTASGSLHSIPGTPPDLLQPPQGDAFAPRNEFALDIDLKEEPPFFKVSDSHYAA   316
NTDB id 478 HSISS4 RS06985 WP 021143811.1   YATVEEIFYEPCHPYTWSLLSSLPQLADDKGELFSIPGTPPSLYTPVVGDAFALRSDYAMQIDFEEKAPQFQVSDTHWAK   320
NTDB id 327 STU RS16115 WP 011226304.1      YATVEEIFYEPCHPYTWSLLSSLPQLADDNGKLFSIPGTPPSLYTPVVGDAFALRSDYALQIDFEEKAPQFQVSDTHWAK   320
NTDB id 295 STER RS06915 WP 011226304.1     YATVEEIFYEPCHPYTWSLLSSLPQLADDNGKLFSIPGTPPSLYTPVVGDAFALRSDYALQIDFEEKAPQFQVSDTHWAK   320
consensus                                   !*!!*!*!!*!*!!!!!!*!!*!*!***** ! !*!!!!!!!!*!**!**!!!!!*!***!**!!**!**!*!*!!!*!*!*
```

```
logo
NTDB id 34697 SMUGS5 RS01130 WP 002265822.1  TWLLDDRAPKITPPERILQRWRKWKSLQGEKHND.......   350
NTDB id 361 SMU RS01310 WP 002262737.1       TWLLDDRAPKITPPERILQRWEKWKSLQGEKHND.......   350
NTDB id 478 HSISS4 RS06985 WP 021143811.1   TWLLHEDAPKVEKPAVIQNLHEKIRANMGFAHLGDEEEGNA   361
NTDB id 327 STU RS16115 WP 011226304.1      TWLLHEDAPKVDKPAVIQNLHEKILANMGFAHLGDEEEGNA   361
NTDB id 295 STER RS06915 WP 011226304.1     TWLLHEDAPKVDKPAVIQNLHEKILANMGFAHLGDEEEGNA   361
consensus                                   !!!!***!!!***!**!*****!*****!**!*********
```

X non conserved
X similar
X $\geq$ 50% conserved