logo

```
NTDB id 1306 DR RS10060 WP 027479822.1    ..MALSIGDRRLGAILLDQGYLGDNDLQRALERHSEVGGRLADVLIDSGMVGEKRIARAIEEALGIPLVNLLAVQPDPAALRSIR   83
NTDB id 36677 MRUB RS04810 WP 013013233.1 MANVLTIGDKRLGAALLDMGLLGDEELQRALEQHREVGGNLSEIIVDLGLLSERRIAQAIEQAFGIPLVELADMEISPEAKSLIP   85
NTDB id 1028 TT RS08215 WP 011173991.1    .MSVLTIGDKRLGAALLDAGLLTDEELQRALERHREVGGSLAEVLVDMGLLSERRIAQTIEDRFGIPLVELHRVEIPPKVKALLP   84
consensus                                    *!*!!!*!!!!*!!! !*!*!**!!!!!!*!*!!!! !*****!*!***!*!!!**!!**!!!!!*!  *** ! ** ***
```

logo

```
NTDB id 1306 DR RS10060 WP 027479822.1    PQTALNLQAFPFAL..EGDRLRVALVDPLSSFSIETLEDDSGFDIEPYQALREEVMWAIATHYPELGLEIVVPSGASDAGRTGGK  166
NTDB id 36677 MRUB RS04810 WP 013013233.1 AERARDLGAIPFSV..EGGTLRVALLNPLDNLVLEELEDLTNQIIEPYLATPSSFRYALAVHYPELGLPVPPP..PSAASQGEMQ  166
NTDB id 1028 TT RS08215 WP 011173991.1    AEKAKELKAIPFALDEEAGVVRVAFLNPLDTLSLEEVEDLTGLVVEPYQTTKSAFLYALAKHYPELGLPVPPP..PSGEGQKDLK  167
consensus                                  ***!**!  !*!!**   !** *!!!***!!*****!**!!*** **!!!***** ***!*!  !!!!!!!****!   *!**** ***
```

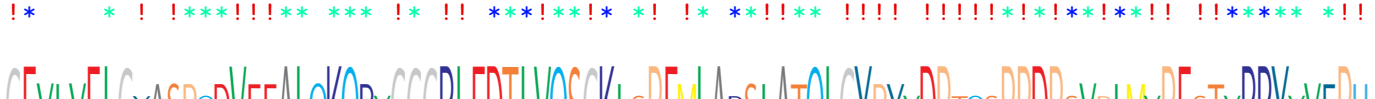
logo

```
NTDB id 1306 DR RS10060 WP 027479822.1    LGERLITHGYITDAQLQVALDAQQQTGEALGATLISQRAITEDQLYEVLAEQEGTTFLPNPSGFHPGEEVLGSMLRADALRLLAV  251
NTDB id 36677 MRUB RS04810 WP 013013233.1 LGEILVSKGWLSREDLEAALVEQEKTGELLGRLLVNKFGLAEERLYQALAEQAGIEFRAELDDLELQQEVSAYLLRPDALRYQAI  251
NTDB id 1028 TT RS08215 WP 011173991.1    LGELLLQKGWISREALEEALVEQEKTGDLLGRILVR.KGLPEEALYRALAEQKGLEFLESTEGIVPDPSAALLLRSDALRYGAV  251
consensus                                 !!!*!***!***** !* !!**!**!!**!!**!*  *** !* !! *!!!! !**!*   *** *  ** * *!! !!!!* !*
```

logo

```
NTDB id 1306 DR RS10060 WP 027479822.1    PVDETEQGVTVLTSDPRKRPDIDALIGRPVQLMLTRPRDIERLIEQFYPQRGRLGEQLVQEGTLSRDQLREALQVQAREGKVKPL  336
NTDB id 36677 MRUB RS04810 WP 013013233.1 PARQDGQQVLVVLADPRHRHAVARLIERPTKFILTLPKVWEALFGKAYPEKSRLGEALVQEGKLGRAALQDALSVQRRMGKTRPL  336
NTDB id 1028 TT RS08215 WP 011173991.1    PIGFQNGEVEVVLSDPRHKEAVAQLLNRPARFYLALPQAWEELFRRAYPQKNRLGEVLVQEGKLSREALKEALEVQKGLPRAKPL  336
consensus                                 !*    * ! !***!!!** *** !* !! ***!**!* *! !* **!!** !!!! !!!!!*!*!**!**!! !!*****  *!!
```

logo



```
NTDB id 1306 DR RS10060 WP 027479822.1    GEVITELGFASPDEVDSALQKQNVGGGRLEDTLVQSGKLSPEMLARSLAAQLGYEFLDPIQNPPDPKVALMIPEATARRYVVVPV  421
NTDB id 36677 MRUB RS04810 WP 013013233.1 GEVLVELGYVSAQDVEEALAKQRQGGGRLEDTLVQSGKIKPEMLAKSLATQLGYPYIDPTDSPPDPSVLTMVPESTVRRYTIFPH  421
NTDB id 1028 TT RS08215 WP 011173991.1    GEILVELGLARPEDVEEALQKQRRGGGRLEDTLVQSGKLRPEALAQAVATQLGYPYVDPEEDPPDPGAPLLLPEDLCRRYGVFPH  421
consensus                                 !!***!!!*****!**!!*!!* !!!!!!!!!!!!!!!**!!*!!***!*!!!!***!! * !!!! * **** !  * !!! **!*
```

logo

```
NTDB id 1306 DR RS10060 WP 027479822.1    RLQGNSLVVAMKDPRNVFALDDLKLITGK.....EILPAVMAEKDIIRLIERYFGEK.GFEKLNKELAERNKTQQSQEADLSVAD  500
NTDB id 36677 MRUB RS04810 WP 013013233.1 HLEGNTLVVLMKDPRNILAIDDLRMITKR.....DVMPAVSAEAAITKLIERFYGSTTGVEELAREFEGKKR..EEEAADTSALD  499
NTDB id 1028 TT RS08215 WP 011173991.1    RLEGNRLVLLMKDPRNILALDDVRLALKRKGLNYEVAPAVATEAAITKLIERFYGKA.ELSEIAKEFAKKQA..EEEVPSPLELD  503
consensus                                 *!*!!*!!**!!!!!!**!*!!******* **!!! *!**!**!!!!**!  *******!** ***  *** ** * *!
```

logo

```
NTDB id 1306 DR RS10060 WP 027479822.1    ESAIVQVVDSIIREAALQDASDIHIETTEDAVKVRYRIDGALREQNSFPKGAAQQIMARLKIMGHLDIAERRVPQDGRVRFKKGS  585
NTDB id 36677 MRUB RS04810 WP 013013233.1 DNAVVKLVNSIIREAFLQDASDIHIEPRQSDILVRIRIDGTLREYMRLPRGAGPAIASRIKIMANLDIAERRLPQDGRVRYRDRS  584
NTDB id 1028 TT RS08215 WP 011173991.1    ESAAQKFVKQVIREAFLQDASDIHIEPRQNDVQVRLRIDGALRPYSTLPKGALNAVISVVKIMGGLNIAEKRLPQDGRVRYREGA  588
consensus                                 **!****! **!!!!*!!!!!!!!!!*** ** !!*!!!!*!!** **!*!!*******!!!* !*!!!*!*!!!!!!!*****
```

logo

```
NTDB id 1306 DR RS10060 WP 027479822.1    IDLDLRLSTLPTVYGEKAVMRLLQKASNIPELEQLGFSEYNYARYTEIIERPNGIFLVTGPTGSGKSFTCFSTLKRIAKPEKNTT  670
NTDB id 36677 MRUB RS04810 WP 013013233.1 IDLDLRLSTLPTVYGEKIVMRLLRKAADIPEIEQLGFAPDVFQRFEDVISKPYGIFLITGPTGSGKSFTTFSILKRIATPDKNTT  669
NTDB id 1028 TT RS08215 WP 011173991.1    IDVDLRLSTLPTVYGEKAVMRLLKKASDIPEIEDLGFAPGVFERFKEVISKPYGIFLITGPTGSGKSFTTFSILKRIATPDKNTQ  673
consensus                                 !!*!!!!!!!!!!!!!!*!!!!!*!!**!!!*!*!!!** ** !* **!**!*!!!!*!!!!!!!!!!*!!*!!!!!*!*!!!*
```

logo

```
NTDB id 1306 DR RS10060 WP 027479822.1    TIEDPIEYEVPGIVQSQVNNSTGMTFARALRAFLRQDPDIIFVGEIRDQETAKIAVEAALTGHMVLATLHTNDAPGAVTRLEEMG  755
NTDB id 36677 MRUB RS04810 WP 013013233.1 TIEDPVEYEIPGINQTQVNPVAGLTFAKALRSFLRQDPDIIMVGEIRDSETAKIATEAALTGHLVIATLHTNDAAGAVTRLDEMG  754
NTDB id 1028 TT RS08215 WP 011173991.1    TIEDPVEYEIPGINQTQVNPQAGLTFARALRAFLRQDPDIIMVGEIRDSETAKIATEAALTGHLVIATLHTNDAAQATTRLDEMG  758
consensus                                 !!!!!*!!!*!!!*!*!!!* *!*!!!*!!!*!!!!!!!!!!*!!!!!!*!!!!!!*!!!!!!!*!*!!!!!!!!**!*!!!*!!!
```

logo

```
NTDB id 1306 DR RS10060 WP 027479822.1    IENFNISAAVMGVLAQRLVRRVCSECKQPTNADPEVLRRLGISERDIRGANLMRGTGCPRCGGTGYKGRMGIHELMVMDDSLRRT  840
NTDB id 36677 MRUB RS04810 WP 013013233.1 VELFNISAALVGVLAQRLVRKICEHCKIQVEPDPTVLRRLELSREELRGKTLYKGTGCDKCNGTGYKGRTAIHELMVLDDEIRRA  839
NTDB id 1028 TT RS08215 WP 011173991.1    VEPFNISAALIGVLSQRLVRRVCEHCKVEVKPDPETLRRLGLSEAEIQGARLYKGMGCERCGGTGYKGRYAIHELLVVDDEIRHA  843
consensus                                 *! !!!!!!*!!!*!!!!!**!**!!* * *!!**!!!!**!* ***!* !**!*!!**!*!!!!!!! *!!!!*!*!!**!**
```

logo

```
NTDB id 1306 DR RS10060 WP 027479822.1    IGAGRPAAEIRDVALGESGLRSLRQDGIEKALQGLTTLEEVLAVTAS   887
NTDB id 36677 MRUB RS04810 WP 013013233.1 IVEGQSATQIKEIAR.RGGMKTLREDGIQKAFLGLTTLEEVMARTNE   885
NTDB id 1028 TT RS08215 WP 011173991.1    IVAGKSATEIKEIAR.RKGMKTLREDGLYKALQGITTLEEVLARTIE   889
consensus                                 !**!**!**!***!* * !***!!*!!* !!**!*!!!!!!*!*! *
```

X non conserved
X similar
X ≥ 50% conserved