```
logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  MMGNWPKKPEGSQWTDDQWKAVVANGRDILVAAAAGSGKTAVLVERIIKKIINEENPVDVDRLLVVTFTNAAAQEMKNRI   80
NTDB id 119 BSU 10630 NP 388944.2            ...MNIPKPADSTWTDDQWNAIVSTGQDILVAAAAGSGKTAVLVERMIRKITAEENPIDVDRLLVVTFTNASAAEMKHRI   77
consensus                                    ***  **!!  ! !!!!!! !*!  ! !!!!!!!!!!!!!!!!!!*!*!!  !!!!*!!!!!!!!!!!!! ! !!!*!!

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  GEALEKVLIDEPGSQHVRKQLSLLNKASISTIHSFCLQVIRGYYYMLDVDPRFRIANQTENELLKEEVLDDILEEEYGIE  160
NTDB id 119 BSU 10630 NP 388944.2            AEALEKELVQRPGSLHIRRQLSLLNRASISTLHSFCLQVLKKYYYLIDLDPGFRIADQTEGELIGDEVLDELFEDEYAKG  157
consensus                                    *!!!!! !*  !!! !*!*!!!!!!*!!!!!*!!!!!!!** !!!**!*!! !!!! !!! !!* *!!!!** !*!!*

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  DNTIFFELVDRYTSDRSDDDLQRMILALHTESRAHPNPEKWLDKLVEAYDVEGK.TIEDLVYASYLLEDVKFQLETAEQY  239
NTDB id 119 BSU 10630 NP 388944.2            .EKAFFELVDRYTTDRHDLDLQFLVKQVYEYSRSHPNPEAWLESFVHLYDVSEKSAIEELPFYQYVKEDIAMVLNGAKEK  236
consensus                                    *   !!!!!!!!!*!!*! !!! **  **  !! !!!!! !!*  !* !!!  !* !!*!**  !* !!*   !  !

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  IRKATELAMLPDGPAPRVETLQADLALLGTLSSAARESWTSVYEAMQNVSWQTLKRIKKSDYNEDIVKQVDSLRNKAKDE  319
NTDB id 119 BSU 10630 NP 388944.2            LLRALELTKAPGGPAPRADNFLDDLAQIDELIQ.HQDDFSELYKRVPAVSFKRAKAVKGDEFDPALLDEATDLRNGAKKL  315
consensus                                    * *! !!   ! !!!!! *    !!! *  !  ** * ** *!  ** !!*   ! *!  ** * **     !!! !!

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  VKKLQEELFSRRPESFLRDFQDMHPVLEKLVQLVKVFTERFQAMKRDKGMVDFTDLEHFCLQILSEQSEDGEMKPSAVAL  399
NTDB id 119 BSU 10630 NP 388944.2            LEKLKTDYFTRSPEQHLKSLAEMKPVIETLVQLVISYGKRFEAAKQEKSIIDFSDLEHYCLAILTAENDKGEREPSEAAR  395
consensus                                    * !!  * !*! !! *!*   *!*!!*! !!!!!  *  !! ! ! *! **!!*!!!!*!! !!*   * !!  !!  !

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  QYRNKFAEVLVDEYQDTNFVQESIIKFVTKDSESEGNLFMVGDVKQSIYRFRLAEPGLFLGKYKRFTQEGLGGGMKIDLA  479
NTDB id 119 BSU 10630 NP 388944.2            FYQEQFHEVLVDEYQDTNLVQESILQLVTSGPEETGNLFMVGDVKQSIYRFRLAEPLLFLSKYKRFTESGEGTGRKIDLN  475
consensus                                     !   !*!!!!!!!!!!! !!!!!*  !!  *!  !!!!!!!!!!!!!!!!!!!! !!! !!!!!!  ! ! ! !!!!

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  KNFRSRHEVLDSTNFLFKQLMGGKYGEVDYDEQAELKLGASYPENEEVETELLLIQQTEETIDSEEGEEVETVQLEARL  559
NTDB id 119 BSU 10630 NP 388944.2            KNFRSRADILDSTNFLFKQLMGGKIGEVDYDEQAELKLGAAYPDNDETETELLLIDNAEDT.DASEEAEELETVQFEAKA  554
consensus                                    !!!!!!***!  !!!*!!!*!!  *!!*!!!  !!!!!!! !!* **   !!!*! * !* *   !!* !*!  ! !!*
```

```
logo
NTDB id 309327 DY471 RS05845 WP 071729531.1  MAQRIKAMVDSGYEVYDRKTDSMRPVQYRDFVILLRSMPWAPQIMEELKLQGIPIYADLATGYFEATEVNIMMNVFRVID   639
NTDB id 119 BSU 10630 NP 388944.2            IAKEIRKLISSPFKVYDGKKKTHRNIQYRDIVILLRSMPWAPQIMEELRAQGIPVYANLTSGYFEAVEVAVALSVLKVID   634
consensus                                    *!  !* ** !** !!! !  **!**!!!! !!!!!!!!!!!!!!!!* !!!!*!! ! *!!!!! !! * * ! *!!!

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  NPMQDIPLAAVLRSPIVGLNDEELATLRAHGKKGSFYEVMSSFLKGAPLEEEKELHDKLEWFYNLLQGWREFARQQSLSD   719
NTDB id 119 BSU 10630 NP 388944.2            NPYQDIPLASVLRSPIVGADENELSLIRLENKKAPYYEAMKDYLAAGD..RSDELYQKLNTFYGHLQKWRAFSKNHSVSE   712
consensus                                    !! !!!!!! !!!!!!!!  * !!  *! * !!***!! !  *! *****   !!* !!  !! *!! !! ! ***!*!*

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  LIWKVYGETGYYDFVGGLPAGKQRQANLRVLYDRARQYEATSFRGLFRFLRFIERILERGDDMGTARALGEQEDVVRIMT   799
NTDB id 119 BSU 10630 NP 388944.2            LIWEVYRDTKYMDYVGGMPGGKQRQANLRVLYDRARQYESTAFRGLFRFLRFIERMQERGDDLGTARALSEQEDVVRLMT   792
consensus                                    !!! !! *! ! !*!!!*!*!!!!!!!!!!!!!!!!!! ! !!!!!!!!!!!!!* !!!!!*!!!!!! !!!!!!!*!!

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  IHKSKGLEFPVVFVAGLGRRFNTQDLMKRFLLHKDFGFGSQFIDPRKRIKYTTLSQLAIKRKMKMELIAEEMRVLYVALT   879
NTDB id 119 BSU 10630 NP 388944.2            IHSSKGLEFPVVFVAGLGRNFNMMDLNKSYLLDKELGFGTKYIHPQLRISYPTLPLIAMKKKMRRELLSEELRVLYVALT   872
consensus                                    !! !!!!!!!!!!!!!!! !!  !! ! *!!*!* !!!* *!*!  !! !*!!* *!*!*!!* !!* !!*!!!!!!!!

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  RAKEKLILIGTVKDANKEMEKWLDAREHSEWLLPDHIRAGASCYLDWIAPSLYRHRDSEMLLELGQGSIPDEIYGYDTSW   959
NTDB id 119 BSU 10630 NP 388944.2            RAKEKLFLIGSCKDHQKQLAKWQASASQTDWLLPEFDRYQARTYLDFIGPALARHRDLGDLAGVP...AHADISGHPARF   949
consensus                                    !!!!!! !!!**!!**! * !!      ***!!!!** !  ! *!!!*!*! ! !!!!   !  *****   *! !**   *

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  KVEVVDGNTLLAPE..PVQEEKQELLEALREKKAVPLESERKEEVYDRLMWKYGYGEATSHRAKQSVTEIKRNYQSEEG.  1036
NTDB id 119 BSU 10630 NP 388944.2            AVQMIHSYDLLDDDLEERMEEKSERLEAIRRGEPVPGSFAFDEKAREQLSWTYPHQEVTQIRTKQSVSEIKRKREYEDEY  1029
consensus                                     ! ***   !! *****  !!! ! !!!*!   *!!      !   * ! ! !** ! ! *! !!!!*!!!!    !* *

logo

NTDB id 309327 DY471 RS05845 WP 071729531.1  .SDNAFIKKLRAPIQTRPRFMEKKGLTYAERGTAVHAVMQHVDLKKPITVEILQEQIAGMVNKELLTFEQAEEIAIEKVI  1115
NTDB id 119 BSU 10630 NP 388944.2            SGRAPVKPADGSILYRRPAFMMKKGLTAAEKGTAMHTVMQHIPLSHVPSIEEAEQTVHRLYEKELLTEEQKDAIDIEEIV  1109
consensus                                    *   *  *    **  !! !! !!!!! !!*!!!*! !!!!**! *****!     ** *  !!!!! !! * ! !! **
```

```
logo
NTDB id 309327 DY471 RS05845 WP 071729531.1  SFFDSDLGKRVLAAKSVEREVPFTMMLAAEEAYQDWQGESGESILVQGVIDCMIEEEDGITLIDFKTDTIEGKFPGGFDQ  1195
NTDB id 119 BSU 10630 NP 388944.2            QFFHTEIGGQLIGAKWKDREIPFSLALPAKEIYPDAH.EADEPLLVQGIIDCLYETEDGLYLLDYKSDRIEGKFQHGFEG  1188
consensus                                     !!****!  ***!!  *!!*!!** !*! ! !*! **!  !**!!!!*!!!* ! !!!* !*!*!*! !!!!!**!!*

logo
NTDB id 309327 DY471 RS05845 WP 071729531.1  AKPILEERYKVQLSLYAKALEKSLQHPVKEKCLYFFDGNHVIKVEE  1241
NTDB id 119 BSU 10630 NP 388944.2            AAPILKKRYETQIQLYTKAVEQIAKTKVKGCALYFFDGGHILTL..  1232
consensus                                    ! !!!  !!  !* !! !!*!    **!! **!!!!!! !** ***
```

X non conserved

X similar

X $\geq$ 50% conserved