```
logo

NTDB id 251811 CG475 RS05290 WP 048723054.1  MVENWPAKPEGSQWTDDQWKAVVAHGRDILVAAAAGSGKTAVLVERIIKKIINEENPVDVDRLLVVTFTNAAAQEMKNRI   80
NTDB id 119 BSU 10630 NP 388944.2            ...MNIPKPADSTWTDDQWNAIVSTGQDILVAAAAGSGKTAVLVERMIRKITAEENPIDVDRLLVVTFTNASAAEMKHRI   77
consensus                                    ***  **!!  ! !!!!!! !*! *! !!!!!!!!!!!!!!!!!!!*!*!!  !!!!*!!!!!!!!!!!!! ! !!!*!!

logo

NTDB id 251811 CG475 RS05290 WP 048723054.1  GEALEKVLIEEPSSRHIRKQLSLLNKASISTIHSFCLQVIRSYYYMLDIDPRFRIANQTENELLKEEVLDDILEEEYGME  160
NTDB id 119 BSU 10630 NP 388944.2            AEALEKELVQRPGSLHIRRQLSLLNRASISTLHSFCLQVLKKYYYLIDLDPGFRIADQTEGELIGDEVLDELFEDEYAKG  157
consensus                                    *!!!!! !*  ! ! !!!*!!!!!!*!!!!!*!!!!!!!** !!!**!*!! !!!! !!! !!* *!!!!** !*!!*

logo

NTDB id 251811 CG475 RS05290 WP 048723054.1  ENQLFFELVDRYTSDRNDDDLQRMILALHTAAGAHPNPEKWLDRLVEAYNVEGK.TIEDLMYASYLLEDVKFQLETATEH  239
NTDB id 119 BSU 10630 NP 388944.2            E.KAFFELVDRYTTDRHDLDLQFLVKQVYEYSRSHPNPEAWLESFVHLYDVSEKSAIEELPFYQYVKEDIAMVLNGAKEK  236
consensus                                    !*  !!!!!!!!!*!!*! !!! **  **     !!!!! !!*  !* ! !  !* !!*!**  !* !!*   !  ! !*

logo

NTDB id 251811 CG475 RS05290 WP 048723054.1  IRKAMELAMLPDGPAPRMETLQADLVLLETLSHAARKSWTSVYEAMQHVSWQTLKRIKKSDYNEDIVKQVDSLRNKAKDE  319
NTDB id 119 BSU 10630 NP 388944.2            LLRALELTKAPGGPAPRADNFLDDLAQIDELIQ.HQDDFSELYKRVPAVSFKRAKAVKGDEFDPALLDEATDLRNGAKKL  315
consensus                                    * *!*!!   ! !!!!! *    !!  ** ! ***   ** *!  ***!!*   ! *!  ** * **     !!! !!

logo

NTDB id 251811 CG475 RS05290 WP 048723054.1  VKKLQEELFSRKPESFLRDFQEMHPVLGKLVQLVKEFSNRFQAIKRDKGMVDFTDLEHFCLQILSEQGEDGELRPSPVAL  399
NTDB id 119 BSU 10630 NP 388944.2            LEKLKTDYFTRSPEQHLKSLAEMKPVIETLVQLVISYGKRFEAAKQEKSIIDFSDLEHYCLAILTAENDKGEREPSEAAR  395
consensus                                    * !!  * !*! !! *!*   !!*!!*  !!!!!  *  !! ! ! *! **!!*!!!!*!! !!*   * !!  !!* !

logo

NTDB id 251811 CG475 RS05290 WP 048723054.1  QYRNRFAEVLVDEYQDTNFVQESIIKLVTKDSEQEGNLFMVGDVKQSIYRFRLAEPGLFLGKYKRFTQEGLEGGMKIDLA  479
NTDB id 119 BSU 10630 NP 388944.2            FYQEQFHEVLVDEYQDTNLVQESILQLVTSGPEETGNLFMVGDVKQSIYRFRLAEPLLFLSKYKRFTESGEGTGRKIDLN  475
consensus                                     !   !*!!!!!!!!!!! !!!!!* !!!   *!  !!!!!!!!!!!!!!!!!!!!! !!! !!!!!!  !   ! !!!!

logo

NTDB id 251811 CG475 RS05290 WP 048723054.1  KNFRSRHEVLAGTNFIFKQIMGEEVGEIEYDADAELKLGASYPEGEDVAAELLCIHQSEEEVLDGEEGEEVEKAQLEARL  559
NTDB id 119 BSU 10630 NP 388944.2            KNFRSRADILDSTNFLFKQLMGGKIGEVDYDEQAELKLGAAYPDNDETETELLLIDNAED.TDASEEAEELETVQFEAKA  554
consensus                                    !!!!!!***!  !!!*!!!*!!  *!!**!!  !!!!!!! !!* **   !!!*!** !**    !!*!!*!  ! !!*
```

```
logo
NTDB id 251811 CG475 RS05290 WP 048723054.1  IAQRIKAMVDSGYTVYDRKTNEMRQVQYRDFVILLRSMPWAPQIMEELKLQGIPVYAELATGYFEATEVNIMMNVFRVID   639
NTDB id 119 BSU 10630 NP 388944.2            IAKEIRKLISSPFKVYDGKKKTHRNIQYRDIVILLRSMPWAPQIMEELRAQGIPVYANLTSGYFEAVEVAVALSVLKVID   634
consensus                                    !!   !* ** !** !!! !   *!**!!!! !!!!!!!!!!!!!!!!* !!!!!!! ! *!!!!! !! * * ! *!!!

logo
NTDB id 251811 CG475 RS05290 WP 048723054.1  NPVQDIPLAAVLRSPIVGLNDEELAMLRAHAKKGSFYEVMRSFLRGAPLEGEKELHEKLKWFYHLLQGWREFARQQSLSD   719
NTDB id 119 BSU 10630 NP 388944.2            NPYQDIPLASVLRSPIVGADENELSLIRLENKKAPYYEAMKDYLAAGD..RSDELYQKLNTFYGHLQKWRAFSKNHSVSE   712
consensus                                    !! !!!!!! !!!!!!!!  * !! **! * !!***!! !* *! *****   !!* !!  !!**!! !! ! ***!*!*

logo
NTDB id 251811 CG475 RS05290 WP 048723054.1  LIWKVYRETGYYDFVGGLPGGKQRQANLRVLYDRARQYEATSFRGLFRFLRFIERILERGDDMGTARALGEQEDVVRIMT   799
NTDB id 119 BSU 10630 NP 388944.2            LIWEVYRDTKYMDYVGGMPGGKQRQANLRVLYDRARQYESTAFRGLFRFLRFIERMQERGDDLGTARALSEQEDVVRLMT   792
consensus                                    !!! !!!*! ! !*!!!*!!!!!!!!!!!!!!!!!!! ! !!!!!!!!!!!!!* !!!!!*!!!!!! !!!!!!!*!!

logo
NTDB id 251811 CG475 RS05290 WP 048723054.1  IHKSKGLEFPVVFVAGLGRRFNTQDLMQRFLLHKDFGFGSQFIDPRKRIKYTTLSQLAIKRKMKRELIAEEMRVLYVALT   879
NTDB id 119 BSU 10630 NP 388944.2            IHSSKGLEFPVVFVAGLGRNFNMMDLNKSYLLDKELGFGTKYIHPQLRISYPTLPLIAMKKKMRRELLSEELRVLYVALT   872
consensus                                    !! !!!!!!!!!!!!!!!! !!   !!    *!*!* !!!* *!*!  !! !*!!* *!*!*!!*!!!* !!*!!!!!!!!

logo
NTDB id 251811 CG475 RS05290 WP 048723054.1  RAKEKLILIGTVKDKQKQMEKWQDTRSQTEWLLPEYVRYSASTYLDWIAPSLYRHRDSGILLGVPQH...NEIYGYPTSW   959
NTDB id 119 BSU 10630 NP 388944.2            RAKEKLFLIGSCKDHQKQLAKWQASASQTDWLLPEFDRYQARTYLDFIGPALARHRDLGDLAGVPAH...ADISGHPARF   949
consensus                                    !!!!!! !!!**!!* ! * !!  *  *!*!!!!** !  ! *!!!*!*! ! !!!!   !  ** **** *!  **  *

logo
NTDB id 251811 CG475 RS05290 WP 048723054.1  KVEFVDGKTLLAP..EPAQEEKQELLEALREKKAVPLESERKDEVYNRLTWKYEYEDATLQRAKQSVTEIKRNYQSEDG.   1036
NTDB id 119 BSU 10630 NP 388944.2            AVQMIHSYDLLDDDLEERMEEKSERLEAIRRGEPVPGSFAFDEKAREQLSWTYPHQEVTQIRTKQSVSEIKRKREYEDEY   1029
consensus                                     !  **   !! ***!*  !!! ! !!!*!   *!!      *     !*! !** * !  ! !!!!*!!!!    !! *

logo
NTDB id 251811 CG475 RS05290 WP 048723054.1  .SDTAFIQKLRAPIRTRPRFMEKKGLTYAERGTAVHAVMQHVDLKQSITIESIQEQIAKMVNKELLTFEQAEEISVERIV   1115
NTDB id 119 BSU 10630 NP 388944.2            SGRAPVKPADGSILYRRPAFMMKKGLTAAEKGTAMHTVMQHIPLSHVPSIEEAEQTVHRLYEKELLTEEQKDAIDIEEIV   1109
consensus                                    *   *  *    **  !! !! !!!!! !!*!!!*! !!!!**! * **!!     ****  !!*!! !! * ! *! !!
```

```
logo
NTDB id 251811 CG475 RS05290 WP 048723054.1  AFFESHLGKRVLEAKSVEREVPFTMMLSAKEAYQNWQGKSEETILVQGVIDCMIEEDDGITLIDFKTDTIEGKFPGGFDQ  1195
NTDB id 119 BSU 10630 NP 388944.2            QFFHTEIGGQLIGAKWKDREIPFSLALPAKEIYPDAH.EADEPLLVQGIIDCLYETEDGLYLLDYKSDRIEGKFQHGFEG  1188
consensus                                     !!****!  ** !!  *!!*!!** !*!!! !*  **  *!**!!!!*!!!* ! *!!* !*!*!*! !!!!!**!!*

logo
NTDB id 251811 CG475 RS05290 WP 048723054.1  AKPILEERYKVQLSLYAKALEKTLQHPVKEKCLYFFDGNHVITIEE  1241
NTDB id 119 BSU 10630 NP 388944.2            AAPILKKRYETQIQLYTKAVEQIAKTKVKGCALYFFDGGHILTL..  1232
consensus                                    ! !!!  !!  !* !! !!*!    **!! **!!!!!! !**!***
```

X non conserved

X similar

X $\geq$ 50% conserved