```
logo
NTDB id 1323 RA0C RS07335 WP 004916218.1      .MLVKVYGSAIHGVSAQTITIEVNVDQGV.GYHLVGLPDNAIKESSHRISAALKNVGYKLPGKKITINMAPADLRKEGSA   78
NTDB id 1271 LPP RS03220 WP 011213198.1       MSLAFTKTRSTIGIVAQPVSVEVHLSNGLPSFTMVGLAETAVKESKDRVRSAIINSQFEFPCRKITVNLGPANLPKTGSG   80
NTDB id 1248 GC085 RS03150 WP 011213198.1     MSLAFTKTRSTIGIVAQPVSVEVHLSNGLPSFTMVGLAETAVKESKDRVRSAIINSQFEFPCRKITVNLGPANLPKTGSG   80
NTDB id 230325 CBR65 RS12835 WP 087467215.1   MSLAIVYSRAKLGVSAPLVTVEVHLSNGLPSLSIVGLPETAVKESKDRVRSAILNSHLEFPARRITVNLAPADLPKEGGR   80
NTDB id 1153 A1552VC RS00115 WP 000521788.1   MGLAIIHSRASIGVQAPPVTVEVHISNGMPGFTLVGLPETTVKESRDRVRSAIINSRFEFPAKRITVNLAPADLPKEGGR   80
NTDB id 1397 DSB67 RS15690 WP 005535577.1     MGLAIIHSRASVGVQAPSVSVEVHISNGMPGFTLVGLPETTVKESKDRVRSAIVNSNFQFPAKRITVNLAPADLPKEGGR   80
NTDB id 1349 HI 1117 AAC22771.1               MSLAIVYSRASMGVQAPLVTIEVHLSNGKPGFTLVGLPEKTVKEAQDRVRSALMNAQFKYPAKRITVNLAPADLPKEGGR   80
NTDB id 1387 A4U84 RS06900 WP 020457569.1     MSLAIIYSRASIGVEAPLVTIEVHISGGSPGLTLVGLPEKSVKEAQDRVRSALMNANFDYPARRITINLAPADLPKEGGR   80
consensus                                     **!*** *****!* !* ***!!****!******!!!*** *!!***!***!**!*****!***!!*!**!!*!*!*!**

logo
NTDB id 1323 RA0C RS07335 WP 004916218.1      YDLSIALGILAASGQIIAPEIERYLIMGELSLDGGLQPIKGVLPIAIRAREEGFKGIILPKQNTREAAIVNDLEVYGVEN  158
NTDB id 1271 LPP RS03220 WP 011213198.1       FDLPIALGILAASEQIPLTNLANHEFIGELALSGELRGVSAIIPAVLAAHK.DNQHLIIANANAAEASLTGHQKVFTANN  159
NTDB id 1248 GC085 RS03150 WP 011213198.1     FDLPIALGILAASEQIPLTNLANHEFIGELALSGELRGVSAIIPAVLAAHK.DNQHLIIANANAAEASLTGHQKVFTANN  159
NTDB id 230325 CBR65 RS12835 WP 087467215.1   YDLAIALGILAASGQIPKESLAEYEFLGELALSGELRPINAALPAALASGD.VQRRLILPTHNATEAALSNTTRVYGSDN  159
NTDB id 1153 A1552VC RS00115 WP 000521788.1   FDLPIALGILAASDQIARNKLESYEFIGELALSGEIRGVKGVLPAALAANQ.VERCLVVPHSNGDQAALVGVERHKSAQS  159
NTDB id 1397 DSB67 RS15690 WP 005535577.1     FDLPIALGILAASEQIATDKLKNYEFVGELALSGGLRTVKGVLPAALAANK.KQRHLVVPHANGDQAALVGKEQHKSAQS  159
NTDB id 1349 HI 1117 AAC22771.1               FDLPIAIGILAASDQLDASHLKQFEFVAELALTGQLRGVHGVIPAILAAQK.SKRELIIAKQNANEASLVSDQNTYFAQT  159
NTDB id 1387 A4U84 RS06900 WP 020457569.1     FDLPIAIGILAASGQIDSDKLKRIELLGELSLTGHLRGVHGAIPAVLAASK.AKRETIVPQQNANEVSLVSNTQTYCAST  159
consensus                                     *!!*!!*!!!!!!*!*    *  *****!!*!*! **** ***!* *** *   * ****  !* ** **     * **

logo
NTDB id 1323 RA0C RS07335 WP 004916218.1      IKEVIDFFNENCPLEPTKVNTREEFHKRVNLFPFDFSEVKGQETAKRAMEVAAAGGHNILLIGPPGSGKTMLAKRIPSIL  238
NTDB id 1271 LPP RS03220 WP 011213198.1       LREVCDYLCQGTSLQSLPPKPDL....LLNNYELDWSDIKGQQHAKNAMVIAACGGHSILLSGAPGSGKTMMAKRFSTLL  235
NTDB id 1248 GC085 RS03150 WP 011213198.1     LREVCDYLCQGTSLQSLPPKPDL....LLNNYELDWSDIKGQQHAKNAMVIAACGGHSILLSGAPGSGKTMMAKRFSTLL  235
NTDB id 230325 CBR65 RS12835 WP 087467215.1   LLQVCAHLHQREFLFQAEAA.....VAADNDDYLDLSDVKGQAQAKRALEIAASGGHNLLLYGPPGTGKTMLASRLPGIL  234
NTDB id 1153 A1552VC RS00115 WP 000521788.1   LLEVCADLCGQQTLSLFQSSPSV....QQVSQTRDLQDIIGQQQGKRALEIAAAGNHNLLFLGPPGTGKTMLASRLCDLL  235
NTDB id 1397 DSB67 RS15690 WP 005535577.1     LLEVCAELCGQHQLNLYQTPKKK....ELKAHGRDLQDIIGQQQGKRALEIAAAGNHNLLFLGPPGTGKTMLASRLCDLL  235
NTDB id 1349 HI 1117 AAC22771.1               LLDVVQFLNGQEKLPLATEIVKESAVNFSGKNTLDLTDIIGQQHAKRALTIAAAGQHNLLFLGPPGTGKTMLASRLTGLL  239
NTDB id 1387 A4U84 RS06900 WP 020457569.1     LLQVVNFLNNRDQLPIAQQLSQNIAEN.RPLVSRDLTDIIGQQHAKRALIIAASGQHNLLFLGPPGTGKTMLASRLADLL  238
consensus                                     ***!* **     !                     !**** !!* *!*!* *!! ! !*** *!*!!*!!!!*!*!*   *!

logo
NTDB id 1323 RA0C RS07335 WP 004916218.1      PPLTLKEALETTKIHSVAGKMGAET..SLMTIRPFRSPHHTISDVALVGGGSYPQPGEISLAHNGVLFLDEMPEFKRTVL  316
NTDB id 1271 LPP RS03220 WP 011213198.1       PELSETQALECAAINS...IRGKLPDFREWRLPPFRAPHHTASPVALVGGGNPPKPGEISLAHHGVLFLDELPEFNRQVL  312
NTDB id 1248 GC085 RS03150 WP 011213198.1     PELSETQALECAAINS...IRGKLPDFREWRLPPFRAPHHTASPVALVGGGNPPKPGEISLAHHGVLFLDELPEFNRQVL  312
NTDB id 230325 CBR65 RS12835 WP 087467215.1   PALDEREMLDVAAVYSAAPSVTSQTGTHAWRKRPFRAPHHTASAIALVGGGPNPRPGEISLAHRGVLFLDELPEFQRQVL  314
NTDB id 1153 A1552VC RS00115 WP 000521788.1   PEMSDEEAMETASIAS...LTQQEINQHNWKLRPFRAPHHSSSMAALVGGGTIPRPGEISLAHNGLLFLDEMPEFERKVL  312
NTDB id 1397 DSB67 RS15690 WP 005535577.1     PEMSDEEAMETASVAS...LTQSEINEHNWKTRPFRAPHHSSSMAALVGGGSVPRPGEISLAHNGLLFLDEMPEFDRKVL  312
NTDB id 1349 HI 1117 AAC22771.1               PEMTDLEAIETASVTS...LVQNELNFHNWKQRPFRAPHHSASMPALVGGGTIPKPGEISLATNGVLFLDELPEFERKVL  316
NTDB id 1387 A4U84 RS06900 WP 020457569.1     PEMEDDEAIETASVTS...LVQNELNFQNWKKRPFRSPHHSASMVALVGGGSIPKPGEISLAHNGVLFLDELPEFERKVL  315
consensus                                     !**** ****** * !   *   *     ** *!!!*!!!**! *!!!!!!* !*!!!!!!!**!*!!!!!*!!! ! !!
```

```
logo
NTDB id 1323 RA0C RS07335 WP 004916218.1      EVMRQPLEDREVTISRAKFTVNYPASFMLVASMNPSPSGFFPDDP.NNTSSSFEMQRYLNKLSGPLLDRIDIHIEVQKVE   395
NTDB id 1271 LPP RS03220 WP 011213198.1       ETLREPLESGHICISRAAAQIEFPAKFQLIAAMNPCPCGQWGNSQANCMCTPDRISRYLAKLSAPLLDRIDMQVTIHALS   392
NTDB id 1248 GC085 RS03150 WP 011213198.1     ETLREPLESGHICISRAAAQIEFPAKFQLIAAMNPCPCGQWGNSQANCMCTPDRISRYLAKLSAPLLDRIDMQVTIHALS   392
NTDB id 230325 CBR65 RS12835 WP 087467215.1   EVLREPLESGEVRISRARAQVTYPAHFQLVAAMNPCPCGYHGSDSDRCRCTPDQVRRYRDKISGPLLDRIDMHVPVRALK   394
NTDB id 1153 A1552VC RS00115 WP 000521788.1   DSLREPLESGEIVISRAQGKTRFPARFQLVGALNPSPTGYYEGS..QARANPQSILRYLSRLSGPLLDRFDMSIEIPALP   390
NTDB id 1397 DSB67 RS15690 WP 005535577.1     DSLREPLESGEIIISRAQGKTRFPARFQIVGALNPSPTGYYEGN..QARTNPQAILRYLGRLSGPLLDRFDMSLEIPALP   390
NTDB id 1349 HI 1117 AAC22771.1               DALRQPLESGEIIISRANAKIQFPARFQLVAAMNPSPTGHYTGT..HNRTSPQQIMRYLNRLSGPFLDRFDLSIEVPLLP   394
NTDB id 1387 A4U84 RS06900 WP 020457569.1     DALRQPLESGEIIISRANAKVQFPACFQLIAAMNPSPTGHYQGT..HNRTSPQQLMRYLNRLSGPFLDRFDLSIEVPLLP   393
consensus                                     * *!*!!!**** !!!! * * *!!*!******!!*!*! *  *  * * **  * !!* **!*!*!!! !* *** **

logo
NTDB id 1323 RA0C RS07335 WP 004916218.1      FDQLSDK..RKGESSEIIRQRVLKAREIQQERYQDLAISYNAQMGPKEIEHFCELDEVSLLLIKNAMEKLNLSARAYDRI   473
NTDB id 1271 LPP RS03220 WP 011213198.1       QEELIKPNTHLEKQSLAIREKVTKMHEIQMARQD....SLNANLNSKTCEMVCELGSEEQLFLREVMSKLKLSARGYHRL   468
NTDB id 1248 GC085 RS03150 WP 011213198.1     QEELIKPNTHLEKQSLAIREKVTKMHEIQMARQD....SLNANLNSKTCEMVCELGSEEQLFLREVMSKLKLSARGYHRL   468
NTDB id 230325 CBR65 RS12835 WP 087467215.1   QGELHAP..STGDNSTRVRERVEQTRTRQLDRQG....KYNHQLNAPELERFCVLNNNDKLLLEQAIDKLGLSTRAYHRV   468
NTDB id 1153 A1552VC RS00115 WP 000521788.1   KGTLANG.GDRGESTAAVRQRVWVARERMLARSG....KVNALLQSREIEQYCPLLKADAEFLESALHRLGLSIRAYHRI   465
NTDB id 1397 DSB67 RS15690 WP 005535577.1     KGTLSEG.GDRGEPTAIVKERVNQARDCMLARSG....KVNALLGSREIEAFCPLQKSDAEFLENALHRLGLSIRAYHRI   465
NTDB id 1349 HI 1117 AAC22771.1               QGSLQNT.GDRGETSAQVREKVLKVREIQMERAG....KINAYLNSKEIERDCKLNDKDAFFLEKALNKLGLSVRAYHRI   469
NTDB id 1387 A4U84 RS06900 WP 020457569.1     QGALQNNTDQRGETTEQARKRVLEARHLQFNRRG....KINAQLTTKEIEQDCKLTDRDALFLENALTKLGLSVRAYHRI   469
consensus                                     ** !       *** *  ****!   ***** ! *    **!*********!  ! !   * **** ** *!*!! !*!*!*

logo
NTDB id 1323 RA0C RS07335 WP 004916218.1      LKVSRTIADLERETNIQSHHIAEAIQYRSLDRDFWKV.....   510
NTDB id 1271 LPP RS03220 WP 011213198.1       LKVSRTIADMNSSKKVLLNHLQQALSYKQNLHLPK.......   503
NTDB id 1248 GC085 RS03150 WP 011213198.1     LKVSRTIADMNSSKKVLLNHLQQALSYKQNLHLPK.......   503
NTDB id 230325 CBR65 RS12835 WP 087467215.1   LKVARTLADMEGLQQPGTTQITEALSYRTLDRENLSTI....   506
NTDB id 1153 A1552VC RS00115 WP 000521788.1   IKVARTIADLQGEAQIARPHLAEALGYRAMDRLLKQLSAQNV   507
NTDB id 1397 DSB67 RS15690 WP 005535577.1     IKVARTIADLEGSPQIERTHLAEALGYRAMDRLLKQLTAQAV   507
NTDB id 1349 HI 1117 AAC22771.1               LKVSRTIADLQGEQQIFQPHLAEALGYRAMVRLLQKLSNM..   509
NTDB id 1387 A4U84 RS06900 WP 020457569.1     LKVSRTIADLAGEAQIQQPHLAEALGYRAMDRLLQRLQGES.   510
consensus                                     *!!*!!*!!* *  **   ****!* !* ****   *
```

X non conserved

X similar

X $\geq$ 50% conserved