```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1193 PAKAF RS26665 WP 003161249.1    ................MNSGLSRLGIALLAA.MFAPALLAADLEKLDVAALPGDRVELKLQFDEPVAAPRGYTIEQPARIA    64
NTDB id 181253 A3K93 RS11185 WP 067731289.1  MKNSFRDYIFGDGNTMNHVFRQFSMASIAIAISQVASAQVEITNIVPMQIPGQGTEIRVMFNGLPPQPNAYQLETPSRLI    80
NTDB id 1009 ACIAD RS15175 WP 004923730.1    ................MKQIIRQFSIGTVAYAIMQVASAQVAITNVVPMNIPGQGTEIRVMFNGLPPQPQAYQLEQPARLI    65
NTDB id 1052 ABD1 RS15850 WP 001017033.1     ................MNHVFRQFSMGAVAIAIMQAASAQVSMTNIVPMQIAGQGTEIRVMFNGLPPQPQAYQLENPSRLI    65
NTDB id 1039 HON27 RS01460 WP 031993779.1    ................MNHVFRQFSMGAVAIAIMQAASAQVSMTNIVPMQIAGQGTEIRVMFNGLPPQPQAYQLENPSRLI    65
consensus                                                   !********** *!***** !**** **********!***!****!******!**!**!*!*!**

logo

NTDB id 1193 PAKAF RS26665 WP 003161249.1    LDLPGVQNKLGTKNRELSVGNTRSVTVVEAKDRTRLIINLTTLSSYTTRVEGNNLFVVVGNSPAGASVASTAPVKASPAP   144
NTDB id 181253 A3K93 RS11185 WP 067731289.1  LDFENTRENFAQKNIAIGTKEASQLGVSSDAERSRLTVNLTDPGAFTTRVEGNTFILKINAAAPAVA......KNV....   150
NTDB id 1009 ACIAD RS15175 WP 004923730.1    LDFDKAGQKLAKSLIPVTTNEASSIDVSSDDKRARVVVNLKDAGAFTTRVEGNVFILKINNIQSTAT.....PVAT....   136
NTDB id 1052 ABD1 RS15850 WP 001017033.1     LDFDKAQQGLKQSKISVATNEASSVDVTSDDQRSRLTVNLKDAGAFTTRVEGNTFILKINSAQTSNK.....PLPV....   136
NTDB id 1039 HON27 RS01460 WP 031993779.1    LDFDKAQQGLKQSKISVATNEASSVDVTSDDQRSRLTVNLKDTGAFTTRVEGNTFILKINSAQTSNK.....PLPV....   136
consensus                                    !!****** **** * *********!**** !*!***!!** ***!!!!!!!******* ****        ** *

logo

NTDB id 1193 PAKAF RS26665 WP 003161249.1    ASYAQPIKPKPYVPAGRAIRNIDFQRGEKGEGNVVIDLSDPTLSPDIQEQGGKIRLDFAKTQLPDALRVRLDVKDFATPV   224
NTDB id 181253 A3K93 RS11185 WP 067731289.1  ........SPRY..VEQGITNIGFQRGSKGEGQIVIDLAGANTPVDVQQQGTKVVIRSLGSKIPAHLIRRLNVNDFATPA   220
NTDB id 1009 ACIAD RS15175 WP 004923730.1    ........SAPA..PQQGIGNIGFQRGAQGEGLVVIDLQGTNTPVDVQQQGSKVVVRFPGIKIPTHLARRLNTTDFATPV   206
NTDB id 1052 ABD1 RS15850 WP 001017033.1     ........VS.A..QPQGVSNIGFQRGSQGEGLVVVDLLGSNTPVDVQQQGSKVVIRTIGTKIPTHLARRLNVNDFATPV   205
NTDB id 1039 HON27 RS01460 WP 031993779.1    ........VS.A..QPQGVSNIGFQRGSQGEGLVVVDLLGSNTPVDVQQQGSKVVIRTIGTKIPTHLARRLNVNDFATPV   205
consensus                                     *    ****!!*!!!!**!!!**!*!! ******!*!*!!*!*********!**!**!!***!!!!!*

logo

NTDB id 1193 PAKAF RS26665 WP 003161249.1    QFVNASAQSDRTSITIEPSGLYDYLVYQTDNRLTVSIKPMTTEDAERRKKDNFAYTGEKLSLNFQDIDVRSVLQLIADFT   304
NTDB id 181253 A3K93 RS11185 WP 067731289.1  STVDAVNQNGSGLITIQTNGSYEYMAYQTDNKLTISLKRPEDKN.PLRPKAVSHYSGKKISLDFQDIEVRRVLQLLADFT   299
NTDB id 1009 ACIAD RS15175 WP 004923730.1    ASIDSYNDGSNGVISIQSTGSYEYMAYQAENKLTISLKRPQDNV.RLNSKNNQNYTGKKISLDFQDIEVRRVLQLLADFT   285
NTDB id 1052 ABD1 RS15850 WP 001017033.1     SSIDAYNDKGVGVITIQSSGSYEYMAYQAENKLTISLKRPQDKN.VTSLYKTPNYSGNKLSLDFQDIEVRRVLQLLADFT   284
NTDB id 1039 HON27 RS01460 WP 031993779.1    SSIDAYNDKGVGVITIQSSGSYEYMAYQAENKLTISLKRPQDKN.VTSLYKTPNYSGNKLSLDFQDIEVRRVLQLLADFT   284
consensus                                    ******** *  **!*!***!*!*!**!!**!*!!*!*!****** *    *!*!  !*!!*!!!!*!!*!!!!*!!!!

logo

NTDB id 1193 PAKAF RS26665 WP 003161249.1    DLNLVASDTVQGNITLRLQNVPWDQALDLVLKTKGLDKRKLGNVLLVAPADEIAARERQELEAQKQIAELAPLRRELIQV   384
NTDB id 181253 A3K93 RS11185 WP 067731289.1  DINMVAADSVQGNITLRLKEVPWDQALDIVLKTKKLDKRRNGNVIWIAPIEELTKAEEEEAKAIAQSIKLSPLQTEYIQL   379
NTDB id 1009 ACIAD RS15175 WP 004923730.1    NINMVTADSVQGNITLHLKDVPWDQALDIILKTKNLDKRRNGNVIWIAPVSELIKSEEDEAKAIAQSTKLAPLQTEYILL   365
NTDB id 1052 ABD1 RS15850 WP 001017033.1     GINMVAADSVQGNITLRLKDVPWDQALDIILKTKNLDKRRNGNVIWIAPVAELIKAEEEEAKAVAQSVKLAPLQTEYIQL   364
NTDB id 1039 HON27 RS01460 WP 031993779.1    GINMVAADSVQGNITLRLKDVPWDQALDIILKTKNLDKRRNGNVIWIAPVAELIKAEEEEAKAVAQSVKLAPLQTEYIQL   364
consensus                                     *!*!**!*!!!!!!!*!**!!!!!!!!!**!!!!*!!!!**!!!***!!* !****!**!**!**!**!*!!**!*!**
```

```
logo
NTDB id 1193 PAKAF RS26665 WP 003161249.1     NYAKAADIAKLFQSVTSDGGQE.........................GKEGGRGSITVDDRTNSIIAYQPQERLDELRR   438
NTDB id 181253 A3K93 RS11185 WP 067731289.1   SYAKAADIEKLLTSSKKASNSSSS........TGGSSGDDPLGE..ANLLSPRGTVSVDTRTNTLIINDTSQRIDQIRK   448
NTDB id 1009 ACIAD RS15175 WP 004923730.1     KYAKAADIEKLITQGRNSGTSNSN........TNGSATVEPLGDSVGTLLSPRGTISLDPRTNTLIINDTSQKIDQIRK   436
NTDB id 1052 ABD1 RS15850 WP 001017033.1      KYAKAGDIMGLITQGSNNSNGLQHTSGGGTSTSTNLNTGVDSLGNNVGSLLSPRGTITQDDRTNTLIINDTAQSIDQIRK   444
NTDB id 1039 HON27 RS01460 WP 031993779.1     KYAKAGDIMGLITQGSNNSNGLQHTSGGGTSTSTNLNTGVDSLGNNVGSLLSPRGTITQDDRTNTLIINDTAQSIDQIRK   444
consensus                                     *!!!!*!! *!******* **              **  **** **  ********!!****!*!!!**!**** ***!**!*

logo
NTDB id 1193 PAKAF RS26665 WP 003161249.1     IVSQLDIPVRQVMIEARIVEANVGYDKSLGVRWGGAYHKG..............NWSGYGKDGNIGIKDEDGMNCGPIAG   504
NTDB id 181253 A3K93 RS11185 WP 067731289.1   MIDLLDVAVKQVMVEARIVTAERSFSRDLGIKWGLQRNNPTG.....LNAPGSTVWGGD......................   502
NTDB id 1009 ACIAD RS15175 WP 004923730.1     MIDLLDIPVKQVMIEARIVRATTSFSKEMGVKWGILSQGINQNSNLLVGGSETTLWNLRNPDSN................   500
NTDB id 1052 ABD1 RS15850 WP 001017033.1      MIDLLDVQVKQVMVEARIVRASTSFTKELGVKWGILSQGITNNNNLLVGGSETTLWNLREPKKD............ETTG   512
NTDB id 1039 HON27 RS01460 WP 031993779.1     MIDLLDVQVKQVMVEARIVRASTSFTKELGVKWGILSQGITNNNNLLVGGSETTLWNLREPKKD............ETTG   512
consensus                                     ****!!* !*!!!*!!!!!*!********!**!!********* ***********!*** *                     *

logo
NTDB id 1193 PAKAF RS26665 WP 003161249.1     SCTFPTTGTSKSPSPFVDLGAKDA.TSGIGIGFI.TDNIILDLQLSAMEKTGNGEIVSQPKVVTSDKETAKILKGSEVPY   582
NTDB id 181253 A3K93 RS11185 WP 067731289.1   ..........FSPKVDLGVDLSTASAGTFNFGLLKISDYMLDLQLTALQSDGMGEVLSAPKILTGDKQKAYILRGTEIPY   572
NTDB id 1009 ACIAD RS15175 WP 004923730.1     .GTYT...IERPDNLNVDLGVTTTGASSIAFGLISLSDFMLDLELSALQADGYGEVISTPKVMSADKQKAKVATGVEVPY   576
NTDB id 1052 ABD1 RS15850 WP 001017033.1      GYKYT...IERPDNLNVDLGVSNP.AGSIAFGLISMSDFMLDLELSALQADGYGEVISTPKVMTADKQTAKVATGQQVPY   588
NTDB id 1039 HON27 RS01460 WP 031993779.1     GYKYT...IERPDNLNVDLGVSNP.AGSIAFGLISMSDFMLDLELSALQADGYGEVISTPKVMTADKQTAKVATGQQVPY   588
consensus                                       **   **************   ******!*****!!!!*!*!****!*!!**!*!!****!!**!****! **!!

logo
NTDB id 1193 PAKAF RS26665 WP 003161249.1     QEASSSG...ATSTSFKEAALSLEVTPQITPDNRIIVEVKVTKDAPDYQNMLNGVPPINKNEVNAKILVNDGETIVIGGV   659
NTDB id 181253 A3K93 RS11185 WP 067731289.1   QTYSA...NEGSTTSFKEANLKLEVTPSITPEGKVQLELKVEKDSIGE.MTTEGPS.INTNELETNVLINDGETVVLGGI   647
NTDB id 1009 ACIAD RS15175 WP 004923730.1     QSTTNSAAGSTATTSFKEALLSLEVTPNITPDGKILMELNIANDSINS.YAQNGEAILNKNTINTNVLVNNGETVVLGGV   655
NTDB id 1052 ABD1 RS15850 WP 001017033.1      QSTTNSAAGSTATTSFKDALLSLNVTPSITPDGKIQMKLDISKDSVAG.AAPNGELILNKNNINTNVLVDNGETVILGGV   667
NTDB id 1039 HON27 RS01460 WP 031993779.1     QSTTNSAAGSTATTSFKDALLSLNVTPSITPDGKIQMKLDISKDSVAG.AAPNGELILNKNNINTNVLVDNGETVILGGV   667
consensus                                     !************!!!!*!*!*!*!!!*!!!******** ***!***    * *!* **!*! *****!***!!!***!!*

logo
NTDB id 1193 PAKAF RS26665 WP 003161249.1     FSNEQSKSVEKVPFLGELPYLGRLFRRDTVTDRKNELLVFLTPRIMNNQAIAIGR   714
NTDB id 181253 A3K93 RS11185 WP 067731289.1   FDDFKTTTSDKVPFFGDLPVVGNLFKNNSKVSNQAELLIFVTPRIVNDSVSRNH.   701
NTDB id 1009 ACIAD RS15175 WP 004923730.1     FEQTTNNAVTKVPFLGDLPYVGRLFKKTAKSEAKNELLIFVTPRIVNDTIVGNH.   709
NTDB id 1052 ABD1 RS15850 WP 001017033.1      FEQTTMNSQTKVPFFGDIPVVGRLFRKDVKSDDKQELLIFVTPRIVNDTLARNH.   721
NTDB id 1039 HON27 RS01460 WP 031993779.1     FEQTTMNSQTKVPFFGDIPVVGRLFRKDVKSDDKQELLIFVTPRIVNDTLARNH.   721
consensus                                     !**** ** *!!!!*!**!**!*!!*** *** **!!!*!*!!!!*!*** ***
```

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