```
logo
NTDB id 351481 E3H47 RS00590 WP 138000408.1   MIAELSQLHYHSLKLWYLVQHSVSSFNQLVEYFGSAEQATTPAALARWGNLKLHANHS...KRAQEFYSATGQAEFEQLT   77
NTDB id 1043 H0N27 RS16615 WP 168727007.1     MLTQLSSHQYHTLKVWYLVQHSLVSFKKIIDYFGNCEKATQPDGLAKWSSLGLHANHL...KRVNEFQTPQGQAQFEQLV   77
NTDB id 1073 ABD1 RS00865 WP 015451369.1      MLTQLSSHHYHTLKVWYLVQHSLVSFKKIIDYFGNCEKATQPDGLAKWSSLGLHANHL...KRVNEFQTTQGQAQFEQLV   77
NTDB id 1021 ACIAD RS00975 WP 004930462.1     MITILSSHHYHTIKVWYVLQHSLSGFKKLIHYFGDCETALQPQRLSDWQKLGLHANHL...KRLEEVHTLQGQQQFEKML   77
NTDB id 1152 A1552VC RS00200 WP 000654772.1   ...MKDQDLAAWLALCFTPKLGSKIISHLLATRLPAQLQSFT..PKQWLACGLKPEQLVF......LTTQAAKQAEQCLQ   69
NTDB id 1094 KZH42 RS01320 WP 002224767.1     ...MTEDERFAWLQLAFTPYIGAESFLLLMRRFGSAQNALSA..PAEQVAALIRHKQALEAWRNAEKRALARQAAEAALE   75
NTDB id 1089 NMB RS00600 WP 002224767.1       ...MTEDERFAWLQLAFTPYIGAESFLLLMRRFGSAQNALSA..PAEQVAALIRHKQALEAWRNAEKRALARQAAEAALE   75
NTDB id 1120 NGFG RS10355 WP 020997408.1      ...MTEDERFAWLQLAFTPYIGAESFLLLMRSFGSAQNALSA..PAEQVAPAVRHKHALEAWRNAEKRALARQAAEAALE   75
NTDB id 1122 OK783 RS09595 WP 003705341.1     ...MTEDERFAWLQLAFTPYIGAESFLLLMRSFGSAQNALSA..PAEQVAPAVRHKHALEAWRNAEKRALARQAAEAALE   75
consensus                                       * * * **** * *** **  **  **  *********   ****** ***  * *   *  *  ********  *

logo
NTDB id 351481 E3H47 RS00590 WP 138000408.1   QRVLASCDFILVPEDILYPQQLHPYTDKPPILFGQGSAQALSQPQIAIVGSRKPSPHGRQVAYDFAYYLSEKGFYITSGL   157
NTDB id 1043 H0N27 RS16615 WP 168727007.1     QQVRQHTDFILTPDDSGYPTQLLPYTDHPPIIFGKGQAQALLQPQIAIVGSRKPSPHGRQVAYDFAYYLSEKGFFISSGL   157
NTDB id 1073 ABD1 RS00865 WP 015451369.1      QQVRQHTDFILTPDDSGYPTQLLPYTDHPPIIFGKGQAQALLQPQIAIVGSRKPSPHGRQVAYDFAYYLSEKGFFISSGL   157
NTDB id 1021 ACIAD RS00975 WP 004930462.1     AQLQTHTDFIVTPDDPAYPSQLIPYQDRPPILFGQGSIQSLIQPQIAVVGSRKPSPHGRQVAYDFSYFLSEKGFYITSGL   157
NTDB id 1152 A1552VC RS00200 WP 000654772.1   WRSAANNRYIVTPHCPLYPRLLKEINSSPPVLFIEGIWEAVHDPAVAIVGSRNASVDGRQIARQFATELAQSGLVVTSGL   149
NTDB id 1094 KZH42 RS01320 WP 002224767.1     WEMRDGCRLMLL.QDEDFPEMLTQGLTAPPVLFLRGNVQLLHKPSAAIVGSRHATPQAMRIAKDFGKSLGGKGIPVVSGM   154
NTDB id 1089 NMB RS00600 WP 002224767.1       WEMRDGCRLMLL.QDEDFPEMLTQGLTAPPVLFLRGNVQLLHKPSAAIVGSRHATPQAMRIAKDFGKSLGGKGIPVVSGM   154
NTDB id 1120 NGFG RS10355 WP 020997408.1      WEMRDGCRLMLL.QDEDFPEMLTQGLTAPPVLFLRGNVRLLHKPSAAIVGSRHATPQAMRIAKDFGRALGGKGIPTVSGM   154
NTDB id 1122 OK783 RS09595 WP 003705341.1     WEMRDGCRLMLL.QDEDFPEMLTQGLTAPPVLFLRGNVRLLHKPSAAIVGSRHATPQAMRIAKDFGRALGGKGIPTVSGM   154
consensus                                     * **  ******* *  *! *!    * !!**!**!*** ** ! *!*!!!! *** ****!**!*  !* *!* **!!*

logo
NTDB id 351481 E3H47 RS00590 WP 138000408.1   ALGIDEAAHQGALQHQ.RTIAVVGTGLDLVYPAHNRKLQEQILQYGGTIVSEFLPGTQPLKHHFPRRNRIVSGLSLGVLV   236
NTDB id 1043 H0N27 RS16615 WP 168727007.1     AYGIDEAAHQGASTHQ.RTIAVTGTGLDTTYPAQNKKLAEHILAKNGAIITEFLPGTPPLQQHFPRRNRIVSGLSLGVLV   236
NTDB id 1073 ABD1 RS00865 WP 015451369.1      AYGIDEAAHQGASAHQ.RTIAVTGTGLDTTYPAQNKKLAEYILAQNGAIITEFLPGTPPLQQHFPRRNRIVSGLSLGVLV   236
NTDB id 1021 ACIAD RS00975 WP 004930462.1     AHGIDEAAHQGSLVHH.RAIAVVGTGLDLCYPSGNKALKQHIRDQGGAIVSEFLPGTPPLQAHFPRRNRIVSGLSLGVLV   236
NTDB id 1152 A1552VC RS00200 WP 000654772.1   ALGIDGYAHDGALQAQGQTVAVLGSGLAQVYPKQHQGLAERIIA.QGALVSEFAPHTPPKADHFPRRNRIISGLSLGVVV   228
NTDB id 1094 KZH42 RS01320 WP 002224767.1     ASGIDTAAHQGALQAEGGTIAVWGTGIDRIYPPVNKNLAYEIAE.KGLIVSEFPIGTRPYAGNFPRRNRLIAALSQVTLV   233
NTDB id 1089 NMB RS00600 WP 002224767.1       ASGIDTAAHQGALQAEGGTIAVWGTGIDRIYPPVNKNLAYEIAE.KGLIVSEFPIGTRPYAGNFPRRNRLIAALSQVTLV   233
NTDB id 1120 NGFG RS10355 WP 020997408.1      ASGIDTAAHQGALEAEGGTIAVWGTGIDRIYPPANKNLAYEIAE.KGLIVSEFPIGTRPYAGNFPRRNRLIAALSQVTLV   233
NTDB id 1122 OK783 RS09595 WP 003705341.1     ASGIDTAAHQGALEAEGGTVAVWGTGIDRIYPPANKNLAYEIAE.KGLIVSEFPIGTRPYAGNFPRRNRLIAALSQVTLV   233
consensus                                     ! !!!  *!!*!** * * **!! !*!** *!!  ** !*  ! *  ! ***!! **! ! ***!!!!!!****!!****!

logo
NTDB id 351481 E3H47 RS00590 WP 138000408.1   AEAALESGSLITAQRAADQGKIIFAIPGHIYSEHHQGCHQLIREGSILVDHPEQLIEDLALPT......QWHSQQQKVS.   309
NTDB id 1043 H0N27 RS16615 WP 168727007.1     VEATLKSGSLITANKAAEQGKTVFAIPGHIYSEFHQGCHQLIREGAILIDHPEQIIEDLALPT......QWQSQQQNQT.   309
NTDB id 1073 ABD1 RS00865 WP 015451369.1      VEATLKSGSLITANKAAEQGKTVFAIPGHIYSEFHQGCHQLIREGAILIDHPEQIIEDLALPT......QWQSQQQNQT.   309
NTDB id 1021 ACIAD RS00975 WP 004930462.1     VEATLKSGSLITANKAAEQGKVVFAIPGHIYSEFHQGCHQLIREGAILVDHPEQIIEDLALPT......HWHSQSTASGE   310
NTDB id 1152 A1552VC RS00200 WP 000654772.1   VEAAEKSGSLITARYAAEQGREVFVVPGSIFNAASQGSNQLIRQGACLVQSVQQIHQELKNAL......TWSLSEQVPYQ   302
NTDB id 1094 KZH42 RS01320 WP 002224767.1     VEAALESGSLITARLAAEMGREVMAVPGSIDNPHSKGCHKLIKDGAKLVECLDDILNECPGLLQNTGASSYSINKGIPEK   313
NTDB id 1089 NMB RS00600 WP 002224767.1       VEAALESGSLITARLAAEMGREVMAVPGSIDNPHSKGCHKLIKDGAKLVECLDDILNECPGLLQNTGASSYSINKGIPEK   313
NTDB id 1120 NGFG RS10355 WP 020997408.1      VEAALESGSLITAGLAAEMGREVMAVPGSIDNPHSKGCHKLIKDGAKLTECLDDILNECPGLLQNTGASSYSINKDTPDT   313
NTDB id 1122 OK783 RS09595 WP 003705341.1     VEAALESGSLITAGLAAEMGREVMAVPGSIDNPHSKGCHKLIKDGAKLTECLDDILNECPGLLQNTGASSYSINKDTPDT   313
consensus                                     *!!***!!!!!!!  !!**!*****!!*!** ***!***!!**!* !** ********   *       *****   *
```

```
logo
NTDB id 351481 E3H47 RS00590 WP 138000408.1   ......SVPEPA.........QVPEHLF...ELYQQLDWVGLDLDQIALKLPLPAAELTGHLMELELLGLCVQQSGRY.L   370
NTDB id 1043 H0N27 RS16615 WP 168727007.1     ....EETNTNTP.........EIPEHLI...DLYQSLDWVGQNIDQLVVHHNIPVSELTSSLMELELLGLCMQQSGLY.L   372
NTDB id 1073 ABD1 RS00865 WP 015451369.1      ....EEANTNTP.........EIREHLI...DLYQSLDWVGQNIDQLVVHHNIPVSELTSSLMELELLGLCMQQSGLY.L   372
NTDB id 1021 ACIAD RS00975 WP 004930462.1     ANADDSGKTDDA.........DLPDDLL...PLYQLLDWQGQDLDQLAQHYQGSTAELTAQLMELELLGVCIQQSGRY.L   377
NTDB id 1152 A1552VC RS00200 WP 000654772.1   ATLFSA...............VQSDEELPFPELLANVGIEATPIDILASRTQIPVQDIMMQLLELELLGHVVAVPGGYIR   367
NTDB id 1094 KZH42 RS01320 WP 002224767.1     RITAVQTASDQLSLPEGKMPSEKTENRPVGGSILDRMGFDPVHPDVLAGQLAMPAADLYAALLELELDGSVAAMPGGRYQ   393
NTDB id 1089 NMB RS00600 WP 002224767.1       RITAVQTASDQLSLPEGKMPSEKTENRPVGGSILDRMGFDPVHPDVLAGQLAMPAADLYAALLELELDGSVAAMPGGRYQ   393
NTDB id 1120 NGFG RS10355 WP 020997408.1      GRRTVQTAY..APPPAAKMPSEGAAGGTAVGGILDKMGFDPIHPDVLAGQLAMPAADLYAALLELELDGSVAAMPGGRYQ   391
NTDB id 1122 OK783 RS09595 WP 003705341.1     GRRAVQTAY..APPPAAKMPSEGAAGGTAVGGILDKMGFDPVHPDVLAGQLAMPAADLYAALLELELDGSVAAMPGGRYQ   391
consensus                                           * *           *  *        **  ****** *!***  * ****** * !*!!!!*! *****!**
```

```
logo

NTDB id 351481 E3H47 RS00590 WP 138000408.1   RCRPGF   376
NTDB id 1043 H0N27 RS16615 WP 168727007.1     RCRS..   376
NTDB id 1073 ABD1 RS00865 WP 015451369.1      RCRS..   376
NTDB id 1021 ACIAD RS00975 WP 004930462.1     RCRSPY   383
NTDB id 1152 A1552VC RS00200 WP 000654772.1   KGRG..   371
NTDB id 1094 KZH42 RS01320 WP 002224767.1     RIRT..   397
NTDB id 1089 NMB RS00600 WP 002224767.1       RIRT..   397
NTDB id 1120 NGFG RS10355 WP 020997408.1      RIRT..   395
NTDB id 1122 OK783 RS09595 WP 003705341.1     RIRT..   395
consensus                                     * !*
```

X non conserved

X similar

X $\geq$ 50% conserved