logo

```
NTDB id 1077011 ACI3ES RS00510 WP 114667433.1  .........MAQSTLTKTVLTGVIAGLVGGGVILYAQFGLEKSTTQTVR.TTATKTSSISKNATATTAYNKVSDAVVSVL  70
NTDB id 381 SMU RS09890 WP 002262650.1         MNNTKSHPFLKWFIPFLVIFLTFILGVISTLTFNWITGN..KSFSNNGK..TTVSNVIYDTKSNTTKAVKNVKNTVVSVI  76
NTDB id 425 SGO RS10525 WP 012131081.1         .MKNSSNFFKKTLQVFIVLLVGFIGGVAGTWGFSYFSTP..HSATNNNQKTATTVTTSYKNSNSTTEAVDKVKDAVVSVI  77
NTDB id 539 SM12261 RS09395 WP 000681587.1     .MKHLKTFYKKGFQLLVVIVISFFSGALGSFSINQLTQK..STEST.SNNNSTITQTAYKNENSTTQAVNKVKDAVVSVI  76
NTDB id 256 KZH43 RS10270 WP 000681597.1       .MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQK..SSVNN.SNNNSTITQTAYKNENSTTQAVNKVKDAVVSVI  76
NTDB id 215 SPD RS10945 WP 000681597.1         .MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQK..SSVNN.SNNNSTITQTAYKNENSTTQAVNKVKDAVVSVI  76
NTDB id 181 SPR RS10425 WP 000681597.1         .MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQK..SSVNN.SNNNSTITQTAYKNENSTTQAVNKVKDAVVSVI  76
NTDB id 145 SP RS11450 WP 000681597.1          .MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQK..SSVNN.SNNNSTITQTAYKNENSTTQAVNKVKDAVVSVI  76
consensus                                       **********************!************   **   * ****************!*!***!***!!!!*
```

logo

```
NTDB id 1077011 ACI3ES RS00510 WP 114667433.1  NFSKSGQNYE.................ESSEGSGVIYKKSDQSAFIVTNNHVIDGAAKIQVMLHNGKKVTATLVGKDAMT  133
NTDB id 381 SMU RS09890 WP 002262650.1          NYQKTDNSYYNYDSGSQEKNKSEDGLGVYGEGSGVIYKKDGDSAYLVTNNHVVKDAEKLEIMMANGKKVVGKLVGSDTYS  156
NTDB id 425 SGO RS10525 WP 012131081.1          TYSESNSDAIF.....DNNNSGNENDQVASEGSGVIYRKDKDYAYLVTNTHVINGAKKVDIRLADGNKVPGEIVGTDTYS  152
NTDB id 539 SM12261 RS09395 WP 000681587.1      TYSANRQNSVF.....GNDDTDTDSQQISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFS  151
NTDB id 256 KZH43 RS10270 WP 000681597.1        TYSANRQNSVF.....GNDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFS  151
NTDB id 215 SPD RS10945 WP 000681597.1          TYSANRQNSVF.....GNDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFS  151
NTDB id 181 SPR RS10425 WP 000681597.1          TYSANRQNSVF.....GNDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFS  151
NTDB id 145 SP RS11450 WP 000681597.1           TYSANRQNSVF.....GNDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFS  151
consensus                                       **********     **********  ***!!!!!!!*!****!**!!!*!!***!*!********!*!!****!!*!***
```

logo

```
NTDB id 1077011 ACI3ES RS00510 WP 114667433.1  DLAVLKIASDNVTTTAEFGDSSKIAVGENVLAIGSPLGSEYASSVTQGIISAKKRLVEATSENGQNYGGSTVIQTDAAIN  213
NTDB id 381 SMU RS09890 WP 002262650.1          DLAVIKISSKYVTTVAEFANSDKIKVGEPAIAIGSPLGSDYANSVTEGIVSSLSRTVTSQNENGETIS.TNAIQTDAAIN  235
NTDB id 425 SGO RS10525 WP 012131081.1          DISVVRIPADKVKNVAEFGDSSKLTVGETAIAIGSPLGSDYANTVTQGIVSSLSRNVSSRSEDGQTIA.TQAIQTDAAIN  231
NTDB id 539 SM12261 RS09395 WP 000681587.1      DIAVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAIS.TKAIQTDTAIN  230
NTDB id 256 KZH43 RS10270 WP 000681597.1        DIAVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAIS.TKAIQTDTAIN  230
NTDB id 215 SPD RS10945 WP 000681597.1          DIAVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAIS.TKAIQTDTAIN  230
NTDB id 181 SPR RS10425 WP 000681597.1          DIAVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAIS.TKAIQTDTAIN  230
NTDB id 145 SP RS11450 WP 000681597.1           DIAVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAIS.TKAIQTDTAIN  230
consensus                                       !**!**!****!***!!!**!*!**!!!***!!!!!!!!*!!**!!*!!*!***!*!****!*!****  ***!!!!*!!!
```

logo

```
NTDB id 1077011 ACI3ES RS00510 WP 114667433.1  PGNSGGPLINFAGQVIGINSMKLSTS...SSGTSVEGMGFAIPSDQVVDVVNKLVKDGKITRPAIGIGLVNLSEVTADDQ  290
NTDB id 381 SMU RS09890 WP 002262650.1          PGNSGGALINIKGQVIGINSSKIASSNNSNSGVAVEGMGFAIPSNDVVSIINQLEENGEVVRPALGISMANLSEASTSG.  314
NTDB id 425 SGO RS10525 WP 012131081.1          PGNSGGPLVNIQGQVIGITSSKIANTNN..GSTSVEGMGFAIPSNDVVNIIEQLEKNGKVIRPALGIQMVNLSSLSSSS.  308
NTDB id 539 SM12261 RS09395 WP 000681587.1      PGNSGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNINTSD.  305
NTDB id 256 KZH43 RS10270 WP 000681597.1        PGNSGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSD.  305
NTDB id 215 SPD RS10945 WP 000681597.1          PGNSGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSD.  305
NTDB id 181 SPR RS10425 WP 000681597.1          PGNSGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSD.  305
NTDB id 145 SP RS11450 WP 000681597.1           PGNSGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSD.  305
consensus                                       !!!!!!*!*!**!!!!!!*!*!***  *  ****!!!*!!!!!**********!***!***!!!*!!***!!!******
```

logo

```
NTDB id 1077011 ACI3ES RS00510 WP 114667433.1  KSTLKIPDSVTGGVVVMSLTKKGPADNAGLKKYDVIVGIDGKKVTTQADLREVLYKHKLGDTITLTYYHHSNKKTVKVKL  370
NTDB id 381 SMU RS09890 WP 002262650.1         RDTLKIPSDVTSGIVVLSTQSGMPA.DGKLKKYDVITEIDGKKVASISDLQSILYKHKKGDKIKLTFYREKDKQTVEIQL  393
NTDB id 425 SGO RS10525 WP 012131081.1         SDRLKLPDNVKNGVVVRSTQTGMPA.DGKLEKYDVITKIDDTEISSASDIQSALYKHSINEEIKVTYYRDGKEQTTTIKL  387
NTDB id 539 SM12261 RS09395 WP 000681587.1     IRRLNIPSNVTSGVVVRSVQSNMPA.NGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKL  384
NTDB id 256 KZH43 RS10270 WP 000681597.1       IRRLNIPSNVTSGVIVRSVQSNMPA.NGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKL  384
NTDB id 215 SPD RS10945 WP 000681597.1         IRRLNIPSNVTSGVIVRSVQSNMPA.NGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKL  384
NTDB id 181 SPR RS10425 WP 000681597.1         IRRLNIPSNVTSGVIVRSVQSNMPA.NGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKL  384
NTDB id 145 SP RS11450 WP 000681597.1          IRRLNIPSNVTSGVIVRSVQSNMPA.NGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKL  384
consensus                                      ***!**!**!**!**!*!*****!! ***!*!!!!!***!********!****!!*!*****!**!*!******!****!
```

logo

```
NTDB id 1077011 ACI3ES RS00510 WP 114667433.1  TQKLAS....  376
NTDB id 381 SMU RS09890 WP 002262650.1         TKTSQDLNH.  402
NTDB id 425 SGO RS10525 WP 012131081.1         TKSTDDLSSE  397
NTDB id 539 SM12261 RS09395 WP 000681587.1     DKSSGDLES.  393
NTDB id 256 KZH43 RS10270 WP 000681597.1       NKSSGDLES.  393
NTDB id 215 SPD RS10945 WP 000681597.1         NKSSGDLES.  393
NTDB id 181 SPR RS10425 WP 000681597.1         NKSSGDLES.  393
NTDB id 145 SP RS11450 WP 000681597.1          NKSSGDLES.  393
consensus                                       ********
```

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