```
logo
NTDB id 1079664 ACKVMU RS01340 WP 409173722.1  MDRKDVTPKMKKRKSN..GIWRKLGLGVVGGVIGGL.LTFGIFYAATGGGNSVTTSSSSGTQNASGETVVENVKVNVDSD   77
NTDB id 381 SMU RS09890 WP 002262650.1         .........MNNTKSHPFLKWFIPFLVIFLTFILGVISTLTFNWITG.........NKSFSNNGK..TTVSNVIYDTKSN   60
NTDB id 425 SGO RS10525 WP 012131081.1         ..........MKNSSNFFKKTLQVFIVLLVGFIGGVAGTWGFSYFST.........PHSATNNNGKTATTVTTSYKNSNS   61
NTDB id 539 SM12261 RS09395 WP 000681587.1     ..........MKHLKTFYKKGFQLLVVIVISFFSGALGSFSINQLTQ.........KSTEST.SNNNSTITQTAYKNENS   60
NTDB id 256 KZH43 RS10270 WP 000681597.1       ..........MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQ.........KSSVNN.SNNNSTITQTAYKNENS   60
NTDB id 215 SPD RS10945 WP 000681597.1         ..........MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQ.........KSSVNN.SNNNSTITQTAYKNENS   60
NTDB id 181 SPR RS10425 WP 000681597.1         ..........MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQ.........KSSVNN.SNNNSTITQTAYKNENS   60
NTDB id 145 SP RS11450 WP 000681597.1          ..........MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQ.........KSSVNN.SNNNSTITQTAYKNENS   60
consensus                                                *********************!************         ***  * ****************

logo
NTDB id 1079664 ACKVMU RS01340 WP 409173722.1  ITSAVDKVQGAVVSVINLQKQSSSSDPFGSLFGQQQESSGEDGELQAYSEGSGVIYKKEGGSAYIVTNNHVVDGQQGLEV  157
NTDB id 381 SMU RS09890 WP 002262650.1         TTKAVKNVKNTVVSVINYQKTDNSYYNYDSG..SQ.EKNKSEDGLGVYGEGSGVIYKKDGDSAYLVTNNHVVKDAEKLEI  137
NTDB id 425 SGO RS10525 WP 012131081.1         TTEAVDKVKDAVVSVITYSESNSDAIF.......D.NNNSGNENDQVASEGSGVIYRKDKDYAYLVTNTHVINGAKKVDI  133
NTDB id 539 SM12261 RS09395 WP 000681587.1     TTQAVNKVKDAVVSVITYSANRQNSVF.......G.NDDTDTDSQQISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDI  132
NTDB id 256 KZH43 RS10270 WP 000681597.1       TTQAVNKVKDAVVSVITYSANRQNSVF.......G.NDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDI  132
NTDB id 215 SPD RS10945 WP 000681597.1         TTQAVNKVKDAVVSVITYSANRQNSVF.......G.NDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDI  132
NTDB id 181 SPR RS10425 WP 000681597.1         TTQAVNKVKDAVVSVITYSANRQNSVF.......G.NDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDI  132
NTDB id 145 SP RS11450 WP 000681597.1          TTQAVNKVKDAVVSVITYSANRQNSVF.......G.NDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDI  132
consensus                                      *!*!!**!***!!!!!*********          * ********  ***!!!!!!!*!****!!*!!!*!!********

logo
NTDB id 1079664 ACKVMU RS01340 WP 409173722.1  LLKDGTKVKAELVGTDAYTDLAVLKISADKVDTVASFGDSASLKVGEPAIAIGSPLGSQYANSVTSGIISSLNRQVTSTN  237
NTDB id 381 SMU RS09890 WP 002262650.1         MMANGKKVVGKLVGSDTYSDLAVIKISSKYVTTVAEFANSDKIKVGEPAIAIGSPLGSDYANSVTEGIVSSLSRTVTSQN  217
NTDB id 425 SGO RS10525 WP 012131081.1         RLADGNKVPGEIVGTDTYSDISVVRIPADKVKNVAEFGDSSKLTVGETAIAIGSPLGSDYANTVTQGIVSSLSRNVSSRS  213
NTDB id 539 SM12261 RS09395 WP 000681587.1     RLSDGTKVPGEIVGADTFSDIAVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKS  212
NTDB id 256 KZH43 RS10270 WP 000681597.1       RLSDGTKVPGEIVGADTFSDIAVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKS  212
NTDB id 215 SPD RS10945 WP 000681597.1         RLSDGTKVPGEIVGADTFSDIAVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKS  212
NTDB id 181 SPR RS10425 WP 000681597.1         RLSDGTKVPGEIVGADTFSDIAVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKS  212
NTDB id 145 SP RS11450 WP 000681597.1          RLSDGTKVPGEIVGADTFSDIAVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKS  212
consensus                                      ****!*!!****!!*!***!**!**!****!**!!*!**!****!!!*!!!!!!!!!!*!!!*!!*!!*!!!*!*!****

logo
NTDB id 1079664 ACKVMU RS01340 WP 409173722.1  ESNETVNINAIQTDAAINPGNSGGPLVNIEGQVIGINSSKIASTSD.SSSVSVEGMGFAIPSNDVVNIINQLEKDGKVTR  316
NTDB id 381 SMU RS09890 WP 002262650.1         ENGETISTNAIQTDAAINPGNSGGALINIKGQVIGINSSKIASSNNSNSGVAVEGMGFAIPSNDVVSIINQLEENGEVVR  297
NTDB id 425 SGO RS10525 WP 012131081.1         EDGQTIATQAIQTDAAINPGNSGGPLVNIQGQVIGITSSKIANTNN..GSTSVEGMGFAIPSNDVVNIIEQLEKNGKVIR  291
NTDB id 539 SM12261 RS09395 WP 000681587.1     EDGQAISTKAIQTDTAINPGNSGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTR  288
NTDB id 256 KZH43 RS10270 WP 000681597.1       EDGQAISTKAIQTDTAINPGNSGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTR  288
NTDB id 215 SPD RS10945 WP 000681597.1         EDGQAISTKAIQTDTAINPGNSGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTR  288
NTDB id 181 SPR RS10425 WP 000681597.1         EDGQAISTKAIQTDTAINPGNSGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTR  288
NTDB id 145 SP RS11450 WP 000681597.1          EDGQAISTKAIQTDTAINPGNSGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTR  288
consensus                                      !********!!!!!*!!!!!!!!!*!*!!*!!!!!!*!!!!!*   *  ****!!!*!!!!!*!!***!!*!!!**!*!*!
```

```
logo
```

```
NTDB id 1079664 ACKVMU RS01340 WP 409173722.1   PALGITMTDLSAVSTQQQEQILKLPSSVTNGVIIRSVQPATPAEKAGLEQYDVITKIDDTEVSSGVELQSVLYGKKVGDT   396
NTDB id 381 SMU RS09890 WP 002262650.1          PALGISMANLSEASTSGR.DTLKIPSDVTSGIVVLSTQSGMPAD.GKLKKYDVITEIDGKKVASISDLQSILYKHKKGDK   375
NTDB id 425 SGO RS10525 WP 012131081.1          PALGIQMVNLSSLSSSSS.DRLKLPDNVKNGVVVRSTQTGMPAD.GKLEKYDVITKIDDTEISSASDIQSALYKHSINEE   369
NTDB id 539 SM12261 RS09395 WP 000681587.1      PALGIQMVNLSNINTSDI.RRLNIPSNVTSGVVVRSVQSNMPAN.GHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDT   366
NTDB id 256 KZH43 RS10270 WP 000681597.1        PALGIQMVNLSNVSTSDI.RRLNIPSNVTSGVIVRSVQSNMPAN.GHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDT   366
NTDB id 215 SPD RS10945 WP 000681597.1          PALGIQMVNLSNVSTSDI.RRLNIPSNVTSGVIVRSVQSNMPAN.GHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDT   366
NTDB id 181 SPR RS10425 WP 000681597.1          PALGIQMVNLSNVSTSDI.RRLNIPSNVTSGVIVRSVQSNMPAN.GHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDT   366
NTDB id 145 SP RS11450 WP 000681597.1           PALGIQMVNLSNVSTSDI.RRLNIPSNVTSGVIVRSVQSNMPAN.GHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDT   366
consensus                                       !!!!!*!**!!******* **!**!**!**!****!*!***!!* **!**!!!!!**!*****!****!!*!!******
```

```
logo
```

```
NTDB id 1079664 ACKVMU RS01340 WP 409173722.1   VKITYYRGEEEKTVDIKLTIDNTALNQGNSNSSNGSNN   434
NTDB id 381 SMU RS09890 WP 002262650.1          IKLTFYREKDKQTVEIQLTKTSQDLNH...........   402
NTDB id 425 SGO RS10525 WP 012131081.1          IKVTYYRDGKEQTTTIKLTKSTDDLSSE..........   397
NTDB id 539 SM12261 RS09395 WP 000681587.1      IKITYYRNGKEETTSIKLDKSSGDLES...........   393
NTDB id 256 KZH43 RS10270 WP 000681597.1        IKITYYRNGKEETTSIKLNKSSGDLES...........   393
NTDB id 215 SPD RS10945 WP 000681597.1          IKITYYRNGKEETTSIKLNKSSGDLES...........   393
NTDB id 181 SPR RS10425 WP 000681597.1          IKITYYRNGKEETTSIKLNKSSGDLES...........   393
NTDB id 145 SP RS11450 WP 000681597.1           IKITYYRNGKEETTSIKLNKSSGDLES...........   393
consensus                                       *!*!*!!*****!**!*! *****!**
```

X non conserved

X similar

X $\geq$ 50% conserved