```
logo

NTDB id 425 SGO RS10525 WP 012131081.1        ..MKNSSNFFKKTLQVFIVLLVGFIGGVAGTWGFSYFSTPHSATNNNQKTATTVTTSYKNSNSTTEAVDKVKDAVVSVITYSESN   83
NTDB id 539 SM12261 RS09395 WP 000681587.1    ..MKHLKTFYKKGFQLLVVIVISFFSGALGSFSINQLTQKSTEST.SNNNSTITQTAYKNENSTTQAVNKVKDAVVSVITYSANR   82
NTDB id 256 KZH43 RS10270 WP 000681597.1      ..MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQKSSVNN.SNNNSTITQTAYKNENSTTQAVNKVKDAVVSVITYSANR   82
NTDB id 215 SPD RS10945 WP 000681597.1        ..MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQKSSVNN.SNNNSTITQTAYKNENSTTQAVNKVKDAVVSVITYSANR   82
NTDB id 181 SPR RS10425 WP 000681597.1        ..MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQKSSVNN.SNNNSTITQTAYKNENSTTQAVNKVKDAVVSVITYSANR   82
NTDB id 145 SP RS11450 WP 000681597.1         ..MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQKSSVNN.SNNNSTITQTAYKNENSTTQAVNKVKDAVVSVITYSANR   82
NTDB id 59954 L897 RS09050 WP 002994926.1    ......MPSMKHILKSLSILLIGFLGGLIAIITFNNLYPHSPS.KINSGKATTSNMVFNNTTNTTKAVKAVQNAVVSVINYQDNP   78
NTDB id 381 SMU RS09890 WP 002262650.1       MNNTKSHPFLKWFI.PFLVIFLTFILGVISTLTFNWITG.NKS.FSNNGKTTVSNVIYDTKSNTTKAVKNVKNTVVSVINYQKTD   82
consensus                                      ********!************!**!***************  * *****!************!!*!!**!***!!!!!*!****
```

```
logo

NTDB id 425 SGO RS10525 WP 012131081.1        SDAIF.......DN...NNSGNENDQVASEGSGVIYRKDKDYAYLVTNTHVINGAKKVDIRLADGNKVPGEIVGTDTYSDISVVR   158
NTDB id 539 SM12261 RS09395 WP 000681587.1    QNSVF.......GN...DDTDTDSQQISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFSDIAVVK   157
NTDB id 256 KZH43 RS10270 WP 000681597.1      QNSVF.......GN...DDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFSDIAVVK   157
NTDB id 215 SPD RS10945 WP 000681597.1        QNSVF.......GN...DDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFSDIAVVK   157
NTDB id 181 SPR RS10425 WP 000681597.1        QNSVF.......GN...DDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFSDIAVVK   157
NTDB id 145 SP RS11450 WP 000681597.1         QNSVF.......GN...DDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFSDIAVVK   157
NTDB id 59954 L897 RS09050 WP 002994926.1    SSSLSNPYTKLFGEGRSKENKDAELSIFSEGSGVIYRKDGNSAYVVTNNHVIDGAKRIEILMADGSKVVGELVGADTYSDLAVVK   163
NTDB id 381 SMU RS09890 WP 002262650.1       NSY.....YNYDSGSQEKNKSEDGLGVYGEGSGVIYKKDGDSAYLVTNNHVVKDAEKLEIMMANGKKVVGKLVGSDTYSDLAVIK   162
consensus                                    *****        **   ******** ***!!!!!!!*!****!!*!!!*!!***!****!***!*!!*!**!!*!!*!!**!**
```

```
logo

NTDB id 425 SGO RS10525 WP 012131081.1        IPADKVKNVAEFGDSSKLTVGETAIAIGSPLGSDYANTVTQGIVSSLSRNVSSRSEDGQTIATQAIQTDAAINPGNSGGPLVNIQ   243
NTDB id 539 SM12261 RS09395 WP 000681587.1    ISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAISTKAIQTDTAINPGNSGGPLINIQ   242
NTDB id 256 KZH43 RS10270 WP 000681597.1      ISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAISTKAIQTDTAINPGNSGGPLINIQ   242
NTDB id 215 SPD RS10945 WP 000681597.1        ISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAISTKAIQTDTAINPGNSGGPLINIQ   242
NTDB id 181 SPR RS10425 WP 000681597.1        ISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAISTKAIQTDTAINPGNSGGPLINIQ   242
NTDB id 145 SP RS11450 WP 000681597.1         ISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAISTKAIQTDTAINPGNSGGPLINIQ   242
NTDB id 59954 L897 RS09050 WP 002994926.1    ISSDKIKTVAEFADSTKLNVGEVAIAIGSPLGTQYANSVTQGIVSSLSRTVTLKNENGETVSTNAIQTDAAINPGNSGGPLINIE   248
NTDB id 381 SMU RS09890 WP 002262650.1       ISSKYVTTVAEFANSDKIKVGEPAIAIGSPLGSDYANSVTEGIVSSLSRTVTSQNENGETISTNAIQTDAAINPGNSGGALINIK   247
consensus                                    !*******!!!!**!*!**!!!*!!!!!!!!!!**!!!*!!*!!!!!!*!*!****!*!****!*!!!!!*!!!!!!!!!!*!*!!*
```

```
logo

NTDB id 425 SGO RS10525 WP 012131081.1        GQVIGITSSKIANTNNG....STSVEGMGFAIPSNDVVNIIEQLEKNGKVIRPALGIQMVNLSSLSSSSSDRLKLPDNVKNGVVV   324
NTDB id 539 SM12261 RS09395 WP 000681587.1    GQVIGITSSKIAT..NG....GTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNINTSDIRRLNIPSNVTSGVVV   321
NTDB id 256 KZH43 RS10270 WP 000681597.1      GQVIGITSSKIAT..NG....GTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSDIRRLNIPSNVTSGVIV   321
NTDB id 215 SPD RS10945 WP 000681597.1        GQVIGITSSKIAT..NG....GTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSDIRRLNIPSNVTSGVIV   321
NTDB id 181 SPR RS10425 WP 000681597.1        GQVIGITSSKIAT..NG....GTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSDIRRLNIPSNVTSGVIV   321
NTDB id 145 SP RS11450 WP 000681597.1         GQVIGITSSKIAT..NG....GTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSDIRRLNIPSNVTSGVIV   321
NTDB id 59954 L897 RS09050 WP 002994926.1    GQVIGINSSKISSTPTGSNGNSGAVEGIGFAIPSTDVIKIIKQLETNGEVIRPALGISMVNLNDLSTNALSQINIPTSVTGGIVV   333
NTDB id 381 SMU RS09890 WP 002262650.1       GQVIGINSSKIASSNNSN..SGVAVEGMGFAIPSNDVVSIINQLEENGEVVRPALGISMANLSEASTSGRDTLKIPSDVTSGIVV   330
consensus                                    !!!!!!*!!!!**  **     ***!!!*!!!!!**!***!!*!!!*!!*!*!!!!!!*!*!!*************!**!**!**!
```

```
logo
NTDB id 425 SGO RS10525 WP 012131081.1      RSTQTGMPADGKLEKYDVITKIDDTEISSASDIQSALYKHSINEEIKVTYYRDGKEQTTTIKLTKSTDDLSSE.   397
NTDB id 539 SM12261 RS09395 WP 000681587.1  RSVQSNMPANGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKLDKSSGDLES..   393
NTDB id 256 KZH43 RS10270 WP 000681597.1    RSVQSNMPANGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKLNKSSGDLES..   393
NTDB id 215 SPD RS10945 WP 000681597.1      RSVQSNMPANGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKLNKSSGDLES..   393
NTDB id 181 SPR RS10425 WP 000681597.1      RSVQSNMPANGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKLNKSSGDLES..   393
NTDB id 145 SP RS11450 WP 000681597.1       RSVQSNMPANGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKLNKSSGDLES..   393
NTDB id 59954 L897 RS09050 WP 002994926.1   AEVKEGMPASGKLAQYDVITEIDGKTVNSISDLQSSLYGHDINDTIKVTFYRGTTKKKADIKLTKTTQDLTKTQ   407
NTDB id 381 SMU RS09890 WP 002262650.1      LSTQSGMPADGKLKKYDVITEIDGKKVASISDLQSILYKHKKGDKIKLTFYREKDKQTVEIQLTKTSQDLNH..   402
consensus                                   ******!!!*!*!**!!!!!**!*****!**!*!!*!!*!*****!!*!*!!********!*! !***!!**
```

X non conserved

X similar

X ≥ 50% conserved