```
logo

NTDB id 381 SMU RS09890 WP 002262650.1        MNNTKSHPFLKWFIPFLVIFLTFILGVISTLTFNWITGNKSFSNNGK..TTVSNVIYDTKSNTTKAVKNVKNTVVSVINY   78
NTDB id 425 SGO RS10525 WP 012131081.1        .MKNSSNFFKKTLQVFIVLLVGFIGGVAGTWGFSYFSTPHSATNNNQKTATTVTTSYKNSNSTTEAVDKVKDAVVSVITY   79
NTDB id 337881 EQH28 RS11140 WP 000681601.1  .MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQKSSVN.NSNNNSTITQTAYKNENSTTQAVNKVKDAVVSVITY   78
NTDB id 256 KZH43 RS10270 WP 000681597.1     .MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQKSSVN.NSNNNSTITQTAYKNENSTTQAVNKVKDAVVSVITY   78
NTDB id 215 SPD RS10945 WP 000681597.1       .MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQKSSVN.NSNNNSTITQTAYKNENSTTQAVNKVKDAVVSVITY   78
NTDB id 181 SPR RS10425 WP 000681597.1       .MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQKSSVN.NSNNNSTITQTAYKNENSTTQAVNKVKDAVVSVITY   78
NTDB id 145 SP RS11450 WP 000681597.1        .MKHLKTFYKKWFQLLVVIVISFFSGALGSFSITQLTQKSSVN.NSNNNSTITQTAYKNENSTTQAVNKVKDAVVSVITY   78
NTDB id 539 SM12261 RS09395 WP 000681587.1   .MKHLKTFYKKGFQLLVVIVISFFSGALGSFSINQLTQKSTES.TSNNNSTITQTAYKNENSTTQAVNKVKDAVVSVITY   78
consensus                                     ********!******!****!**!****************  ******!*****!*****!!*!!**!!**!!!!!*!

logo

NTDB id 381 SMU RS09890 WP 002262650.1        QKTDNSYYNYDSGSQEKNKSEDGLGVYGEGSGVIYKKDGDSAYLVTNNHVVKDAEKLEIMMANGKKVVGKLVGSDTYSDL  158
NTDB id 425 SGO RS10525 WP 012131081.1        SESNSDAIF.....DNNNSGNENDQVASEGSGVIYRKDKDYAYLVTNTHVINGAKKVDIRLADGNKVPGEIVGTDTYSDI  154
NTDB id 337881 EQH28 RS11140 WP 000681601.1  SANRQNSVF.....GNDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFSDI  153
NTDB id 256 KZH43 RS10270 WP 000681597.1     SANRQNSVF.....GNDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFSDI  153
NTDB id 215 SPD RS10945 WP 000681597.1       SANRQNSVF.....GNDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFSDI  153
NTDB id 181 SPR RS10425 WP 000681597.1       SANRQNSVF.....GNDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFSDI  153
NTDB id 145 SP RS11450 WP 000681597.1        SANRQNSVF.....GNDDTDTDSQRISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFSDI  153
NTDB id 539 SM12261 RS09395 WP 000681587.1   SANRQNSVF.....GNDDTDTDSQQISSEGSGVIYKKNDKEAYIVTNNHVINGASKVDIRLSDGTKVPGEIVGADTFSDI  153
consensus                                     ********     **************!!!!!!!!*****!!*!!!*!!***!*!**!****!*!!*!**!!*!!*!!*

logo

NTDB id 381 SMU RS09890 WP 002262650.1        AVIKISSKYVTTVAEFANSDKIKVGEPAIAIGSPLGSDYANSVTEGIVSSLSRTVTSQNENGETISTNAIQTDAAINPGN  238
NTDB id 425 SGO RS10525 WP 012131081.1        SVVRIPADKVKNVAEFGDSSKLTVGETAIAIGSPLGSDYANTVTQGIVSSLSRNVSSRSEDGQTIATQAIQTDAAINPGN  234
NTDB id 337881 EQH28 RS11140 WP 000681601.1  AVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLRSEDGQAISTKAIQTDTAINPGN  233
NTDB id 256 KZH43 RS10270 WP 000681597.1     AVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAISTKAIQTDTAINPGN  233
NTDB id 215 SPD RS10945 WP 000681597.1       AVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAISTKAIQTDTAINPGN  233
NTDB id 181 SPR RS10425 WP 000681597.1       AVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAISTKAIQTDTAINPGN  233
NTDB id 145 SP RS11450 WP 000681597.1        AVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAISTKAIQTDTAINPGN  233
NTDB id 539 SM12261 RS09395 WP 000681587.1   AVVKISSEKVTTVAEFGDSSKLTVGETAIAIGSPLGSEYANTVTQGIVSSLNRNVSLKSEDGQAISTKAIQTDTAINPGN  233
consensus                                     *!**!****!**!!!!**!*!**!!!*!!!!!!!!!!*!!!*!!*!!!!!!*!*!****!*!**!*!*!!!!!*!!!!!!

logo

NTDB id 381 SMU RS09890 WP 002262650.1        SGGALINIKGQVIGINSSKIASSNNSNSGVAVEGMGFAIPSNDVVSIINQLEENGEVVRPALGISMANLSEASTSGRDTL  318
NTDB id 425 SGO RS10525 WP 012131081.1        SGGPLVNIQGQVIGITSSKIANTNN..GSTSVEGMGFAIPSNDVVNIIEQLEKNGKVIRPALGIQMVNLSSLSSSSSDRL  312
NTDB id 337881 EQH28 RS11140 WP 000681601.1  SGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSDIRRL  309
NTDB id 256 KZH43 RS10270 WP 000681597.1     SGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSDIRRL  309
NTDB id 215 SPD RS10945 WP 000681597.1       SGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSDIRRL  309
NTDB id 181 SPR RS10425 WP 000681597.1       SGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSDIRRL  309
NTDB id 145 SP RS11450 WP 000681597.1        SGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNVSTSDIRRL  309
NTDB id 539 SM12261 RS09395 WP 000681587.1   SGGPLINIQGQVIGITSSKIAT..N..GGTSVEGLGFAIPANDAINIIEQLEKNGKVTRPALGIQMVNLSNINTSDIRRL  309
consensus                                     !!!*!*!!*!!!!!!*!!!!!*  !  ****!!!*!!!!!*!!***!!*!!!*!!*!*!!!!!!*!*!!!****!****!
```

```
logo

NTDB id 381 SMU RS09890 WP 002262650.1        KIPSDVTSGIVVLSTQSGMPADGKLKKYDVITEIDGKKVASISDLQSILYKHKKGDKIKLTFYREKDKQTVEIQLTKTSQ   398
NTDB id 425 SGO RS10525 WP 012131081.1        KLPDNVKNGVVVRSTQTGMPADGKLEKYDVITKIDDTEISSASDIQSALYKHSINEEIKVTYYRDGKEQTTTIKLTKSTD   392
NTDB id 337881 EQH28 RS11140 WP 000681601.1   NIPSNVTSGVVVRSVQSNMPANGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKLNKSSG   389
NTDB id 256 KZH43 RS10270 WP 000681597.1      NIPSNVTSGVIVRSVQSNMPANGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKLNKSSG   389
NTDB id 215 SPD RS10945 WP 000681597.1        NIPSNVTSGVIVRSVQSNMPANGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKLNKSSG   389
NTDB id 181 SPR RS10425 WP 000681597.1        NIPSNVTSGVIVRSVQSNMPANGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKLNKSSG   389
NTDB id 145 SP RS11450 WP 000681597.1         NIPSNVTSGVIVRSVQSNMPANGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKLNKSSG   389
NTDB id 539 SM12261 RS09395 WP 000681587.1    NIPSNVTSGVVVRSVQSNMPANGHLEKYDVITKVDDKEIASSTDLQSALYNHSIGDTIKITYYRNGKEETTSIKLDKSSG   389
consensus                                     **!**!**!**!*!*!*!**!!!*!*!*!!!!!!**!*****!**!*!!*!!*!*****!!*!*!!*****!**!*!*!***

logo

NTDB id 381 SMU RS09890 WP 002262650.1        DLNH.   402
NTDB id 425 SGO RS10525 WP 012131081.1        DLSSE   397
NTDB id 337881 EQH28 RS11140 WP 000681601.1   DLES.   393
NTDB id 256 KZH43 RS10270 WP 000681597.1      DLES.   393
NTDB id 215 SPD RS10945 WP 000681597.1        DLES.   393
NTDB id 181 SPR RS10425 WP 000681597.1        DLES.   393
NTDB id 145 SP RS11450 WP 000681597.1         DLES.   393
NTDB id 539 SM12261 RS09395 WP 000681587.1    DLES.   393
consensus                                     !!**
```

X non conserved

X similar

X $\geq$ 50% conserved