```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1399 DSB67 RS15600 WP 010645755.1      .............MTPQNDIDLAAWLKLSCLPGIGGVKMNKLLSKDTPSNIVQYSTEQLQLLGLTAKQLQAWSQVD....   63
NTDB id 114 BSU 16110 NP 389493.1              MDQAAVCLTICRINQLLSPSLLLKWWKAD....PSMSLT.........SPVLQTVTR........DQIK.AAALKN...   54
NTDB id 599 KW2 RS05940 WP 021037268.1         ...............MITNFDLFRWKKAG....MTNLGV.........NKLLKFFRKYDRKISL..RQMGQVAQVKSIPN   50
NTDB id 525 SMSK321 RS06295 WP 000705298.1     ...............MKITNYEIYKLKKSG....LTNQQI.........LKVLEYGENVDQELLL..GDIADISGCRNPAV   51
NTDB id 267 KZH43 RS05590 WP 000705306.1       ...............MKITNYEIYKLKKSG....LTNQQI.........LKVLEYGENVDQELLL..GDIADISGCRNPAV   51
NTDB id 226 SPD RS05990 WP 000705306.1         ...............MKITNYEIYKLKKSG....LTNQQI.........LKVLEYGENVDQELLL..GDIADISGCRNPAV   51
NTDB id 192 SPR RS05715 WP 000705306.1         ...............MKITNYEIYKLKKSG....LTNQQI.........LKVLEYGENVDQELLL..GDIADISGCRNPAV   51
NTDB id 157 SP RS06205 WP 000705306.1          ...............MKITNYEIYKLKKSG....LTNQQI.........LKVLEYGENVDQELLL..GDIADISGCRNPAV   51
NTDB id 497 SM12261 RS05565 WP 000705318.1     ...............MKITNYEIYKLKKSG....LTNQQV.........LAVLEYGENVDQELLL..GDIAEISGCRNPAV   51
NTDB id 1036434 ACA346 RS06050 WP 289648733.1  ................MNNFELFKWKKAG....LSNLNI.........NKVLAYQEKQGKKLTL..RNVAVVSECKNPIL   49
NTDB id 407 SMU RS04605 WP 002262865.1         ................MDNFQLFKLKKAG....LTNLNI.........LNIIDYEERTQKSLSL..RDMAVVSKNKKPLI   49
consensus                                                     ************!**    ******         ****************  ***************

logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1399 DSB67 RS15600 WP 010645755.1      ......KEVDACLTWVAASSHHHILTLADALYPPLLKQTVAPPPLLFVKGEASCLPQ.PQIAMVGSRNASVDGLQHTRTF   136
NTDB id 114 BSU 16110 NP 389493.1              EIEQFYPKLPRVL.AAYREQGINTIPISSKQYPFWLKSIYDPPAVLFAKGDMTLLSKGRKIGIVGTRNPTAYGKQVVNHL   133
NTDB id 599 KW2 RS05940 WP 021037268.1         FIEQY.KNQDVKK.LRADYKKFSSFSILDDLYPERLREIYNPPVLIFYQGNIDLLKN.PKLAFVGSRLAGQSGIKSVQKI   127
NTDB id 525 SMSK321 RS06295 WP 000705298.1     FMERY.FQIDDAH.LEKEFKKIPSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRSCSKQGAKSVEKI   128
NTDB id 267 KZH43 RS05590 WP 000705306.1       FMERY.FQIDDAH.LSKEFQKFPSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRACSKQGAKSVEKV   128
NTDB id 226 SPD RS05990 WP 000705306.1         FMERY.FQIDDAH.LSKEFQKFPSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRACSKQGAKSVEKV   128
NTDB id 192 SPR RS05715 WP 000705306.1         FMERY.FQIDDAH.LSKEFQKFPSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRACSKQGAKSVEKV   128
NTDB id 157 SP RS06205 WP 000705306.1          FMERY.FQIDDAH.LSKEFQKFPSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRACSKQGAKSVEKV   128
NTDB id 497 SM12261 RS05565 WP 000705318.1     FMERY.FQIDDAH.LEKEFQKFPSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRACSKQGAKSVEKV   128
NTDB id 1036434 ACA346 RS06050 WP 289648733.1  FMENY.KNLDIKA.CREEFNKYPSFSILDDIYPTALKQIYNPPVLLFYQGDLELLEK.SKLAVVGTRNASENGIQSVQKI   126
NTDB id 407 SMU RS04605 WP 002262865.1         FMEHY.KNLDSKA.LRKEFNRFPSLSILDKEYPLELKNIYNPPVLLFYQGDLDLLAR.PKLAVVGSRNASQMGVAAVKKI   126
consensus                                      ***** ******* * ***************!!**!******!***!**!****!** *****!!*! ****!*******

logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 1399 DSB67 RS15600 WP 010645755.1      ASDLVQHDLIVTSGLALGIDGHAHDGALLAGGKTIAVLGSGLEQVYPARHRGLAQRVAENGALVSEFRPDAKPRAENFPR   216
NTDB id 114 BSU 16110 NP 389493.1              TKEICRKGWVIVSGLASGIDGMSHAASIKAKGRTIGVIAGGFQHIYPRENLQLADHMAKHHILLSEHPPETKPQKWHFPM   213
NTDB id 599 KW2 RS05940 WP 021037268.1         VTEL.NQSFTIVSGLAKGIDTASHLSAIKTKTPTIAVIGTGLDIFYPLENRKIQEYLAKYQLVLSEYSLGEKPLKYHFPE   206
NTDB id 525 SMSK321 RS06295 WP 000705298.1     IQGL.ENELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYISNDHLVLSEYGPGEQPLKFHFPA   207
NTDB id 267 KZH43 RS05590 WP 000705306.1       IQGL.ENELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPA   207
NTDB id 226 SPD RS05990 WP 000705306.1         IQGL.ENELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPA   207
NTDB id 192 SPR RS05715 WP 000705306.1         IQGL.ENELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPA   207
NTDB id 157 SP RS06205 WP 000705306.1          IQGL.ENELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPA   207
NTDB id 497 SM12261 RS05565 WP 000705318.1     IQGL.ENELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPA   207
NTDB id 1036434 ACA346 RS06050 WP 289648733.1  IKEL.NNRFVIVSGMARGIDTVAHIASLKNGGQTIAVIGTGLDKVYPKENKELQHYIGKHQLVLTEYEPNAQPLKYHFPE   205
NTDB id 407 SMU RS04605 WP 002262865.1         IQDL.SKQFVIISGLARGIDTAAHLASLKSGGATIAVIGTGLDVHYPKENRRLQDYIAKNHLLLSEYEAQSQPLKYHFPE   205
consensus                                      **** *******!!*!*!!!***!********!!*!***!****!!*******************!******!****!!*
```

```
logo
                                                  RNRIIAGLCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDYLAEEEF

NTDB id 1399 DSB67 RS15600 WP 010645755.1         RNRIISGLSLGVLVVEAAEKSGSLITARYALEQGREVFALPASINAPNASGGNQLIQNGACLVQNTQEVLNEIQSLLDWS   296
NTDB id 114 BSU 16110 NP 389493.1                 RNRIISGLSEGVIVVQGKEKSGSLITAYQALEQGREVFAVPGSLFDPYAGGPIKLIQQGAKAIWSAEDIFEELPERNV..   291
NTDB id 599 KW2 RS05940 WP 021037268.1            RNRIIAGLSRGVVVVEAKLRSGSLITCERALEEGRDIFAIPGNIADGTSDGCNHLIQQGAKLVYQAQDILEEYLYN....   282
NTDB id 525 SMSK321 RS06295 WP 000705298.1        RNRIIAGLCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....   282
NTDB id 267 KZH43 RS05590 WP 000705306.1          RNRIIAGLCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....   282
NTDB id 226 SPD RS05990 WP 000705306.1            RNRIIAGLCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....   282
NTDB id 192 SPR RS05715 WP 000705306.1            RNRIIAGLCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....   282
NTDB id 157 SP RS06205 WP 000705306.1             RNRIIAGLCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....   282
NTDB id 497 SM12261 RS05565 WP 000705318.1        RNRIIAGLCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....   282
NTDB id 1036434 ACA346 RS06050 WP 289648733.1     RNRIIAGLAEGLVVCEAKIRSGSLITCERALEEGREIYAIPGSIVDGKSDGCHHLIQEGAKCITSGLDILSDYLF.....   280
NTDB id 407 SMU RS04605 WP 002262865.1            RNRIIAGLSQGVMVAEAKIRSGSLITCERAMEEGRDVFVVPGNILDGQSEGCHHLIQEGAKCITSGFDILNEFNF.....   280
consensus                                         !!!!!*!!**!**!*****!!!!!!***!*!*!!*****!*********!***!!!*!!**************
```

```
logo
                                                  INQSLDLFSAPIDEEELPFPQLLANVGNEATPVDILASRTNIPVQEVMMQLLELELSGHVVAVSGGYIRKGRG

NTDB id 1399 DSB67 RS15600 WP 010645755.1         INQSLDLFSAPIDEEELPFPQLLANVGNEATPVDILASRTNIPVQEVMMQLLELELSGHVVAVSGGYIRKGRG   369
NTDB id 114 BSU 16110 NP 389493.1                 ..Q....YTEPF.............................................................   297
NTDB id 599 KW2 RS05940 WP 021037268.1            ............................................................................   282
NTDB id 525 SMSK321 RS06295 WP 000705298.1        ............................................................................   282
NTDB id 267 KZH43 RS05590 WP 000705306.1          ............................................................................   282
NTDB id 226 SPD RS05990 WP 000705306.1            ............................................................................   282
NTDB id 192 SPR RS05715 WP 000705306.1            ............................................................................   282
NTDB id 157 SP RS06205 WP 000705306.1             ............................................................................   282
NTDB id 497 SM12261 RS05565 WP 000705318.1        ............................................................................   282
NTDB id 1036434 ACA346 RS06050 WP 289648733.1     ............................................................................   280
NTDB id 407 SMU RS04605 WP 002262865.1            ............................................................................   280
consensus
```

X non conserved
X similar
X ≥ 50% conserved