```
logo
NTDB id 25 SA RS06185 WP 000593194.1          ........MIKLFLLKLYWAHFSTKQIHQFLMAYPNVIKEEGRKKDSYLCE.W.....VNREENVLLLRKYYAFIKLDHN   66
NTDB id 1250 GC085 RS13065 WP 027219989.1     ..MNNLQPLLALNRMK..RIG.....PRT.......VLKLQKRWPDLNLMFQLSSVDLEEAGLPSWLAQ...TIKNFDPD   61
NTDB id 599 KW2 RS05940 WP 021037268.1        .MITNFD....LFRWK..KAGMTNLGVNK.......LLKFFRKYDRKISLRQMG..QVAQVKSIPNFIE...QYKNQDVK   61
NTDB id 390437 FSA28 RS04985 WP 002262865.1   ..MDNFQ....LFKLK..KAGLTNLNILN.......IIDYEERTQKSLSLRDMA..VVSKNKKPLIFME...HYKNLDSK   60
NTDB id 407 SMU RS04605 WP 002262865.1        ..MDNFQ....LFKLK..KAGLTNLNILN.......IIDYEERTQKSLSLRDMA..VVSKNKKPLIFME...HYKNLDSK   60
NTDB id 525 SMSK321 RS06295 WP 000705298.1    MKITNYE....IYKLK..KSGLTNQQILK.......VLEYGENVDQELLLGDIA..DISGCRNPAVFME...RYFQIDDA   62
NTDB id 267 KZH43 RS05590 WP 000705306.1      MKITNYE....IYKLK..KSGLTNQQILK.......VLEYGENVDQELLLGDIA..DISGCRNPAVFME...RYFQIDDA   62
NTDB id 226 SPD RS05990 WP 000705306.1        MKITNYE....IYKLK..KSGLTNQQILK.......VLEYGENVDQELLLGDIA..DISGCRNPAVFME...RYFQIDDA   62
NTDB id 192 SPR RS05715 WP 000705306.1        MKITNYE....IYKLK..KSGLTNQQILK.......VLEYGENVDQELLLGDIA..DISGCRNPAVFME...RYFQIDDA   62
NTDB id 157 SP RS06205 WP 000705306.1         MKITNYE....IYKLK..KSGLTNQQILK.......VLEYGENVDQELLLGDIA..DISGCRNPAVFME...RYFQIDDA   62
NTDB id 497 SM12261 RS05565 WP 000705318.1    MKITNYE....IYKLK..KSGLTNQQVLA.......VLEYGENVDQELLLGDIA..EISGCRNPAVFME...RYFQIDDA   62
consensus                                     *******    ****!  ***********       *****************   *************    *****!**

logo
NTDB id 25 SA RS06185 WP 000593194.1          DIIKELQKL....KVSYITYMDSEYPVLLKEIYQFPLLLFYKGNIKLINNMHHLAVVGARDSTSYTQQSLEFLLSNDKSK  142
NTDB id 1250 GC085 RS13065 WP 027219989.1     FIKTDLNWLSSSENHHILTWDSPYYPALLKEIADPPFILYAKGELSALTQ.PSLAIVGSRNASVTGNENARAFSREISRH  140
NTDB id 599 KW2 RS05940 WP 021037268.1        KLRADYKKF......SSFSILDDLYPERLREIYNPPVLIFYQGNIDLLKN.PKLAFVGSRLAGQSGIKSVQKIVTELN.Q  133
NTDB id 390437 FSA28 RS04985 WP 002262865.1   ALRKEFNRF......PSLSILDKEYPLELKNIYNPPVLLFYQGDLDLLAR.PKLAVVGSRNASQMGVAAVKKIIQDLS.K  132
NTDB id 407 SMU RS04605 WP 002262865.1        ALRKEFNRF......PSLSILDKEYPLELKNIYNPPVLLFYQGDLDLLAR.PKLAVVGSRNASQMGVAAVKKIIQDLS.K  132
NTDB id 525 SMSK321 RS06295 WP 000705298.1    HLEKEFKKI......PSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRSCSKQGAKSVEKIIQGLE.N  134
NTDB id 267 KZH43 RS05590 WP 000705306.1      HLSKEFQKF......PSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRACSKQGAKSVEKVIQGLE.N  134
NTDB id 226 SPD RS05990 WP 000705306.1        HLSKEFQKF......PSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRACSKQGAKSVEKVIQGLE.N  134
NTDB id 192 SPR RS05715 WP 000705306.1        HLSKEFQKF......PSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRACSKQGAKSVEKVIQGLE.N  134
NTDB id 157 SP RS06205 WP 000705306.1         HLSKEFQKF......PSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRACSKQGAKSVEKVIQGLE.N  134
NTDB id 497 SM12261 RS05565 WP 000705318.1    HLEKEFQKF......PSFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKF.PKVAVVGSRACSKQGAKSVEKVIQGLE.N  134
consensus                                     ** ******      *********!!**!**!***!******!******* ***!*!!*! ****************** *

logo
NTDB id 25 SA RS06185 WP 000593194.1          YLTIVSGLAQGADAMAHQIALKYNLPTIAVLAFGHQTHYPKSTLALRNKIEEKGLVISEYPPHTPIAKYRFPERNRIISG  222
NTDB id 1250 GC085 RS13065 WP 027219989.1     GVSIVSGLALGIDAHAHLGCLEGGGKTIAVLGTGIDCIYPRRHLKLAEQITENGLLLSEFPLKSPPIAGHFPLRNRIISG  220
NTDB id 599 KW2 RS05940 WP 021037268.1        SFTIVSGLAKGIDTASHLSAIKTKTPTIAVIGTGLDIFYPLENRKIQEYLAKYQLVLSEYSLGEKPLKYHFPERNRIIAG  213
NTDB id 390437 FSA28 RS04985 WP 002262865.1   QFVIISGLARGIDTAAHLASLKSGGATIAVIGTGLDVHYPKENRRLQDYIAKNHLLLSEYEAQSQPLKYHFPERNRIIAG  212
NTDB id 407 SMU RS04605 WP 002262865.1        QFVIISGLARGIDTAAHLASLKSGGATIAVIGTGLDVHYPKENRRLQDYIAKNHLLLSEYEAQSQPLKYHFPERNRIIAG  212
NTDB id 525 SMSK321 RS06295 WP 000705298.1    ELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYISNDHLVLSEYGPGEQPLKFHFPARNRIIAG  214
NTDB id 267 KZH43 RS05590 WP 000705306.1      ELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAG  214
NTDB id 226 SPD RS05990 WP 000705306.1        ELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAG  214
NTDB id 192 SPR RS05715 WP 000705306.1        ELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAG  214
NTDB id 157 SP RS06205 WP 000705306.1         ELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAG  214
NTDB id 497 SM12261 RS05565 WP 000705318.1    ELVIVSGLAKGIDTAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAG  214
consensus                                     ***!*!!!!*!*!***!********!!!!***!****!!***************!**!!***********!!*!!!!!*!
```

```
logo
NTDB id 25 SA RS06185 WP 000593194.1          LSKGVLITEAKEQSGSHITIDFALEQNRNVYVLPGSMFNPMTKGNLLRIQEGAKVVLNANDIFEDYYI............   290
NTDB id 1250 GC085 RS13065 WP 027219989.1     LSLCILVIEAAIKSGSLITARMALEQNRDVLAIPGSIHNPLARGCHYLLQQGAKLVTSVADVLDELKIEHHQFTSNKPIF   300
NTDB id 599 KW2 RS05940 WP 021037268.1        LSRGVVVVEAKLRSGSLITCERALEEGRDIFAIPGNIADGTSDGCNHLIQQGAKLVYQAQDILEEYLYN...........   282
NTDB id 390437 FSA28 RS04985 WP 002262865.1   LSQGVMVAEAKIRSGSLITCERAMEEGRDVFVVPGNILDGQSEGCHHLIQEGAKCITSGFDILNEFNF............   280
NTDB id 407 SMU RS04605 WP 002262865.1        LSQGVMVAEAKIRSGSLITCERAMEEGRDVFVVPGNILDGQSEGCHHLIQEGAKCITSGFDILNEFNF............   280
NTDB id 525 SMSK321 RS06295 WP 000705298.1    LCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF............   282
NTDB id 267 KZH43 RS05590 WP 000705306.1      LCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF............   282
NTDB id 226 SPD RS05990 WP 000705306.1        LCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF............   282
NTDB id 192 SPR RS05715 WP 000705306.1        LCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF............   282
NTDB id 157 SP RS06205 WP 000705306.1         LCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF............   282
NTDB id 497 SM12261 RS05565 WP 000705318.1    LCRGVIVAEAKMRSGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF............   282
consensus                                     !*******!!***!!!*!!***!*!**!*****!!********!*****!*!!!******!*******

logo
                                              SLASGKENLVKFIGFETTTIDQIIDRSGYGMEQVTSGLAELELKGAVIAVPGGYIRCEYER
NTDB id 25 SA RS06185 WP 000593194.1          ............................................................   290
NTDB id 1250 GC085 RS13065 WP 027219989.1     SLASGKENLVKFIGFETTTIDQIIDRSGYGMEQVTSGLAELELKGAVIAVPGGYIRCEYER   361
NTDB id 599 KW2 RS05940 WP 021037268.1        ............................................................   282
NTDB id 390437 FSA28 RS04985 WP 002262865.1   ............................................................   280
NTDB id 407 SMU RS04605 WP 002262865.1        ............................................................   280
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
consensus
```

X non conserved

X similar

X $\geq$ 50% conserved