logo



```
NTDB id 1250 GCO85 RS13065 WP 027219989.1        ..MNNLQPLLALNRMKRIG.....PRTVLKLQKRWPDLNLMFQLSSVDLEEAGLPSWLAQTIKNFDPDFIKTDLNWLSSS   73
NTDB id 599 KW2 RS05940 WP 021037268.1           .MITNFD....LFRWKKAGMTNLGVNKLLKFFRKYDRKISLRQM..GQVAQVKSIPNFIEQYKNQDVKKLRADYKKFS..   71
NTDB id 525 SMSK321 RS06295 WP 000705298.1       MKITNYE....IYKLKKSGLTNQQILKVLEYGENVDQELLLGDI..ADISGCRNPAVFMERYFQIDDAHLEKEFKKIP..   72
NTDB id 497 SM12261 RS05565 WP 000705318.1       MKITNYE....IYKLKKSGLTNQQVLAVLEYGENVDQELLLGDI..AEISGCRNPAVFMERYFQIDDAHLEKEFQKFP..   72
NTDB id 267 KZH43 RS05590 WP 000705306.1         MKITNYE....IYKLKKSGLTNQQILKVLEYGENVDQELLLGDI..ADISGCRNPAVFMERYFQIDDAHLSKEFQKFP..   72
NTDB id 226 SPD RS05990 WP 000705306.1           MKITNYE....IYKLKKSGLTNQQILKVLEYGENVDQELLLGDI..ADISGCRNPAVFMERYFQIDDAHLSKEFQKFP..   72
NTDB id 192 SPR RS05715 WP 000705306.1           MKITNYE....IYKLKKSGLTNQQILKVLEYGENVDQELLLGDI..ADISGCRNPAVFMERYFQIDDAHLSKEFQKFP..   72
NTDB id 157 SP RS06205 WP 000705306.1            MKITNYE....IYKLKKSGLTNQQILKVLEYGENVDQELLLGDI..ADISGCRNPAVFMERYFQIDDAHLSKEFQKFP..   72
NTDB id 98629 MGAS11027 RS04765 WP 031488274.1   ..MNHFE....LYKLKKAGLTNKNILNILDYQKQQEKSLSLRDM..AVVSGCKHPSHFIEAYKQLDIQKLKIEFKQFP..   70
NTDB id 407 SMU RS04605 WP 002262865.1           ..MDNFQ....LFKLKKAGLTNLNILNIIDYEERTQKSLSLRDM..AVVSKNKKPLIFMEHYKNLDSKALRKEFNRFP..   70
consensus                                        *******    ****!**!**********************   ********************!****  *******
```

logo



```
NTDB id 1250 GCO85 RS13065 WP 027219989.1        ENHHILIWDSPYYPALLKEIADPPFILYAKGELSALTQPSLAIVGSRNASVTGNENARAFSREISRHGMSIVSGLALGID   153
NTDB id 599 KW2 RS05940 WP 021037268.1           ....SFSILDDLYPERLREIYNPPVLIFYQGNIDLLKNPKLAFVGSRLAGQSGIKSVQKIVTELNQ.SFTIVSGLAKGID   146
NTDB id 525 SMSK321 RS06295 WP 000705298.1       ....SFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKFPKVAVVGSRSCSKQGAKSVEKIIQGLEN.ELVIVSGLAKGID   147
NTDB id 497 SM12261 RS05565 WP 000705318.1       ....SFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKFPKVAVVGSRACSKQGAKSVEKVIQGLEN.ELVIVSGLAKGID   147
NTDB id 267 KZH43 RS05590 WP 000705306.1         ....SFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKFPKVAVVGSRACSKQGAKSVEKVIQGLEN.ELVIVSGLAKGID   147
NTDB id 226 SPD RS05990 WP 000705306.1           ....SFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKFPKVAVVGSRACSKQGAKSVEKVIQGLEN.ELVIVSGLAKGID   147
NTDB id 192 SPR RS05715 WP 000705306.1           ....SFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKFPKVAVVGSRACSKQGAKSVEKVIQGLEN.ELVIVSGLAKGID   147
NTDB id 157 SP RS06205 WP 000705306.1            ....SFSILDDCYPWDLSEIYDAPVLLFYKGNLDLLKFPKVAVVGSRACSKQGAKSVEKVIQGLEN.ELVIVSGLAKGID   147
NTDB id 98629 MGAS11027 RS04765 WP 031488274.1   ....SISILDKHYPMALKEIYNPPVLLFFQGNLDLLEKPKLAIVGSRRSSDTGVKSVRKILKELGN.RFVIVSGLARGID   145
NTDB id 407 SMU RS04605 WP 002262865.1           ....SLSILDKEYPLELKNIYNPPVLLFYQGDLDLLARPKLAVVGSRNASQMGVAAVKKIIQDLSK.QFVIISGLARGID   145
consensus                                           ********!!**!**!***!******!****!**!**!*!!!!*****!**************  ***!*!!!!*!!!
```

logo



```
NTDB id 1250 GCO85 RS13065 WP 027219989.1        AHAHLGCLFGGGKTIAVLGTGIDCIYPRRHLKLAEQITENGLLLSEFPLKSPPIAGHFPLRNRIISGLSLCILVIEAAIK   233
NTDB id 599 KW2 RS05940 WP 021037268.1           TASHLSAIKTKTPTIAVIGTGLDIFYPLENRKIQEYLAKYQLVLSEYSLGEKPLKYHFPERNRIIAGLSRGVVVVEAKLR   226
NTDB id 525 SMSK321 RS06295 WP 000705298.1       TAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYISNDHLVLSEYGPGEQPLKFHFPARNRIIAGLCRGVIVAEAKMR   227
NTDB id 497 SM12261 RS05565 WP 000705318.1       TAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAGLCRGVIVAEAKMR   227
NTDB id 267 KZH43 RS05590 WP 000705306.1         TAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAGLCRGVIVAEAKMR   227
NTDB id 226 SPD RS05990 WP 000705306.1           TAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAGLCRGVIVAEAKMR   227
NTDB id 192 SPR RS05715 WP 000705306.1           TAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAGLCRGVIVAEAKMR   227
NTDB id 157 SP RS06205 WP 000705306.1            TAAHMAALQNGGKTIAVIGTGLDVFYPKANKRLQDYIGNDHLVLSEYGPGEQPLKFHFPARNRIIAGLCRGVIVAEAKMR   227
NTDB id 98629 MGAS11027 RS04765 WP 031488274.1   TSAHLACLKNGGQTIAIIGTGLDRFYPKENRELQTFLGKNHLVITEYGPGEEALSYHFPERNRIIAGLSRGILVVEAKNR   225
NTDB id 407 SMU RS04605 WP 002262865.1           TAAHLASLKSGGATIAVIGTGLDVHYPKENRRLQDYIAKNHLLLSEYEAQSQPLKYHFPERNRIIAGLSQGVMVAEAKIR   225
consensus                                        ***!**********!!!**!!!*!**!!*****************!***!**********!!!*!!!!!*!!*****!*!!***
```

logo



```
NTDB id 1250 GCO85 RS13065 WP 027219989.1        SGSLITARMALEQNRDVLAIPGSIHNPLARGCHYLLQQGAKLVTSVADVLDELKIEHHQFTSNKPIFSLASGKENLVKFI   313
NTDB id 599 KW2 RS05940 WP 021037268.1           SGSLITCERALEEGRDIFAIPGNIADGTSDGCNHLIQQGAKLVYQAQDILEEYLYN.....................   282
NTDB id 525 SMSK321 RS06295 WP 000705298.1       SGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....................   282
NTDB id 497 SM12261 RS05565 WP 000705318.1       SGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....................   282
NTDB id 267 KZH43 RS05590 WP 000705306.1         SGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....................   282
NTDB id 226 SPD RS05990 WP 000705306.1           SGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....................   282
NTDB id 192 SPR RS05715 WP 000705306.1           SGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....................   282
NTDB id 157 SP RS06205 WP 000705306.1            SGSLITCERAMEEGRDVFAIPGSILDGLSDGCHHLIQEGAKLVTSGQDVLAEFEF.....................   282
NTDB id 98629 MGAS11027 RS04765 WP 031488274.1   SGSLITCQIGIEEGRDIFAVPGNILDGKSEGCLQLIKEGATCVTSGMDILSEY.......................   278
NTDB id 407 SMU RS04605 WP 002262865.1           SGSLITCERAMEEGRDVFVVPGNILDGQSEGCHHLIQEGAKCITSGFDILNEFNF.....................   280
consensus                                        !!!!!!*****!**!!****!!*!*******!!**!***!!*******!*!*!***
```

logo


```
NTDB id 1250 GCO85 RS13065 WP 027219989.1        GFETTTIDQIIDRSGYGMEQVTSGLAELELKGAVIAVPGGYIRCEYER   361
NTDB id 599 KW2 RS05940 WP 021037268.1           ................................................   282
NTDB id 525 SMSK321 RS06295 WP 000705298.1       ................................................   282
NTDB id 497 SM12261 RS05565 WP 000705318.1       ................................................   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 98629 MGAS11027 RS04765 WP 031488274.1   ................................................   278
NTDB id 407 SMU RS04605 WP 002262865.1           ................................................   280
consensus
```

X non conserved
X similar
X ≥ 50% conserved