```
logo
NTDB id 419 DQL23 RS10745 WP 060553298.1      .MILKIIIAFFPTIIQVVSYEIFHKKIMQSKKIDIKFIGLFFSIVFGISIISSILIEIPSFGDVISSIFHYIFLFIQPLI   79
NTDB id 416 SGO RS10505 WP 012131078.1        .MIFTIILSLFPVIIQVFSYDFFYNKINRKKKINIKLIILFWGLIMVISFLYSLFLLLPDYWKIFRDIFHYLFLLIQPLI   79
NTDB id 486 SM12261 RS09375 WP 020902616.1    MDFLAVLVVILHIFIISKSYYLI.....CKNKINIKELCFFGGYTFL....VESVFELSFYFIYLDGL..GIEKFLFPLV   69
NTDB id 514 SMSK321 RS10615 WP 001048129.1    MNLFGVGLVIVYFLIISHSYRLI.....CKGQINRKELYVFSAYILL....TEIVLDFPSYLLHLDDL..GIVKFLFPLV   69
NTDB id 249 KZH43 RS10250 WP 000362880.1      MDLFGFGTVIVHFLIISHSYHFI.....CKGQINRKELFVFGAYTLL....TEIVFDFPLYILYLDGL..GIERFLFPLG   69
NTDB id 208 SPD RS10925 WP 000362880.1        MDLFGFGTVIVHFLIISHSYHFI.....CKGQINRKELFVFGAYTLL....TEIVFDFPLYILYLDGL..GIERFLFPLG   69
NTDB id 174 SPR RS10405 WP 000362880.1        MDLFGFGTVIVHFLIISHSYHFI.....CKGQINRKELFVFGAYTLL....TEIVFDFPLYILYLDGL..GIERFLFPLG   69
NTDB id 1142106 DQL01 RS11725 WP 016397292.1  MDLLGFGTVIVHFLIISHSYRLI.....CKGRINRKELYVFGAYTLL....TEIVLEFSFYLLYLDKI..GIERFLFPLG   69
NTDB id 138 SP RS11430 WP 000364845.1         MDLLGFGTVIVHFLIISHSYRLI.....CKGRINRKELYVFGAYTLL....TEIVLEFSFYLLYLDKI..GIERFLFPLG   69
consensus                                     **************!***!! **     ****!**!****!******    ******** ****** *   *******!!*

logo
NTDB id 419 DQL23 RS10745 WP 060553298.1      FYKYFL.KRKEYDNYLNLFLSFVIYLSVETSETFLSVIISSITGDYFVKQHYDIFYIIINLLSLFIILKVVDFFDFYFEY  158
NTDB id 416 SGO RS10505 WP 012131078.1        FYKYFLIKRKEYENYLNLFLSFVIYLSVETSETFLSVIISSITGDSFVKQHYDIFYIIINLLSLFIILKVVDFFDFYFEY  159
NTDB id 486 SM12261 RS09375 WP 020902616.1    LYSYFRF.IKKYEKYRGVFLSLLLSLLYNSTHTFLSVTLSSIIGDDTALQYHSLFFLVVVALTYVVIVTIIRYFHLELNY  148
NTDB id 514 SMSK321 RS10615 WP 001048129.1    LYSYFRW.IKQYERDRGLFLSLLLSLLYESTHNFLSVTLSSLTGDNFVLQYYEPFFFLVTVLTYVVILKIIHYFHLDLNY  148
NTDB id 249 KZH43 RS10250 WP 000362880.1      LYSYFRW.MKQYERDRGLFLSLLLSLLYESTHNFLSVTFSSITGDNFVLQYHFPFFFVVTVLTYFVTLKIIYYFHLELAY  148
NTDB id 208 SPD RS10925 WP 000362880.1        LYSYFRW.MKQYERDRGLFLSLLLSLLYESTHNFLSVTFSSITGDNFVLQYHFPFFFVVTVLTYFVTLKIIYYFHLELAY  148
NTDB id 174 SPR RS10405 WP 000362880.1        LYSYFRW.MKQYERDRGLFLSLLLSLLYESTHNFLSVTFSSITGDNFVLQYHFPFFFVVTVLTYFVTLKIIYYFHLELAY  148
NTDB id 1142106 DQL01 RS11725 WP 016397292.1  LYSYFRW.MKQYERDRGLFLSLLLSLLYESTHNFLSVTFSSITGDNFVLQYHFPFFFVVTVLTYFVTLKIIYYFHLELAY  148
NTDB id 138 SP RS11430 WP 000364845.1         LYSYFRW.MKQYERDRGLFLSLLLSLLYESTHNFLSVIFSSITGDNFVLQYHFPFFFVVTVLTYFVTLKIIYYFHLELAY  148
consensus                                     *!*!!** *!*!******!!!****!*******!!!!**!!**!!****!****!******!************!******!

logo
NTDB id 419 DQL23 RS10745 WP 060553298.1      YKEPIYKNDLYNVNKSYIVIHILLNISHWFSENAHLNSFASMIATIGFIMFLSTLFYLKSAREQHEKAKEIQQKKEEQRQ  238
NTDB id 416 SGO RS10505 WP 012131078.1        YKEPIYKNDLYNVNKSYIVIHILLNISHWFSENAHLNSFASMIATIGFIMFLSTLFYLKSAREQYEKAKEIQQKKEEQRQ  239
NTDB id 486 SM12261 RS09375 WP 020902616.1    FDKDYLYPFLKKVFFALLLLHVVSFISDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKEKMEKEIALKQKKFEQKH  228
NTDB id 514 SMSK321 RS10615 WP 001048129.1    FDKDYLYPFLTKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKDQMEKEIALKQKKFEQKH  228
NTDB id 249 KZH43 RS10250 WP 000362880.1      FDEDYLYPFLKKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKVQMEKEIALKQKKFEQKH  228
NTDB id 208 SPD RS10925 WP 000362880.1        FDEDYLYPFLKKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKVQMEKEIALKQKKFEQKH  228
NTDB id 174 SPR RS10405 WP 000362880.1        FDEDYLYPFLKKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKVQMEKEIALKQKKFEQKH  228
NTDB id 1142106 DQL01 RS11725 WP 016397292.1  FDKDYLYPFLKKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKVQMEKEIALKQKKFEQKH  228
NTDB id 138 SP RS11430 WP 000364845.1         FDKDYLYPFLKKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKVQMEKEIALKQKKFEQKH  228
consensus                                     *********!**!*******!*****!***!***!!!!!*!****!*!!**!*!*!***!*****!!*****!!!*!!**

logo
NTDB id 419 DQL23 RS10745 WP 060553298.1      LQLYTDEIVGLYNEIRGFRHDYAGMLISLQTGINSGDMKEVERIFHNVLSQANISLRSDDYTFFELNNVQDTALRSVLIQ  318
NTDB id 416 SGO RS10505 WP 012131078.1        LQLYTDEIVGLYNEIRGFRHDYAGMLTSLQTGINSGDMKEVERIFHNVLSQANISLRSDDYTFFELNNVQDTALRSVLIQ  319
NTDB id 486 SM12261 RS09375 WP 020902616.1    LQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGDLQEIDRVYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSLVAQ  308
NTDB id 514 SMSK321 RS10615 WP 001048129.1    LQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRVYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSLVAQ  308
NTDB id 249 KZH43 RS10250 WP 000362880.1      LQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRIYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSLVAQ  308
NTDB id 208 SPD RS10925 WP 000362880.1        LQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRIYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSLVAQ  308
NTDB id 174 SPR RS10405 WP 000362880.1        LQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRIYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSLVAQ  308
NTDB id 1142106 DQL01 RS11725 WP 016397292.1  LQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRIYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSLVAQ  308
NTDB id 138 SP RS11430 WP 000364845.1         LQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRIYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSLVAQ  308
consensus                                     !!*!!!!!!!!!!!!!!!!!!!!!!!!!*!*!**!*!!***!**!****!!**!!**!!!!*!!*!*!!!!**!*!!!!***!
```

```
logo
```

```
NTDB id 419 DQL23 RS10745 WP 060553298.1      TIFKARECGVEIVFEMKDVIETLPMKLLDLVRVASVLLNNAVEGAAESPSKTMNVSLVKLDKEIVFVIQNSRQSRYINLE   398
NTDB id 416 SGO RS10505 WP 012131078.1        TIFKARECGVEIVFEMKDVIETLPMKLLDLVRVASVLLNNAVEGAAESPSKTMNVSLVKLDKEIVFVIQNSRQSRYINLE   399
NTDB id 486 SM12261 RS09375 WP 020902616.1    SIVYARNNGVEFTLEVKDKITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMTPSG   388
NTDB id 514 SMSK321 RS10615 WP 001048129.1    SIVYARNNGVEFTLEVKDIITRLPIDLLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMTPSG   388
NTDB id 249 KZH43 RS10250 WP 000362880.1      SIVYARNNGVEFTLEVKDTITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMTPSG   388
NTDB id 208 SPD RS10925 WP 000362880.1        SIVYARNNGVEFTLEVKDTITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMTPSG   388
NTDB id 174 SPR RS10405 WP 000362880.1        SIVYARNNGVEFTLEVKDTITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMTPSG   388
NTDB id 1142106 DQL01 RS11725 WP 016397292.1 SIVYARNNGVEFTLEVKDTITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMTPSG   388
NTDB id 138 SP RS11430 WP 000364845.1         SIVYARNNGVEFTLEVKDTITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMTPSG   388
consensus                                     *!**!!**!!***!*!!*!**!!**!!!!!!**!!!!!!!!!!*!*!**!*!*!***!***!*!*!!!!!*********
```

```
logo
```

```
NTDB id 419 DQL23 RS10745 WP 060553298.1      EIYEVGFSTKGENRGLGLNNVKEIIDKYDEVILETDIETNYFIQVVRFKRKEKI   452
NTDB id 416 SGO RS10505 WP 012131078.1        EIYEVGFSTKGENRGLGLNNVKEIIDKYDEVILETDIETNYFIQVVRFKRKEKI   453
NTDB id 486 SM12261 RS09375 WP 020902616.1    DLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 514 SMSK321 RS10615 WP 001048129.1    DLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 249 KZH43 RS10250 WP 000362880.1      DLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 208 SPD RS10925 WP 000362880.1        DLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 174 SPR RS10405 WP 000362880.1        DLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 1142106 DQL01 RS11725 WP 016397292.1 DLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 138 SP RS11430 WP 000364845.1         DLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
consensus                                     *****!!!!!!*!!!*!!!!!!!!**!!!***!!!!**!***!*!**!!!!***
```

X non conserved

X similar

X $\geq$ 50% conserved