```
logo
NTDB id 486 SM12261 RS09375 WP 020902616.1     MDFLAVLVVILHIFIISKSYYLICKNKINIK......ELCFFGGYTFLVESVFELSFYFIYLDGLG........IEKFLF   66
NTDB id 514 SMSK321 RS10615 WP 001048129.1     MNLFGVGLVIVYFLIISHSYRLICKGQINRK......ELYVFSAYILLTEIVLDFPSYLLHLDDLG........IVKFLF   66
NTDB id 138 SP RS11430 WP 000364845.1          MDLLGFGTVIVHFLIISHSYRLICKGRINRK......ELYVFGAYTLLTEIVLEFSFYLLYLDKIG........IERFLF   66
NTDB id 249 KZH43 RS10250 WP 000362880.1       MDLFGFGTVIVHFLIISHSYHFICKGQINRK......ELFVFGAYTLLTEIVFDFPLYILYLDGLG........IERFLF   66
NTDB id 208 SPD RS10925 WP 000362880.1         MDLFGFGTVIVHFLIISHSYHFICKGQINRK......ELFVFGAYTLLTEIVFDFPLYILYLDGLG........IERFLF   66
NTDB id 174 SPR RS10405 WP 000362880.1         MDLFGFGTVIVHFLIISHSYHFICKGQINRK......ELFVFGAYTLLTEIVFDFPLYILYLDGLG........IERFLF   66
NTDB id 1120047 EL079 RS07415 WP 221739197.1   MKI.EFIHW.IIFSIIEAVSVVYCYKKISRVNKVNIHFTLLCLGIVFSTD.............FTTLIHYSIRYMMFFIQ   65
NTDB id 419 DQL23 RS10745 WP 060553298.1       MIL.KIIIA.FFPTIIQVVSYEIFHKKIMQSKKIDIKFIGLFFSIVFGISIIS..SILIEIPSFGDVISSIFHYIFLFIQ   76
NTDB id 416 SGO RS10505 WP 012131078.1         MIF.TIILS.LFPVIIQVFSYDFFYNKINRKKKINIKLIILFWGLIMVISFLY..SLFLLLPDYWKIFRDIFHYLFLLIQ   76
consensus                                      !** *** ******!!****  *****!***      ***************** ******* **        ******

logo
NTDB id 486 SM12261 RS09375 WP 020902616.1     PLVLYSYFRF.IKKYEKYRGVFLSLLLSLLYNSTHTFLSVTLSSIIGDDTALQYHSLFFLVVVALTYVVIVTIIRYFHLE   145
NTDB id 514 SMSK321 RS10615 WP 001048129.1     PLVLYSYFRW.IKQYERDRGLFLSLLLSLLYESTHNFLSVTLSSLTGDNFVLQYYEPFFFLVTVLTYVVILKIIHYFHLD   145
NTDB id 138 SP RS11430 WP 000364845.1          PLGLYSYFRW.MKQYERDRGLFLSLLLSLLYESTHNFLSVIFSSITGDNFVLQYHFPFFFVVTVLTYFVTLKIIYYFHLE   145
NTDB id 249 KZH43 RS10250 WP 000362880.1       PLGLYSYFRW.MKQYERDRGLFLSLLLSLLYESTHNFLSVTFSSITGDNFVLQYHFPFFFVVTVLTYFVTLKIIYYFHLE   145
NTDB id 208 SPD RS10925 WP 000362880.1         PLGLYSYFRW.MKQYERDRGLFLSLLLSLLYESTHNFLSVTFSSITGDNFVLQYHFPFFFVVTVLTYFVTLKIIYYFHLE   145
NTDB id 174 SPR RS10405 WP 000362880.1         PLGLYSYFRW.MKQYERDRGLFLSLLLSLLYESTHNFLSVTFSSITGDNFVLQYHFPFFFVVTVLTYFVTLKIIYYFHLE   145
NTDB id 1120047 EL079 RS07415 WP 221739197.1   PLFFYLYFFK.VKKVKKHLSVFLALFLSLAVSSSETFFSVIISSVTGDKFVDRYWGLFYIFINIISLVFILKAIDYFKFN   144
NTDB id 419 DQL23 RS10745 WP 060553298.1       PLIFYKYFL.KRKEYDNYLNLFLSFVIYLSVETSETFLSVIISSITGDYFVKQHYDIFYIINLLSLFIILKVVDFFDFY   155
NTDB id 416 SGO RS10505 WP 012131078.1         PLIFYKYFLIKRKEYENYLNLFLSFVIYLSVETSETFLSVIISSITGDSFVKQHYDIFYIINLLSLFIILKVVDFFDFY   156
consensus                                      !! *!*!!** *!********!!*****!*******!*!!**!!**!!******* *!****************  *!***

logo
NTDB id 486 SM12261 RS09375 WP 020902616.1     LNYFDKDYLYPFLKKVFFALLLLHVVSFISDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKEKMEKEIALKQKKFE   225
NTDB id 514 SMSK321 RS10615 WP 001048129.1     LNYFDKDYLYPFLTKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKDQMEKEIALKQKKFE   225
NTDB id 138 SP RS11430 WP 000364845.1          LAYFDKDYLYPFLKKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKVQMEKEIALKQKKFE   225
NTDB id 249 KZH43 RS10250 WP 000362880.1       LAYFDEDYLYPFLKKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKVQMEKEIALKQKKFE   225
NTDB id 208 SPD RS10925 WP 000362880.1         LAYFDEDYLYPFLKKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKVQMEKEIALKQKKFE   225
NTDB id 174 SPR RS10405 WP 000362880.1         LAYFDEDYLYPFLKKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKVQMEKEIALKQKKFE   225
NTDB id 1120047 EL079 RS07415 WP 221739197.1   FKYFKKIDFKENIVQLNFYLLFIHLLLNVSHWLSNMKNLNSFSSMIATICFLMFMSILFYLQSIREKYEKEEQIKQKERE   224
NTDB id 419 DQL23 RS10745 WP 060553298.1       FEYYKEPIYKNDLYNVNKSYIVIHILLNISHWFSENAHLNSFASMIATIGFIMFLSTLFYLKSAREQHEKAKEIQQKKEE   235
NTDB id 416 SGO RS10505 WP 012131078.1         FEYYKEPIYKNDLYNVNKSYIVIHILLNISHWFSENAHLNSFASMIATIGFIMFLSTLFYLKSAREQYEKAKEIQQKKEE   236
consensus                                      * !*********************!*****!***!****!!!!*!****!*!*******!***!*****!!*****!!**!

logo
NTDB id 486 SM12261 RS09375 WP 020902616.1     QKHLQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGDLQEIDRVYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSL   305
NTDB id 514 SMSK321 RS10615 WP 001048129.1     QKHLQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRVYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSL   305
NTDB id 138 SP RS11430 WP 000364845.1          QKHLQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRIYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSL   305
NTDB id 249 KZH43 RS10250 WP 000362880.1       QKHLQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRIYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSL   305
NTDB id 208 SPD RS10925 WP 000362880.1         QKHLQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRIYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSL   305
NTDB id 174 SPR RS10405 WP 000362880.1         QKHLQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRIYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSL   305
NTDB id 1120047 EL079 RS07415 WP 221739197.1   QLQLQKYTDEIVSLYNEIRGFRHDYGGMLASFQSAIHTGDIKEVERIYQEVLVNANLQLRSDKYTYFDLNNVGDSALRSV   304
NTDB id 419 DQL23 RS10745 WP 060553298.1       QRQLQLYTDEIVGLYNEIRGFRHDYAGMLISLQTGINSGDMKEVERIFHNVLSQANISLRSDDYTFFELNNVQDTALRSV   315
NTDB id 416 SGO RS10505 WP 012131078.1         QRQLQLYTDEIVGLYNEIRGFRHDYAGMLTSLQTGINSGDMKEVERIFHNVLSQANISLRSDDYTFFELNNVQDTALRSV   316
consensus                                      !**!!*!!!!!!*!!!!!!!!!!!!!*!!!*!*!**!**!***!**!****!!**!!**!!!!*!!*!*!!!**!*!!!!*
```

```
logo

NTDB id 486 SM12261 RS09375 WP 020902616.1      VAQSIVYARNNGVEFTLEVKDKITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMT   385
NTDB id 514 SMSK321 RS10615 WP 001048129.1      VAQSIVYARNNGVEFTLEVKDIITRLPIDLLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMT   385
NTDB id 138 SP RS11430 WP 000364845.1           VAQSIVYARNNGVEFTLEVKDTITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMT   385
NTDB id 249 KZH43 RS10250 WP 000362880.1        VAQSIVYARNNGVEFTLEVKDTITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMT   385
NTDB id 208 SPD RS10925 WP 000362880.1          VAQSIVYARNNGVEFTLEVKDTITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMT   385
NTDB id 174 SPR RS10405 WP 000362880.1          VAQSIVYARNNGVEFTLEVKDTITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMT   385
NTDB id 1120047 EL079 RS07415 WP 221739197.1    MTQTLFKTRDYNIELTFEVKDFVNPLPIKLLDLVRMTSVLLNNAIEGAAESYQKTMNVSLVDLDTETILVIQNSRKKRPL   384
NTDB id 419 DQL23 RS10745 WP 060553298.1        LIQTIFKARECGVEIVFEMKDVIETLPMKLLDLVRVASVLLNNAVEGAAESPSKTMNVSLVKLDKEIVFVIQNSRQSRYI   395
NTDB id 416 SGO RS10505 WP 012131078.1          LIQTIFKARECGVEIVFEMKDVIETLPMKLLDLVRVASVLLNNAVEGAAESPSKTMNVSLVKLDKEIVFVIQNSRQSRYI   396
consensus                                       **!*****!****!***!*!!  ***!!**!!!!!!**!!!!!!!*!!*!*!**!*!*!********!***!!!!!******

logo

NTDB id 486 SM12261 RS09375 WP 020902616.1      PSGDLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 514 SMSK321 RS10615 WP 001048129.1      PSGDLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 138 SP RS11430 WP 000364845.1           PSGDLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 249 KZH43 RS10250 WP 000362880.1        PSGDLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 208 SPD RS10925 WP 000362880.1          PSGDLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 174 SPR RS10405 WP 000362880.1          PSGDLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 1120047 EL079 RS07415 WP 221739197.1    DLEEIYQTDFSTKGEGRGLGLSNIKELINNYEGIILDTKIEDEYFTQVMRVRKEGL.   440
NTDB id 419 DQL23 RS10745 WP 060553298.1        NLEEIYEVGFSTKGENRGLGLNNVKEIIDKYDEVILETDIETNYFIQVVRFKRKEKI   452
NTDB id 416 SGO RS10505 WP 012131078.1          NLEEIYEVGFSTKGENRGLGLNNVKEIIDKYDEVILETDIETNYFIQVVRFKRKEKI   453
consensus                                       *********!!!!!**!!*!!*!*!!****!***!!*!**!***!*!**!******
```

X non conserved

X similar

X $\geq$ 50% conserved