```
logo
NTDB id 419 DQL23 RS10745 WP 060553298.1        MILKIIIAFFPTII....QVVSYEIFHKKIMQSKKIDIKFIGLFFSIVFGISIISSILIEIPSFGDVISSIFHYIFLFIQ   76
NTDB id 416 SGO RS10505 WP 012131078.1          MIFTIILSLFPVII....QVFSYDFFYNKINRKKKINIKLIILFWGLIMVISFLYSLFLLLPDYWKIFRDIFHYLFLLIQ   76
NTDB id 486 SM12261 RS09375 WP 020902616.1      ...MDFLAVLVVILHIFIISKSYYL.....ICKNKINIKELCFFGGYTFLVE....SVFELSFYFIYLDGL..GIEKFLF   66
NTDB id 514 SMSK321 RS10615 WP 001048129.1      ...MNLFGVGLVIVYFLIISHSYRL.....ICKGQINRKELYVFSAYILLTE....IVLDFPSYLLHLDDL..GIVKFLF   66
NTDB id 1170322 ACLV7A RS09910 WP 050242851.1   ...MNLFGFGTVIGHFLIISHSYRL.....ICKGQIKSKELYFFGLYTLLVE....AVLELSFYLLYLDEI..VIERFLF   66
NTDB id 138 SP RS11430 WP 000364845.1           ...MDLLGFGTVIVHFLIISHSYRL.....ICKGRINRKELYVFGAYTLLTE....IVLEFSFYLLYLDKI..GIERFLF   66
NTDB id 249 KZH43 RS10250 WP 000362880.1        ...MDLFGFGTVIVHFLIISHSYHF.....ICKGQINRKELFVFGAYTLLTE....IVFDFPLYIILYLDGL..GIERFLF   66
NTDB id 208 SPD RS10925 WP 000362880.1          ...MDLFGFGTVIVHFLIISHSYHF.....ICKGQINRKELFVFGAYTLLTE....IVFDFPLYIILYLDGL..GIERFLF   66
NTDB id 174 SPR RS10405 WP 000362880.1          ...MDLFGFGTVIVHFLIISHSYHF.....ICKGQINRKELFVFGAYTLLTE....IVFDFPLYIILYLDGL..GIERFLF   66
consensus                                          *********!********!! *     *****!**!****!*******    ****** ****** *   *******

logo
NTDB id 419 DQL23 RS10745 WP 060553298.1        PLIFYKYFL.KRKEYDNYLNLFLSFVIYLSVETSETFLSVIISSITGDYFVKQHYDIFYIIINLLSLFIILKVVDFFDFY   155
NTDB id 416 SGO RS10505 WP 012131078.1          PLIFYKYFLIKRKEYENYLNLFLSFVIYLSVETSETFLSVIISSITGDSFVKQHYDIFYIIINLLSLFIILKVVDFFDFY   156
NTDB id 486 SM12261 RS09375 WP 020902616.1      PLVLYSYFRF.IKKYEKYRGVFLSLLLSLLYNSTHTFLSVTLSSIIGDDTALQYHSLFFLVVVALTYVVIVTIIRYFHLE   145
NTDB id 514 SMSK321 RS10615 WP 001048129.1      PLVLYSYFRW.IKQYERDRGLFLSLLLSLLYESTHNFLSVTLSSLTGDNFVLQYYEPFFFLVTVLTYVVILKIIHYFHLD   145
NTDB id 1170322 ACLV7A RS09910 WP 050242851.1   PLGLYSYFRW.MKQYERDRGLFLSLLLSLLYESTHNFLSVTFSSITGDNFVSQYHAPFFFVVTVLTYVVVLKIIHYFHLE   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
consensus                                       !!**!*!!** *!*!******!!!****!*******!!!!**!!**!!****!** *!******!********** *!***

logo
NTDB id 419 DQL23 RS10745 WP 060553298.1        FEYYKEPIYKNDLYNVNKSYIVIHILLNISHWFSENAHLNSFASMIATIGFIMFLSTLFYLKSAREQHEKAKEIQQKKEE   235
NTDB id 416 SGO RS10505 WP 012131078.1          FEYYKEPIYKNDLYNVNKSYIVIHILLNISHWFSENAHLNSFASMIATIGFIMFLSTLFYLKSAREQYEKAKEIQQKKEE   236
NTDB id 486 SM12261 RS09375 WP 020902616.1      LNYFDKDYLYPFLKKVFFALLLLHVVSFISDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKEKMEKEIALKQKKFE   225
NTDB id 514 SMSK321 RS10615 WP 001048129.1      LNYFDKDYLYPFLTKVFFALLLLHIVSFVSDMVSTIKHLNSFGSILSSIVFISLLLTFFAMNSHKDQMEKEIALKQKKFE   225
NTDB id 1170322 ACLV7A RS09910 WP 050242851.1   LTYFDKDYLYPFLKKVFFALLLLHIVSFVSDMVSTVKHLNSFGSILSSIVFISLLLTFFAMNSHKEQMEKEIALKQKKFE   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
consensus                                       * !*********!**!*******!*****!***!***!!!!!*!****!*!!**!*!*!***!*****!!*****!!!*!

logo
NTDB id 419 DQL23 RS10745 WP 060553298.1        QRQLQLYTDEIVGLYNEIRGFRHDYAGMLISLQTGINSGDMKEVERIFHNVLSQANISLRSDDYTFFELNNVQDTALRSV   315
NTDB id 416 SGO RS10505 WP 012131078.1          QRQLQLYTDEIVGLYNEIRGFRHDYAGMLTSLQTGINSGDMKEVERIFHNVLSQANISLRSDDYTFFELNNVQDTALRSV   316
NTDB id 486 SM12261 RS09375 WP 020902616.1      QKHLQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGDLQEIDRVYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSL   305
NTDB id 514 SMSK321 RS10615 WP 001048129.1      QKHLQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGNLQEIDRVYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSL   305
NTDB id 1170322 ACLV7A RS09910 WP 050242851.1   QKHLQNYTDEIVGLYNEIRGFRHDYAGMLVSMQMAIDSGDLQEIDRVYNEVLVKANHKLRSDKYTYFDLNNIEDSALRSL   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
consensus                                       !**!!*!!!!!!!!!!!!!!!!!!!!!!!!!*!*!**!*!!***!**!****!!**!!**!!!!*!!*!*!!!!**!*!!!!*
```

```
logo
```

```
NTDB id 419 DQL23 RS10745 WP 060553298.1        LIQTIFKARECGVEIVFEMKDVIETLPMKLLDLVRVASVLLNNAVEGAAESPSKTMNVSLVKLDKEIVFVIQNSRQSRYI   395
NTDB id 416 SGO RS10505 WP 012131078.1          LIQTIFKARECGVEIVFEMKDVIETLPMKLLDLVRVASVLLNNAVEGAAESPSKTMNVSLVKLDKEIVFVIQNSRQSRYI   396
NTDB id 486 SM12261 RS09375 WP 020902616.1      VAQSIVYARNNGVEFTLEVKDKITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMT   385
NTDB id 514 SMSK321 RS10615 WP 001048129.1      VAQSIVYARNNGVEFTLEVKDIITRLPIDLLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMT   385
NTDB id 1170322 ACLV7A RS09910 WP 050242851.1  VAQSIVYARNNGVEFTLEVKDTITKLPIELLDLVRIMSVLLNNAVEGSADSYKKQMEVAVIKMETETVIVIQNSCKMTMT   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
consensus                                       **!*!**!!**!!!***!*!!*!**!!**!!!!!!**!!!!!!!!!!*!*!**!*!*!***!***!*!*!!!!!******
```

```
logo
```

```
NTDB id 419 DQL23 RS10745 WP 060553298.1        NLEEIYEVGFSTKGENRGLGLNNVKEIIDKYDEVILETDIETNYFIQVVRFKRKEKI   452
NTDB id 416 SGO RS10505 WP 012131078.1          NLEEIYEVGFSTKGENRGLGLNNVKEIIDKYDEVILETDIETNYFIQVVRFKRKEKI   453
NTDB id 486 SM12261 RS09375 WP 020902616.1      PSGDLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 514 SMSK321 RS10615 WP 001048129.1      PSGDLFALGFSTKGRNRGVGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   441
NTDB id 1170322 ACLV7A RS09910 WP 050242851.1  PSGDLFALGFSTKGRNRGIGLNNVKELLDKYNNIILETEMEGSTFRQIIRFKREFE.   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
consensus                                       ********!!!!!!*!!!*!!!!!!!**!!!***!!!!**!***!*!**!!!!***
```

X non conserved
X similar
X $\geq$ 50% conserved