```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 54 SMU RS08705 WP 002262113.1          MNEALMILSNGLLTYLTVLFLLFLFSKVSNVTLSKKELTLFS.....ISNFLIMIAVTMVNVNLFYPAEP.LYFIALSIY    74
NTDB id 541 H702 RS10470 WP 236726575.1        ..........................................................................................    0
NTDB id 543 H702 RS02375 WP 160172984.1        ..........................................................................................    0
NTDB id 1120006 EL078 RS09425 WP 231997655.1   ..........................................................................................    0
NTDB id 544 H702 RS02380 WP 039696235.1        MIEIVVFIITMLLNFVGFVIVGILFQQITKVKLTFLEWVLIIIFLQAVSFFMNPQKYSMVALVLMKDISVIFCLLSVSFH    80
consensus
```

```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 54 SMU RS08705 WP 002262113.1          LNRQNSLSLNIFYGLLPVASSDLFRRAIIFFILDG....TQGIVMGSSIITTY....MIEFAGIALSYLFLSVFNVDIGR   146
NTDB id 541 H702 RS10470 WP 236726575.1        ..........................................................................................    0
NTDB id 543 H702 RS02375 WP 160172984.1        ..........................................................MYYLVSRWLNIDISN    15
NTDB id 1120006 EL078 RS09425 WP 231997655.1   ..........................................................................................    0
NTDB id 544 H702 RS02380 WP 039696235.1        HNPKIGIRYHIFYALYPINLYMILHEVYCYIIFAIFSIQLTSLTMTSPSVGKMIGMITAVIIPPIFYYLISKWLNIDISN   160
consensus                                                                                                                  **     ****
```

```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 54 SMU RS08705 WP 002262113.1          LKDSLTKMKVKKRLIPMNITMLLYYLLIQVLYVIESYNVIP.TLKFRKFVVIVYLILFLILISFLSQYTKQKVQNEIMAQ   225
NTDB id 541 H702 RS10470 WP 236726575.1        ..........................................................MNRSYQNRLEKEIASA    16
NTDB id 543 H702 RS02375 WP 160172984.1        VSQSLKKHIEPKIFNIINILMVSYFLFMDAIAIVKPFHNAD.NDAIRGIVAFIYLILLFVFLFYLNFRHGQEQKNELLRN    94
NTDB id 1120006 EL078 RS09425 WP 231997655.1   ..........................................MNRNIYRAVIFIYFILLFIFLFYLNFRHGQEQKEELLRN    39
NTDB id 544 H702 RS02380 WP 039696235.1        VRKTLKNYLSARALRFVNVLLLLFYPGMECFGAIAPFEKMSMNRNIYRAVIFIYFILLFIFLFYLNFRHGQEQKNELLRN   240
consensus                                      *  **      *    *** ** **  *     *  *     *  * * ***** ********************!****
```

```
logo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 54 SMU RS08705 WP 002262113.1          KEAQIRNITQYSQQIESLYKDIRSFRHDYLNILTSLRLGIENKDLASIEKIYHQILEKTGHQLQDTRYNIGHLANIQNDA   305
NTDB id 541 H702 RS10470 WP 236726575.1        REQELRYLSAYSKKVEGLYEELRAFRHDYANILVSLKEGIDQDDMGLVRKIYDSVLEDSADFIRNSKFNIGRLVNIDDDA    96
NTDB id 543 H702 RS02375 WP 160172984.1        QEMELAALANYSKHVESLYEEVRSFRHDYANVLMSLKMGIDQGNLDDIKKIYDEITADSTKLVKNNKFDLTRLANITDSG   174
NTDB id 1120006 EL078 RS09425 WP 231997655.1   QEMELKALENYSKHVESLYQEVRSFRHDYANVLMSLKVGIDQGDLDNIKKIYEEITADSAKLVKNNKFDLTRLANISDSA   119
NTDB id 544 H702 RS02380 WP 039696235.1        QEMELAALENYSKHVESLYQEVRSFRHDYANILMSLKVGIDQGNLDDIKKIYDEITADSTKLVKNNKFDLTRLANITDSG   320
consensus                                      *!****** *!!***!*!! **!*!!!!!*!*!*!!*!!****** **!!!*********************!*!!****
```

```
logo
                                                                                                                                                                                                                                                                                                                                                                                                
NTDB id 54 SMU RS08705 WP 002262113.1          VKGILSAKILEAQNKKIAVNVEVSSKIQLPEMELLDFITILSILCDNAIEAAFESLNPEIQLAFFKKNGSIVFIIQNSTK   385
NTDB id 541 H702 RS10470 WP 236726575.1        IKSLLSAKFLEAEASNIEVDLEVKDKIGAPNIPLLDYIRLLAILCDNAIEAALEAKKPAITIACFYQDDDYVLIVDNTTK   176
NTDB id 543 H702 RS02375 WP 160172984.1        VKSLMSAKFLHAENQGIENSLEVSEKMGTPSIPLISYIRILSILFDNAIEGALESAEPKISVANFYQDGDFVFMIENSSK   254
NTDB id 1120006 EL078 RS09425 WP 231997655.1   VKSLMSAKFLEAENRGIEISLEVAEPMKNPAIPLISYIRILSILFDNAIEAALESENPKIAVANFYQDGDFVFIIENSTR   199
NTDB id 544 H702 RS02380 WP 039696235.1        VKSLMSAKFLQAENQGITISLEVAEEMGTPKIPLISYIRILSILFDNAIEAALESAEPRISVANFYQDDEFVFMIENSTK   400
consensus                                      *!***!!!*!*!** *!****!! **** ! **!***!**!*!!*!!!!!*!*!*  !*!**!*!******!****!***
```

```
logo
NTDB id 54 SMU RS08705 WP 002262113.1          EKQIDVSKIFKENYSTKGSNRGIGLAKVNHILEHYPKTSLQTSNHHHLFKQLLIIK........   441
NTDB id 541 H702 RS10470 WP 236726575.1        EESVPVNLIYQKDYSSKGYGRGIGLTTIHQMMRKYSNLSVQTNSKNYHFSQTIRIKNHSTKIVE   240
NTDB id 543 H702 RS02375 WP 160172984.1        EKSVDLGKIFERGYSTRGENRGLGLATLMDFQDDYENLSVETHSSDYTFTQVVRIYEGDSR...   315
NTDB id 1120006 EL078 RS09425 WP 231997655.1   EKSVDLSKIFQRGYSTKGENRGLGLATLVDFQDDYENLSVETSSLDYKFTQVVRVYEGGNG...   260
NTDB id 544 H702 RS02380 WP 039696235.1        EKSVDLGKIFERGYSTKGDNRGLGLATLMDFQDDYENLSVETRSLDYKFTQVVRIYEA......   458
consensus                                      !***** *!* **!!**!**!!*!!*********!***!**! * ** !*!*******
```

X non conserved

X similar

X $\geq$ 50% conserved