```
logo
NTDB id 259 KZH43 RS03480 WP 000491790.1        MFSKLKKTWYADDFSYFIRNFGVFTLIFSTMTLIILQVMHSSLYTSVDDKLHGLSENPQAVIQLAINRATE..EIKDLEN   78
NTDB id 218 SPD RS03780 WP 000491790.1          MFSKLKKTWYADDFSYFIRNFGVFTLIFSTMTLIILQVMHSSLYTSVDDKLHGLSENPQAVIQLAINRATE..EIKDLEN   78
NTDB id 184 SPR RS03565 WP 000491790.1          MFSKLKKTWYADDFSYFIRNFGVFTLIFSTMTLIILQVMHSSLYTSVDDKLHGLSENPQAVIQLAINRATE..EIKDLEN   78
NTDB id 148 SP RS03910 WP 000491790.1           MFSKLKKTWYADDFSYFIRNFGVFTLIFSTMTLIILQVMHSSLYTSVDDKLHGLSENPQAVIQLAINRATE..EIKDLEN   78
NTDB id 1022588 AB1395 RS05050 WP 218654370.1   MHKYIQKKIHSDNFKPFIHFMMVFTAIFFVMTIIILQIMRLGLYSSTDNSLKRARYSAASYIAMTMARNYSWSSDGDGFG   80
NTDB id 363 SMU RS05195 WP 002262215.1          MLIKLRKQKQDENISFFSHFFAVFTGIFFVMTVIIIQVMHFGIYSSVDNSLKIATENVNDYVNMTLSHNNPITEAENGDA   80
consensus                                       !*****!*********!*****!!!*!!**!!*!!*!*!****!*!*!**!*******************  *******
```

```
logo
NTDB id 259 KZH43 RS03480 WP 000491790.1        ARADASKVEIKPNVSSNTEVILFDKDFTQLLSGNRFLGLDKIKLEKKELGHIYQIQVFNSYGQEEIYRVILMETNISSVS   158
NTDB id 218 SPD RS03780 WP 000491790.1          ARADASKVEIKPNVSSNTEVILFDKDFTQLLSGNRFLGLDKIKLEKKELGHIYQIQVFNSYGQEEIYRVILMETNISSVS   158
NTDB id 184 SPR RS03565 WP 000491790.1          ARADASKVEIKPNVSSNTEVILFDKDFTQLLSGNRFLGLDKIKLEKKELGHIYQIQVFNSYGQEEIYRVILMETNISSVS   158
NTDB id 148 SP RS03910 WP 000491790.1           ARADASKVEIKPNVSSNTEVILFDKDFTQLLSGNRFLGLDKIKLEKKELGHIYQIQVFNSYGQEEIYRVILMETNISSVS   158
NTDB id 1022588 AB1395 RS05050 WP 218654370.1   ITIDPSKFKH.NDDLAVLDIIVFDRYGEVINIVDAYSEFSSIKLNKKQLNRIVKETHINIYGHAENYRSVTLEVTD.LAY   158
NTDB id 363 SMU RS05195 WP 002262215.1          SF....KVKSNGQMAANTDTILYDKKHNVINNVNAFSSLYHIRPKLKDIGDIVEQEAKNIYGQTEKYRTVTVKVNN.DFY   155
consensus                                       ******!*************!**!*****************!****!****!******!*!!**!*!!************
```

```
logo
NTDB id 259 KZH43 RS03480 WP 000491790.1        TNIKYAAVLINTSQLEQASQKHEQLIVVVMASFWILSLLASLYLARVSVRPLLESMQKQQSFVENASHELRTPLAVLQNR   238
NTDB id 218 SPD RS03780 WP 000491790.1          TNIKYAAVLINTSQLEQASQKHEQLIVVVMASFWILSLLASLYLARVSVRPLLESMQKQQSFVENASHELRTPLAVLQNR   238
NTDB id 184 SPR RS03565 WP 000491790.1          TNIKYAAVLINTSQLEQASQKHEQLIVVVMASFWILSLLASLYLARVSVRPLLESMQKQQSFVENASHELRTPLAVLQNR   238
NTDB id 148 SP RS03910 WP 000491790.1           TNIKYAAVLINTSQLEQASQKHEQLIVVVMASFWILSLLASLYLARVSVRPLLESMQKQQSFVENASHELRTPLAVLQNR   238
NTDB id 1022588 AB1395 RS05050 WP 218654370.1   PQVKYISFLASTRQLDEAFDRYVNVIISIMIIFWLISVITSVYLAKWSRKPIIASYEKQKSFVENASHELRTPLAVLQNR   238
NTDB id 363 SMU RS05195 WP 002262215.1          PQIKFATIVINTTQLEEANTRYVTIIISVMIVFWLISVIASVYLAKWSQKPILENYEKQKSFVENASHELRTPLAVLQNR   235
consensus                                       ***!*******!*!!**!*******!***!**!!**!***!*!!!**!**!******!!*!!!!!!!!!!!!!!!!!!!!
```

```
logo
NTDB id 259 KZH43 RS03480 WP 000491790.1        LETLFRKPEATIMDVSESIASSLEEVRNMRFLTTSLLNLARRDDGIKPELAEVPTSFFNTTFTNYEMIASENNRVFRFEN   318
NTDB id 218 SPD RS03780 WP 000491790.1          LETLFRKPEATIMDVSESIASSLEEVRNMRFLTTSLLNLARRDDGIKPELAEVPTSFFNTTFTNYEMIASENNRVFRFEN   318
NTDB id 184 SPR RS03565 WP 000491790.1          LETLFRKPEATIMDVSESIASSLEEVRNMRFLTTSLLNLARRDDGIKPELAEVPTSFFNTTFTNYEMIASENNRVFRFEN   318
NTDB id 148 SP RS03910 WP 000491790.1           LETLFRKPEATIMDVSESIASSLEEVRNMRFLTTSLLNLARRDDGIKPELAEVPTSFFNTTFTNYEMIASENNRVFRFEN   318
NTDB id 1022588 AB1395 RS05050 WP 218654370.1   LETLFRKPNDTILEHSESIAASLDEVRNMRMLTTNLLNLARRDDGIDPNIEDISPTFFDDVFKNYQLIAQENDKELMVLN   318
NTDB id 363 SMU RS05195 WP 002262215.1          LESLFRKPEATILDSSESIASSLEEVRNMRMLTANLLNLARRDDGIKPEITEIQPRFFDDTFKNYEMIARENGKKLHIIN   315
consensus                                       !!*!!!!!**!!***!!!!!*!!*!!!!!!*!!**!!!!!!!!!!!!*!********!!***!*!!**!!*!!*******!
```

```
logo
NTDB id 259 KZH43 RS03480 WP 000491790.1        RIHRTIVTDQLLLKQLMTILFDNAVKYTEEDGEIDFLISATDRNLYLLVSDNGIGISTEDKKKIFDRFYRVDKARTRQKG   398
NTDB id 218 SPD RS03780 WP 000491790.1          RIHRTIVTDQLLLKQLMTILFDNAVKYTEEDGEIDFLISATDRNLYLLVSDNGIGISTEDKKKIFDRFYRVDKARTRQKG   398
NTDB id 184 SPR RS03565 WP 000491790.1          RIHRTIVTDQLLLKQLMTILFDNAVKYTEEDGEIDFLISATDRNLYLLVSDNGIGISTEDKKKIFDRFYRVDKARTRQKG   398
NTDB id 148 SP RS03910 WP 000491790.1           RIHRTIVTDQLLLKQLMTILFDNAVKYTEEDGEIDFLISATDRNLYLLVSDNGIGISTEDKKKIFDRFYRVDKARTRQKG   398
NTDB id 1022588 AB1395 RS05050 WP 218654370.1   HLKRPIKSDKTLIKQLMTILVDNALKYTKKQGIISISVETKGRRLWLRVSDNGLGISDDDKSKIFDRFYRVDKARTRQSG   398
NTDB id 363 SMU RS05195 WP 002262215.1          KVNRQIKTDKTLLKQLMTILFDNAVKYTDNDGEIWLDVKTTDRSLIFSVADNGQGISDEDKKKIFDRFYRVDKARTRQKG   395
consensus                                       ***!*!**!**!*!!!!!!!*!!!*!!!***!*!********!*!***!*!!!*!!!!**!!*!!!!!!!!!!!!!!!!!
```

```
logo
```

```
NTDB id 259 KZH43 RS03480 WP 000491790.1        GFGLGLSLAKQIVDALKGTVTVKDNKPKGTIFEVKIAIQTPSKKKK   444
NTDB id 218 SPD RS03780 WP 000491790.1          GFGLGLSLAKQIVDALKGTVTVKDNKPKGTIFEVKIAIQTPSKKKK   444
NTDB id 184 SPR RS03565 WP 000491790.1          GFGLGLSLAKQIVDALKGTVTVKDNKPKGTIFEVKIAIQTPSKKKK   444
NTDB id 148 SP RS03910 WP 000491790.1           GFGLGLSLAKQIVDALKGTVTVKDNKPKGTIFEVKIAIQTPSKKKK   444
NTDB id 1022588 AB1395 RS05050 WP 218654370.1   GFGLGLSLAKQIVDTLGGEITVKDNTPQGTIFDVFL..........   434
NTDB id 363 SMU RS05195 WP 002262215.1          GFGLGLSLAKQITDSLKGSIIVKDKKPQGVMFEARLLANK......   435
consensus                                       !!!!!!!!!!!!*!*!*!***!!!**!*!**!**************
```

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