

|                |       |         |                |        |                                                                                      |      |      |    |
|----------------|-------|---------|----------------|--------|--------------------------------------------------------------------------------------|------|------|----|
| NTDB id 259    | KZH43 | RS03480 | WP 000491790.1 | ....   | MFSKLLKKTWYADDFSYFIRNFGVFTLIFSTMTLIIQLQVMHSSLYTSVDDKLHGLSENPPQAVIQLAINRATEEI         | .... | K... | 74 |
| NTDB id 218    | SPD   | RS03780 | WP 000491790.1 | ....   | MFSKLLKKTWYADDFSYFIRNFGVFTLIFSTMTLIIQLQVMHSSLYTSVDDKLHGLSENPPQAVIQLAINRATEEI         | .... | K... | 74 |
| NTDB id 184    | SPR   | RS03565 | WP 000491790.1 | ....   | MFSKLLKKTWYADDFSYFIRNFGVFTLIFSTMTLIIQLQVMHSSLYTSVDDKLHGLSENPPQAVIQLAINRATEEI         | .... | K... | 74 |
| NTDB id 148    | SP    | RS03910 | WP 000491790.1 | ....   | MFSKLLKKTWYADDFSYFIRNFGVFTLIFSTMTLIIQLQVMHSSLYTSVDDKLHGLSENPPQAVIQLAINRATEEI         | .... | K... | 74 |
| NTDB id 178196 | NX99  | RS01155 | WP 073687949.1 | MLTKFF | FNFLFRRIKSDGFKSFIHFFATFSGIFLIMTVMIQLILSYGVYSNVDSLLKMAATKTNSYLEMEMLKRELFITSEVDQMN     |      |      | 85 |
| NTDB id 363    | SMU   | RS05195 | WP 002262215.1 | ...    | MLIKLRKQKQDENISFFSHFVAVFTGIFFFVMTVITIQVMHFGIYSSVDNLSLKIAITENVNDYVNMTLSSHNNPITEAENG.. |      |      | 79 |
| consensus      |       |         |                |        | *****                                                                                |      | *    |    |

|                                            |                    |                                                                    |     |
|--------------------------------------------|--------------------|--------------------------------------------------------------------|-----|
| NTDB id 259 KZH43 RS03480 WP 000491790.1   | .....DL.....       | ENARADASKVEIKPNVSSNTEVILFDKDFTQLLSGNRFLGLDKIKLEKKELGHIYQIQV        | 135 |
| NTDB id 218 SPD RS03780 WP 000491790.1     | .....DL.....       | ENARADASKVEIKPNVSSNTEVILFDKDFTQLLSGNRFLGLDKIKLEKKELGHIYQIQV        | 135 |
| NTDB id 184 SPR RS03565 WP 000491790.1     | .....DL.....       | ENARADASKVEIKPNVSSNTEVILFDKDFTQLLSGNRFLGLDKIKLEKKELGHIYQIQV        | 135 |
| NTDB id 148 SP RS03910 WP 000491790.1      | .....DL.....       | ENARADASKVEIKPNVSSNTEVILFDKDFTQLLSGNRFLGLDKIKLEKKELGHIYQIQV        | 135 |
| NTDB id 178196 NX99 RS01155 WP 073687949.1 | TTTIYQAYDTKESTAETP | DSSGSKNEPKKMSKIEDAPHDLSVAANTSVLVLDPKNGKVLNVVDFSSLSNLPIDKNNIDVLSKGS | 170 |
| NTDB id 363 SMU RS05195 WP 002262215.1     | .....A.....        | SFKVKSNGQMAANTDTILYDKKHNVINNVNAFSSLYHIRPKLKDIGDIVQEA               | 133 |
| consensus                                  | .....*             | *****                                                              |     |

|                |       |         |                |                    |                                                                        |                                                         |          |     |
|----------------|-------|---------|----------------|--------------------|------------------------------------------------------------------------|---------------------------------------------------------|----------|-----|
| NTDB id 259    | KZH43 | RS03480 | WP 000491790.1 | FNSYGQEEIYRVILMETN | NISSVSTNIKYAAVLINTS                                                    | QLEQASQKHEQLIVVVMASFWILSLLASLYLARVSVRPLLES              | MQKQKQSF | 220 |
| NTDB id 218    | SPD   | RS03780 | WP 000491790.1 | FNSYGQEEIYRVILMETN | NISSVSTNIKYAAVLINTS                                                    | QLEQASQKHEQLIVVVMASFWILSLLASLYLARVSVRPLLES              | MQKQKQSF | 220 |
| NTDB id 184    | SPR   | RS03565 | WP 000491790.1 | FNSYGQEEIYRVILMETN | NISSVSTNIKYAAVLINTS                                                    | QLEQASQKHEQLIVVVMASFWILSLLASLYLARVSVRPLLES              | MQKQKQSF | 220 |
| NTDB id 148    | SP    | RS03910 | WP 000491790.1 | FNSYGQEEIYRVILMETN | NISSVSTNIKYAAVLINTS                                                    | QLEQASQKHEQLIVVVMASFWILSLLASLYLARVSVRPLLES              | MQKQKQSF | 220 |
| NTDB id 178196 | NX99  | RS01155 | WP 073687949.1 | QNYFDQTEKYRLITEKVD | NSIYPDAKYLVI                                                           | IAINTTQLEAEATERYVKLVIMMSFFWLLSVAASMYLAKWSRRPTQESLEKQKAF | 254      |     |
| NTDB id 363    | SMU   | RS05195 | WP 002262215.1 | KNIYGGTEKYRTVTVKVN | N.NDFYPPQIKFATIVINTTQLEAEANTRYVTTIISVMIVFWLISVIASVYLAKWSQKPILENYEKQKSF | 217                                                     |          |     |
| consensus      |       |         |                | *****              |                                                                        |                                                         |          |     |

|           |        |       |         |    |             |                                                                                         |     |
|-----------|--------|-------|---------|----|-------------|-----------------------------------------------------------------------------------------|-----|
| NTDB id   | 259    | KZH43 | RS03480 | WP | 000491790.1 | VENASHELRTPLAVLQNRLETFLRKPEATIMDVSESIASSLEEVRNMRFLLTSSLNLARRDDGIKPELAEVPTSFNNTTFTNYEM   | 305 |
| NTDB id   | 218    | SPD   | RS03780 | WP | 000491790.1 | VENASHELRTPLAVLQNRLETFLRKPEATIMDVSESIASSLEEVRNMRFLLTSSLNLARRDDGIKPELEVPTSFFNNTFTNYEM    | 305 |
| NTDB id   | 184    | SPR   | RS03565 | WP | 000491790.1 | VENASHELRTPLAVLQNRLETFLRKPEATIMDVSESIASSLEEVRNMRFLLTSSLNLARRDDGIKPELAEVPTSFNNTTFTNYEM   | 305 |
| NTDB id   | 148    | SP    | RS03910 | WP | 000491790.1 | VENASHELRTPLAVLQNRLETFLRKPEATIMDVSESIASSLEEVRNMRFLLTSSLNLARRDDGIKPELAEVPTSFNNTTFTNYEM   | 305 |
| NTDB id   | 178196 | NX99  | RS01155 | WP | 073687949.1 | VENASHELRTPLAVIQNRLEVLFRKPESTILDNSENIASSLDIEVRNMRLLTINLLNLARRDDGIKPEITETLEPAFFDTVFTNYAM | 339 |
| NTDB id   | 363    | SMU   | RS05195 | WP | 002262215.1 | VENASHELRTPLAVLQNRLESFLRKPEATILDSSESIASSLEEVRNMRLMTANLLNLARRDDGIKPEITELIQRFFDTFKNYEM    | 302 |
| consensus |        |       |         |    |             | !!...!!..!..*.*.....*..*.....*.....*.....*.....*.....*.....*.....*.....*.....*.....*    |     |

|                |       |         |                |                                                                                                                                                                                                        |     |
|----------------|-------|---------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| NTDB id 259    | KZH43 | RS03480 | WP 000491790.1 | IASENRRVFRFENRIHRTIVTDQLLKQLMTILFDNAVKYTEEDGEIDFLISATDRNLYLLVSDNGIGISTEDKKKIFDRFYRVD                                                                                                                   | 390 |
| NTDB id 218    | SPD   | RS03780 | WP 000491790.1 | IASENRRVFRFENRIHRTIVTDQLLKQLMTILFDNAVKYTEEDGEIDFLISATDRNLYLLVSDNGIGISTEDKKKIFDRFYRVD                                                                                                                   | 390 |
| NTDB id 184    | SPR   | RS03565 | WP 000491790.1 | IASENRRVFRFENRIHRTIVTDQLLKQLMTILFDNAVKYTEEDGEIDFLISATDRNLYLLVSDNGIGISTEDKKKIFDRFYRVD                                                                                                                   | 390 |
| NTDB id 148    | SP    | RS03910 | WP 000491790.1 | IASENRRVFRFENRIHRTIVTDQLLKQLMTILFDNAVKYTEEDGEIDFLISATDRNLYLLVSDNGIGISTEDKKKIFDRFYRVD                                                                                                                   | 390 |
| NTDB id 178196 | NX99  | RS01155 | WP 073687949.1 | IAEENEKGF <del>TA</del> Q <del>N</del> QVGRPIQTDKTL <del>L</del> KQLMTILFDNAIKYTEDDGHV <del>T</del> FT <del>T</del> VRTNDRHLY <del>T</del> CVADNGPGISD <del>S</del> DKKKIFDRFYRVD                      | 424 |
| NTDB id 363    | SMU   | RS05195 | WP 002262215.1 | IARENGK <del>K</del> L <del>H</del> II <del>N</del> KVNRQIKTDKTL <del>L</del> KQLMTILFDNAVKYTDNDGEIWL <del>D</del> VKT <del>T</del> DRSL <del>F</del> VD <del>N</del> QGISD <del>E</del> DKKKIFDRFYRVD | 387 |
| consensus      |       |         |                | IASENRRVFRFENRIHRTIVTDQLLKQLMTILFDNAVKYTEEDGEIDFLISATDRNLYLLVSDNGIGISTEDKKKIFDRFYRVD                                                                                                                   |     |

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NTDB id 259 KZH43 RS03480 WP 000491790.1  
NTDB id 218 SPD RS03780 WP 000491790.1  
NTDB id 184 SPR RS03565 WP 000491790.1  
NTDB id 148 SP RS03910 WP 000491790.1  
NTDB id 178196 NX99 RS01155 WP 073687949.1  
NTDB id 363 SMU RS05195 WP 002262215.1  
consensus



 non conserved  
 similar  
 ≥ 50% conserved