

|                  |    |       |                                |                                                                                           |    |
|------------------|----|-------|--------------------------------|-------------------------------------------------------------------------------------------|----|
| NTDB             | id | 617   | LCA RS06480 WP 011375001.1     | .MSTEEKLTTLLKHCAKQRVQDLYFTPTIGGWRLTERRQSGLVTNQELDKPTGTRYLNRLKYMAGMDISETRRAQTGRSELQLAD     | 84 |
| NTDB             | id | 586   | KW2 RS10855 WP 011836048.1     | ..MVQKKKAQELIQKAIEMEASDIYLIASGNLYKIYIRQQLGRTLTEEVNQEIGLALLTHFKFLAGMNITGERRRVQLCACWVELEG   | 83 |
| NTDB             | id | 584   | DLJ51 RS00890 WP 019777327.1   | MVEVQELGKLELRQAVEEQAQDIYLPLPKPAVKYIYLRFGEKRHLIQCIPPEQAAGLISHFKFVLAMNVGEKRRSQLGCAYAFAD     | 85 |
| NTDB             | id | 385   | SMU RS09035 WP 002263435.1     | ..MVQKLGRKIIAEAVQNKAQDIYIIPKKESYELYMRIGNERRFDIDVDHFFMANLISHFKFVAGMNVGEKRRSQLGSCDSYDE      | 83 |
| NTDB             | id | 394   | FSA28 RS09405 WP 002291652.1   | ..MVQKLGRKIIAEAVQNKAQDIYIIPKKESYELYMRIGNERRFDIDVDHFFMANLISHFKFVAGMNVGEKRRSQLGSCDSYSYE     | 83 |
| NTDB             | id | 429   | SGO RS09420 WP 012130942.1     | ..MVQKIAQAIVRQAKEECAQDIYFVPKDDCYELVMRIGDERRFIQTYYDFDQLAAVISHFVKFLAGMNVGEKRRSQLGSCDYRYDD   | 83 |
| NTDB             | id | 500   | SM12261 RS00945 WP 000249545.1 | ..MVQEIAQEIIIRSARKKGAQDIYFVPKLDAYELHMVRVGDERCKIGGYDFEKFKAAVISHFVKFVAGMNVGEKRRSQLGSCDYEYDQ | 83 |
| NTDB             | id | 98854 | R8568 RS09765 WP 000249567.1   | ..MVQEIAQEIIIRSARKKGTDIYFVFPKLDAYELHMVRVGDERCKIGSYDFEFKFAAVISHFVKFVAGMNVGEKRRSQLGSCDYAYDQ | 83 |
| NTDB             | id | 270   | KZH43 RS09265 WP 000249564.1   | ..MVQEIAQEIIIRSARKKGTDIYFVFPKLDAYELHMVRVGDERCKIGSYDFEKFAAVISHFVKFVAGMNVGEKRRSQLGSCDYAYDH  | 83 |
| NTDB             | id | 229   | SPD RS09895 WP 000249564.1     | ..MVQEIAQEIIIRSARKKGTDIYFVFPKLDAYELHMVRVGDERCKIGSYDFEFKFAAVISHFVKFVAGMNVGEKRRSQLGSCDYAYDH | 83 |
| NTDB             | id | 195   | SPR RS09430 WP 000249564.1     | ..MVQEIAQEIIIRSARKKGTDIYFVFPKLDAYELHMVRVGDERCKIGSYDFEFKFAAVISHFVKFVAGMNVGEKRRSQLGSCDYAYDH | 83 |
| NTDB             | id | 160   | SP RS10380 WP 000249564.1      | ..MVQEIAQEIIIRSARKKGTDIYFVFPKLDAYELHMVRVGDERCKIGSYDFEFKFAAVISHFVKFVAGMNVGEKRRSQLGSCDYAYDH | 83 |
| <b>consensus</b> |    |       |                                |                                                                                           |    |
|                  |    |       |                                | * * * * *                                                                                 |    |

[illegible]

|      |    |       |         |         |    |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |
|------|----|-------|---------|---------|----|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|-----|-----|
| NTDB | id | 617   | LCA     | RS06480 | WP | 011375001.1 | P | T | E | I | V | A | P | E | F | L | Q | L | V | N | D | N   | A | G | L | S | Y | A | E | L | L | K | I | S | L | R | L | R | P | D | T | L | I | I | G | E | I | R | D | L | E | T | A | Q | Y | V | V | S | A | A | L | S | G | H | L | V | L | S | T | I | H | A | R | S | T | Q | G | V | A | R | L | L | D | L | G | T | S | E   | L   | 253 |
| NTDB | id | 586   | KW2     | RS10855 | WP | 011836048.1 | P | V | E | L | I | D | S | D | F | I | Q | L | V | N | D | V   | I | G | N | S | Y | D | E | L | I | K | L | S | L | R | H | R | P | D | L | L | I | V | G | E | I | R | D | Q | T | A | R | A | V | I | R | A | S | L | T | G | Y | T | V | F | S | T | I | H | A | S | V | K | G | V | V | Q | R | L | L | E | L | C | L | S | D | W   | 250 |     |
| NTDB | id | 584   | DLJ51   | RS00890 | WP | 019777327.1 | P | V | E | I | K | Q | D | N | M | L | Q | L | Q | L | N | P   | S | I | G | M | T | Y | D | N | L | I | K | L | S | L | R | H | R | P | D | V | L | I | I | G | E | I | R | D | E | T | A | Q | A | V | I | R | A | S | L | T | G | I | R | V | F | S | T | I | H | A | S | I | P | G | V | Y | A | R | L | E | L | G | V | S | D | 254 |     |     |
| NTDB | id | 385   | SMU     | RS09035 | WP | 002263435.1 | P | V | E | I | K | Q | D | N | M | L | Q | L | Q | L | N | E   | S | I | G | M | T | Y | D | N | L | I | K | L | S | L | R | H | R | P | D | L | I | I | G | E | I | R | D | K | E | T | A | R | A | V | I | R | A | S | L | T | G | A | M | V | F | S | T | I | H | A | S | I | P | G | V | Y | A | R | M | L | E | L | C | T | S | S   | E   | 252 |
| NTDB | id | 394   | FSA2    | RS09405 | WP | 002291652.1 | P | V | E | I | K | Q | D | N | M | L | Q | L | Q | L | N | E   | S | I | G | M | T | Y | D | N | L | I | K | L | S | L | R | H | R | P | D | L | I | I | G | E | I | R | D | K | E | T | A | R | A | V | I | R | A | S | L | T | G | A | M | V | F | S | T | I | H | A | S | I | P | G | V | Y | A | R | M | L | E | L | C | T | S | S   | E   | 252 |
| NTDB | id | 429   | SG0     | RS09420 | WP | 012130942.1 | P | V | E | I | K | Q | D | N | M | L | Q | L | Q | L | N | E   | T | I | G | L | T | Y | E | S | L | I | K | L | S | L | R | H | R | P | D | L | L | I | I | G | E | I | R | D | S | E | T | A | R | A | V | R | A | S | L | T | G | A | T | V | F | S | T | I | H | A | S | I | P | G | V | Y | E | R | L | L | E | L | G | V | S | E   | 251 |     |
| NTDB | id | 500   | SM12261 | RS00945 | WP | 000249545.1 | P | V | E | I | K | Q | D | N | M | L | Q | L | Q | L | N | E   | A | I | G | L | T | Y | E | N | L | I | K | L | S | L | R | H | R | P | D | L | L | I | I | G | E | I | R | D | S | E | T | A | R | A | V | R | A | S | L | T | G | A | T | V | F | S | T | I | H | A | S | I | P | G | V | Y | E | R | L | L | E | L | G | V | S | E   | 251 |     |
| NTDB | id | 98854 | R8568   | RS09765 | WP | 000249567.1 | P | V | E | I | K | Q | D | D | M | L | Q | L | Q | L | N | E   | A | I | G | L | T | Y | E | N | L | I | K | L | S | L | R | H | R | P | D | L | L | I | I | G | E | I | R | D | S | E | T | A | R | A | V | R | A | S | L | T | G | A | T | V | F | S | T | I | H | A | S | I | P | G | V | Y | E | R | L | L | E | L | G | V | S | E   | 251 |     |
| NTDB | id | 270   | KZH43   | RS09265 | WP | 000249564.1 | P | V | E | I | K | Q | D | D | M | L | Q | L | Q | L | N | E</ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |     |     |     |

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|                                            |                                                                              |     |
|--------------------------------------------|------------------------------------------------------------------------------|-----|
| NTDB id 617 LCA RS06480 WP 011375001.1     | ELRACLTGIAYQSLVTKDDVVQAH...YELLTGSDYFSKKE.....GGCDV.....                     | 296 |
| NTDB id 586 KW2 RS10855 WP 011836048.1     | ELKNGLEAVVYQRLIAGKGVLDIAKSKFDTWSPKKWNEKIENLYANGHLTATEAEREKISINQASKIDTTDGESFE | 326 |
| NTDB id 584 DLJ51 RS00890 WP 019777327.1   | ELDNCLAGIAYQRLIGGGGLIDFAQDHFQNHQAECWNEKIDQLLAAGHLTEEEAAAEEKIKD.....          | 315 |
| NTDB id 385 SMU RS09035 WP 002263435.1     | ELQNALRGIVYQRLIGGGGIIDFAKGDYQNHSAKKWNKQIYDLFTAGYITEGEAQAEIEIED.....          | 313 |
| NTDB id 394 FSA28 RS09405 WP 002291652.1   | ELQNALCGIVYQRLIGGGGIIDFAKGDYQNHSAKKWNKQIYDLFTAGYITEGEAQAEIEIED.....          | 313 |
| NTDB id 429 SGO RS09420 WP 012130942.1     | ELKIVLQGGICYQRLIGGGGVIDFASDNYQEHEPTVWNQQIDQLLAAGHIHPEQAEAEKIRNQQAKTSY.....   | 319 |
| NTDB id 500 SM12261 RS00945 WP 000249545.1 | ELAVVLQGVCYQRLIGGGGIVDFANKDYQEHSSTSWNAQIDQLLKDGHITSLQAETEKISYS.....          | 313 |
| NTDB id 98854 R8568 RS09765 WP 000249567.1 | ELAVVLQGVCYQRLIGGGGIVDFANRDYQEHAQAKWNEQIDQLLKDGHITSLQAETEKISYS.....          | 313 |
| NTDB id 270 KZH43 RS09265 WP 000249564.1   | ELAVVLQGVCYQRLIGGGGIVDFASRDYQEHAQAKWNEQIDQLLKDGHITSLQAETEKISYS.....          | 313 |
| NTDB id 229 SPD RS09895 WP 000249564.1     | ELAVVLQGVCYQRLIGGGGIVDFASRDYQEHAQAKWNEQIDQLLKDGHITSLQAETEKISYS.....          | 313 |
| NTDB id 195 SPR RS09430 WP 000249564.1     | ELAVVLQGVCYQRLIGGGGIVDFASRDYQEHAQAKWNEQIDQLLKDGHITSLQAETEKISYS.....          | 313 |
| NTDB id 160 SP RS10380 WP 000249564.1      | ELAVVLQGVCYQRLIGGGGIVDFASRDYQEHAQAKWNEQIDQLLKDGHITSLQAETEKISYS.....          | 313 |
| consensus                                  | *! **!*****!!******* ** ** ** **                                             |     |

- ⓧ non conserved
- ✖ similar
- ⓧ ≥ 50% conserved