

|                  |                                      |              |                                                                              |                     |                                        |
|------------------|--------------------------------------|--------------|------------------------------------------------------------------------------|---------------------|----------------------------------------|
| NTDB id          | 602 KW2 RS03060 WP 011834647.1       | .....MGYLVP  | TPTVIEQSSRGERAYDIYSRLKDRIIIMLTGPVEDGMANSIIAQLFLDQAQN                         | TKDIYLYVNTPGGSVSAG  | 75                                     |
| NTDB id          | 611 V4T04 RS07970 WP 003129593.1     | .....MGYLVP  | TPTVIEQSSRGERAYDIYSRLKDRIIIMLTGPVEDGMANSIIAQLFLDQAQN                         | TKDIYLYVNTPGGSVSAG  | 75                                     |
| NTDB id          | 330 STU RS11365 WP 002949732.1       | .....MIPVV   | IETSRGERSYDIYSRLKDRIIIMLTGPIEDNMANSIIAQLFLDQAQN                              | TKDIYLYVNTPGGSVSAG  | 72                                     |
| NTDB id          | 298 STER RS01925 WP 002949732.1      | .....MIPVV   | IETSRGERSYDIYSRLKDRIIIMLTGPIEDNMANSIIAQLFLDQAQN                              | TKDIYLYVNTPGGSVSAG  | 72                                     |
| NTDB id          | 282 KZH43 RS03215 WP 000613477.1     | .....MIPVV   | IETSRGERSYDIYSRLKDRIIIMLTGPVEDNMANSVIAQLFLDAQDS                              | TKDIYLYVNTPGGSVSAG  | 72                                     |
| NTDB id          | 246 SPD RS03495 WP 000613477.1       | .....MIPVV   | IETSRGERSYDIYSRLKDRIIIMLTGPVEDNMANSVIAQLFLDAQDS                              | TKDIYLYVNTPGGSVSAG  | 72                                     |
| NTDB id          | 244 SPR RS03300 WP 000613477.1       | .....MIPVV   | IETSRGERSYDIYSRLKDRIIIMLTGPVEDNMANSVIAQLFLDAQDS                              | TKDIYLYVNTPGGSVSAG  | 72                                     |
| NTDB id          | 242 SP RS03655 WP 000613477.1        | .....MIPVV   | IETSRGERSYDIYSRLKDRIIIMLTGPVEDNMANSVIAQLFLDAQDS                              | TKDIYLYVNTPGGSVSAG  | 72                                     |
| NTDB id          | 446 SpyM6JRS4 RS01695 WP 002985850.1 | .....MIPVV   | IETSRGERSYDIYSRLKDRIIIMLTGPVEDNMANSVIAQLFLDQAQN                              | TKDIYLYVNTPGGSVSAG  | 72                                     |
| NTDB id          | 445 SPYM3 RS01720 WP 002985850.1     | .....MIPVV   | IETSRGERSYDIYSRLKDRIIIMLTGPVEDNMANSVIAQLFLDQAQN                              | TKDIYLYVNTPGGSVSAG  | 72                                     |
| NTDB id          | 376 SMU RS07595 WP 255262720.1       | MELKEKYS     | MIPVV IETSRGERSYDIYSRLKDRIIIMLTGPVEDNMANSIIAQLFLDQAQN                        | TKDIYLY INSPGGSVSAG | 80                                     |
| NTDB id          | 1223 Cj0192c YP 002343650.1          | .....MFIP    | VYVEIKSSRGERSYDIYSRLKDRIIIMLSGEIHDELAASIVAQLLFLAEADP                         | TKDIYLY INSPGGVITSG | 73                                     |
| NTDB id          | 370023 BLCSL RS19195 WP 003185550.1  | .....MNLIPT  | PVIEQTNRGERAYDIYSRLKDRIIIMLGSAIDNVANISIVSQLLFLEADEDPEKDISTIYN                | INSPGG SITAG        | 74                                     |
| NTDB id          | 86 BSU 34540 NP 391334.1             | .....MNL IPT | PVIEQTN RGERAYDIYSRLKDRIIIMLGSA IDN NV AN IS IV SQ LL FL AE AD PE KE IS LY N | INSPGG SITAG        | 74                                     |
| <b>consensus</b> |                                      |              |                                                                              |                     |                                        |
|                  |                                      |              |                                                                              |                     | **!*!*****!!**!!!!!!!******!*?***!!**! |

[illegible]

|           |        |           |         |             |                                                 |                                                     |     |
|-----------|--------|-----------|---------|-------------|-------------------------------------------------|-----------------------------------------------------|-----|
| NTDB id   | 602    | KW2       | RS03060 | WP          | 011834647.1                                     | ILADNSNRSLQIHKDAERDHWMDAKETLEYGFIDEIMENNSLK..       | 199 |
| NTDB id   | 611    | V4T04     | RS07970 | WP          | 003129593.1                                     | ILADNSNRSLQIHKDAERDHWMDAKETLEYGFIDEIMENNSLK..       | 199 |
| NTDB id   | 330    | STU       | RS11365 | WP          | 002949732.1                                     | ILADNSGQPPIEKVHVDAERDNWMSAQETLEYGFIDEIMTNQLK..      | 196 |
| NTDB id   | 298    | STER      | RS01925 | WP          | 002949732.1                                     | ILADNSGQPPIEKVHVDAERDNWMSAQETLEYGFIDEIMTNQLK..      | 196 |
| NTDB id   | 282    | KZH43     | RS03215 | WP          | 000613477.1                                     | ILAENSQGSMSEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN..     | 196 |
| NTDB id   | 246    | SPD       | RS03495 | WP          | 000613477.1                                     | ILAENSQGSMSEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN..     | 196 |
| NTDB id   | 244    | SPR       | RS03300 | WP          | 000613477.1                                     | ILAENSQGSMSEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN..     | 196 |
| NTDB id   | 242    | SP        | RS03655 | WP          | 000613477.1                                     | ILAENSQGSMSEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN..     | 196 |
| NTDB id   | 446    | SpyM6JRS4 | RS01695 | WP          | 002985850.1                                     | ILAAQNAGKTIKQIHKAERDYWMSAEETLAYGFIDEIMENNELK..      | 196 |
| NTDB id   | 445    | SPYM3     | RS01720 | WP          | 002985850.1                                     | ILAAQNAGKTIKQIHKAERDYWMSAEETLAYGFIDEIMENNELK..      | 196 |
| NTDB id   | 376    | SMU       | RS07595 | WP          | 255262720.1                                     | ILSDNSGKTIKQIHKAERDYWMDAKETLKYGFIDEIMENNELK..       | 204 |
| NTDB id   | 1223   | Cj0192c   | YP      | 002343650.1 | ILAKNTIKKKVAIAKDTERDFFMASQAQEAKEYGLIDKVLKSFK... | 194                                                 |     |
| NTDB id   | 370023 | BLC SL    | RS19195 | WP          | 003185550.1                                     | ILAERTGGPLEVIERDTDRDNFKTAEEAKEYGLIDKVLTRNIDAQK      | 198 |
| NTDB id   | 86     | BSU       | 34540   | NP          | 391334.1                                        | VLAERTGGPLEVIERDTDRDNFKSAEEALEYGLIDKILTHTEDKK.      | 197 |
| consensus |        |           |         |             |                                                 | *!*****!*****!*!!*!!*!!*!!*!!*!!*!!*!!*!!*!!*!!*!!* |     |

 non conserved  
 similar  
  $\geq 50\%$  conserved