

|           |         |           |         |             |             |                                        |                                         |                                 |          |
|-----------|---------|-----------|---------|-------------|-------------|----------------------------------------|-----------------------------------------|---------------------------------|----------|
| NTDB id   | 602     | KW2       | RS03060 | WP          | 011834647.1 | .....MGYL                              | VPTVIEQSSRGERAYDIYSRLKDRIIMLTGPVEDGMANS | IAQLFLDQAQDNTKDIYLYVNTPGGSVSAG  | 75       |
| NTDB id   | 611     | V4T04     | RS07970 | WP          | 003129593.1 | .....MGYL                              | VPTVIEQSSRGERAYDIYSRLKDRIIMLTGPVEDGMANS | IAQLFLDQAQDNTKDIYLYVNTPGGSVSAG  | 75       |
| NTDB id   | 330     | STU       | RS11365 | WP          | 002949732.1 | .....MIP                               | VVIEQTSGERSYDIYSRLKDRIIMLTGPIEDNMANS    | IAQLFLDQAQDNTKDIYLYVNTPGGSVSAG  | 72       |
| NTDB id   | 298     | STER      | RS01925 | WP          | 002949732.1 | .....MIP                               | VVIEQTSGERSYDIYSRLKDRIIMLTGPIEDNMANS    | IAQLFLDQAQDNTKDIYLYVNTPGGSVSAG  | 72       |
| NTDB id   | 282     | KZH43     | RS03215 | WP          | 000613477.1 | .....MIP                               | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANS    | VIAQLFLDAQDS TKDIYLYVNTPGGSVSAG | 72       |
| NTDB id   | 246     | SPD       | RS03495 | WP          | 000613477.1 | .....MIP                               | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANS    | VIAQLFLDAQDS TKDIYLYVNTPGGSVSAG | 72       |
| NTDB id   | 244     | SPR       | RS03300 | WP          | 000613477.1 | .....MIP                               | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANS    | VIAQLFLDAQDS TKDIYLYVNTPGGSVSAG | 72       |
| NTDB id   | 242     | SP        | RS03655 | WP          | 000613477.1 | .....MIP                               | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANS    | VIAQLFLDAQDS TKDIYLYVNTPGGSVSAG | 72       |
| NTDB id   | 1114218 | B6D67     | RS01845 | WP          | 002985850.1 | .....MIP                               | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANS    | VIAQLFLDQAQDNTKDIYLYVNTPGGSVSAG | 72       |
| NTDB id   | 446     | SpyM6JRS4 | RS01695 | WP          | 002985850.1 | .....MIP                               | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANS    | VIAQLFLDQAQDNTKDIYLYVNTPGGSVSAG | 72       |
| NTDB id   | 445     | SPYM3     | RS01720 | WP          | 002985850.1 | .....MIP                               | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANS    | VIAQLFLDQAQDNTKDIYLYVNTPGGSVSAG | 72       |
| NTDB id   | 376     | SMU       | RS07595 | WP          | 255262720.1 | MELKEKYS                               | MIPVVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANS | IAQLFLDQAQDNTKDIYLYINSPGGSVSAG  | 80       |
| NTDB id   | 1223    | Cj0192c   | YP      | 002343650.1 | .....MF     | IPYVIEKSSRGRSYDIYSRLKDRIIMLSGEIHDELAAS | IVAQLFLAEADPTKDIYLYINSPGGVITSG          | 73                              |          |
| NTDB id   | 86      | BSU       | 34540   | NP          | 391334.1    | .....MNL                               | IPTVIEQTNRGERAYDIYSRLKDRIIMLGSAIDDNVANS | IVSQLLFLAAEDPEKEISLYINSPGGSITAG | 74       |
| consensus |         |           |         |             |             |                                        | **!*!*                                  | *****!                          | *!*****! |

[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                                   | ILAENSQGSMSEKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.       | 196 |
| NTDB id   | 246     | SPD       | RS03495 | WP          | 000613477.1                                   | ILAENSQGSMSEKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.       | 196 |
| NTDB id   | 244     | SPR       | RS03300 | WP          | 000613477.1                                   | ILAENSQGSMSEKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.       | 196 |
| NTDB id   | 242     | SP        | RS03655 | WP          | 000613477.1                                   | ILAENSQGSMSEKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.       | 196 |
| NTDB id   | 1114218 | B6D67     | RS01845 | WP          | 002985850.1                                   | ILAAQNAGKTIKQIHKKDAERDYWMSAEETLAYGFIDEIMENNELK.       | 196 |
| NTDB id   | 446     | SpyM6JRS4 | RS01695 | WP          | 002985850.1                                   | ILAAQNAGKTIKQIHKKDAERDYWMSAEETLAYGFIDEIMENNELK.       | 196 |
| NTDB id   | 445     | SPYM3     | RS01720 | WP          | 002985850.1                                   | ILAAQNAGKTIKQIHKKDAERDYWMSAEETLAYGFIDEIMENNELK.       | 196 |
| NTDB id   | 376     | SMU       | RS07595 | WP          | 255262720.1                                   | ILSDNSGKTIKQIHKKDAERDYWMDAKETLKYGFIDEIMENNELK.        | 204 |
| NTDB id   | 1223    | Cj0192c   | YP      | 002343650.1 | ILAKNTKKQKVAKIAKDTERDFFMSAQEAKHEYGLIDKVLKSFK. | 194                                                   |     |
| NTDB id   | 86      | BSU       | 34540   | NP          | 391334.1                                      | VLAERTGGPLEVIERDTDRDNFKAEEALEYGLIDKILTHTEDKK          | 197 |
| consensus |         |           |         |             |                                               | *!***** * * * ! * * * ! * * * ! * * * ! * * * ! * * * |     |

 non conserved  
 similar  
  $\geq 50\%$  conserved