

|           |         |           |         |             |             |                                                                           |                                                                                    |    |
|-----------|---------|-----------|---------|-------------|-------------|---------------------------------------------------------------------------|------------------------------------------------------------------------------------|----|
| NTDB id   | 602     | KW2       | RS03060 | WP          | 011834647.1 | .....MGYL                                                                 | VPTVIEQSSRGERAYDIYSRLKDRIIMLTGPVEDGMANSIIAQLFLDQAQDNTKDIYLYVNTPGGSVSAG             | 75 |
| NTDB id   | 611     | V4T04     | RS07970 | WP          | 003129593.1 | .....MGYL                                                                 | VPTVIEQSSRGERAYDIYSRLKDRIIMLTGPVEDGMANSIIAQLFLDQAQDNTKDIYLYVNTPGGSVSAG             | 75 |
| NTDB id   | 330     | STU       | RS11365 | WP          | 002949732.1 | .....MIP                                                                  | VVIEQTSGERSYDIYSRLKDRIIMLTGPIEDNMANSIIAQLFLDQAQDNTKDIYLYVNTPGGSVSAG                | 72 |
| NTDB id   | 298     | STER      | RS01925 | WP          | 002949732.1 | .....MIP                                                                  | VVIEQTSGERSYDIYSRLKDRIIMLTGPIEDNMANSIIAQLFLDQAQDNTKDIYLYVNTPGGSVSAG                | 72 |
| NTDB id   | 282     | KZH43     | RS03215 | WP          | 000613477.1 | .....MIP                                                                  | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDAQDS TKDIYLYVNTPGGSVSAG                | 72 |
| NTDB id   | 246     | SPD       | RS03495 | WP          | 000613477.1 | .....MIP                                                                  | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDAQDS TKDIYLYVNTPGGSVSAG                | 72 |
| NTDB id   | 244     | SPR       | RS03300 | WP          | 000613477.1 | .....MIP                                                                  | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDAQDS TKDIYLYVNTPGGSVSAG                | 72 |
| NTDB id   | 242     | SP        | RS03655 | WP          | 000613477.1 | .....MIP                                                                  | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDAQDS TKDIYLYVNTPGGSVSAG                | 72 |
| NTDB id   | 446     | SpyM6JRS4 | RS01695 | WP          | 002985850.1 | .....MIP                                                                  | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDQAQDNTKDIYLYVNTPGGSVSAG                | 72 |
| NTDB id   | 445     | SPYM3     | RS01720 | WP          | 002985850.1 | .....MIP                                                                  | VVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSVIAQLFLDQAQDNTKDIYLYVNTPGGSVSAG                | 72 |
| NTDB id   | 1137876 | DQM59     | RS02655 | WP          | 255262943.1 | MELKEKYS                                                                  | MIPVVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSIIAQLFLDQAQDNTKDIYLYINS PGGSVSAG            | 80 |
| NTDB id   | 376     | SMU       | RS07595 | WP          | 255262720.1 | MELKEKYS                                                                  | MIPVVIEQTSGERSYDIYSRLKDRIIMLTGPVEDNMANSIIAQLFLDQAQDNTKDIYLYINS PGGSVSAG            | 80 |
| NTDB id   | 1223    | Cj0192c   | YP      | 002343650.1 | .....MF     | IPIPVIEKSSRGERSYDIYSRLKDRIIMLSGETIHDELAASIV AQLLFLAEADPTKDIYLYINS PGGVITS | 73                                                                                 |    |
| NTDB id   | 86      | BSU       | 34540   | NP          | 391334.1    | .....MNL                                                                  | IPTVIEQTNRGERAYDIYSRLKDRIIMLGSAIDDNVANSI VSQLFLAAEDPEK EISLYINS PGGSITAG           | 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       | ILADNSGQPIEKVHVDAERDNWMSAQETLEYGFIDEIMTNNQLK.   | 196 |
| NTDB id 298 STER RS01925 WP 002949732.1      | ILADNSGQPIEKVHVDAERDNWMSAQETLEYGFIDEIMTNNQLK.   | 196 |
| NTDB id 282 KZH43 RS03215 WP 000613477.1     | ILAENSQGSMKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.   | 196 |
| NTDB id 246 SPD RS03495 WP 000613477.1       | ILAENSQGSMKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.   | 196 |
| NTDB id 244 SPR RS03300 WP 000613477.1       | ILAENSQGSMKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.   | 196 |
| NTDB id 242 SP RS03655 WP 000613477.1        | ILAENSQGSMKVVHADAERDNWMSAQETLEYGFIDEIMANNSLN.   | 196 |
| NTDB id 446 SpyM6JRS4 RS01695 WP 002985850.1 | ILAQNAGKTIKQIHKDAERDYWMSAEETLAYGFIDEIMENNELK.   | 196 |
| NTDB id 445 SPYM3 RS01720 WP 002985850.1     | ILAQNAGKTIKQIHKDAERDYWMSAEETLAYGFIDEIMENNELK.   | 196 |
| NTDB id 1137876 DQM59 RS02655 WP 255262943.1 | ILSDNSGKTVKQIHKDAERDYWMDAKETLKYGFIIDEIMENNELK.  | 204 |
| NTDB id 376 SMU RS07595 WP 255262720.1       | ILSDNSGKTIKQIHKDAERDYWMDAKETLKYGFIIDEIMENNELK.  | 204 |
| NTDB id 1223 Cj0192c YP 002343650.1          | ILAKNTKQKVAKIAKDTERDFFMSAQEAKLEYGLIDKVLKFSFK.   | 194 |
| NTDB id 86 BSU 34540 NP 391334.1             | VLAERTGQPLEVIERDTRDNFKSAEEALEYGLIDKILTHTEDKK    | 197 |
| consensus                                    | *!***** ** *!*****! ****! !*****! !*!***** ** * |     |

 non conserved  
 similar  
  $\geq 50\%$  conserved