

[illegible]

|           |        |           |         |             |                                                                                      |                                                                                    |                         |                            |                                    |                            |     |
|-----------|--------|-----------|---------|-------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------|----------------------------|------------------------------------|----------------------------|-----|
| NTDB id   | 602    | KW2       | RS03060 | WP          | 011834647.1                                                                          | LAIVDTMNFIKS                                                                       | DVQTI VMGMAASMGTTIASSGT | TGKGRFMLPNAEYL             | LHQP MGGAAG                        | QGQTQQTDMAIVA EQLLKTRKRLEQ | 155 |
| NTDB id   | 611    | V4T04     | RS07970 | WP          | 003129593.1                                                                          | LAIVDTMNFIKS                                                                       | DVQTI VMGMAASMGTTIASSGT | TGKGRFMLPNAEYL             | LHQP MGGTGG                        | QGQTQQTDMAIVA EQLLKTRKRLEQ | 155 |
| NTDB id   | 330    | STU       | RS11365 | WP          | 002949732.1                                                                          | LAIVDTMNFIKS                                                                       | DVQTI VMGMAASMGTTIASSGT | TGKGRFMLPNAEYMIHQPMGGTGGGT | QGQTQQTDMAIAAAEHLLKTRNNLEQ         | 152                        |     |
| NTDB id   | 298    | STER      | RS01925 | WP          | 002949732.1                                                                          | LAIVDTMNFIKS                                                                       | DVQTI VMGMAASMGTTIASSGT | TGKGRFMLPNAEYMIHQPMGGTGGGT | QGQTQQTDMAIAAAEHLLKTRNNLEQ         | 152                        |     |
| NTDB id   | 282    | KZH43     | RS03215 | WP          | 000613477.1                                                                          | LAIVDTMNFIKA                                                                       | DVQTI VMGMAASMGTVIASSG  | AKGGRFMLPNAEYMIHQPMGGTGGGT | QGQTDMAIAAAEHLLKTRNTLEK            | 152                        |     |
| NTDB id   | 246    | SPD       | RS03495 | WP          | 000613477.1                                                                          | LAIVDTMNFIKA                                                                       | DVQTI VMGMAASMGTVIASSG  | AKGGRFMLPNAEYMIHQPMGGTGGGT | QGQTDMAIAAAEHLLKTRNTLEK            | 152                        |     |
| NTDB id   | 244    | SPR       | RS03300 | WP          | 000613477.1                                                                          | LAIVDTMNFIKA                                                                       | DVQTI VMGMAASMGTVIASSG  | AKGGRFMLPNAEYMIHQPMGGTGGGT | QGQTDMAIAAAEHLLKTRNTLEK            | 152                        |     |
| NTDB id   | 242    | SP        | RS03655 | WP          | 000613477.1                                                                          | LAIVDTMNFIKA                                                                       | DVQTI VMGMAASMGTVIASSG  | AKGGRFMLPNAEYMIHQPMGGTGGGT | QGQTDMAIAAAEHLLKTRNTLEK            | 152                        |     |
| NTDB id   | 446    | SpyM6JRS4 | RS01695 | WP          | 002985850.1                                                                          | LAIVDTMNFIKA                                                                       | DVQTI VMGMAASMGTVIASSG  | TGKGRFMLPNAEYMIHQPMGGTGGGT | QGQTDMAIAAAEHLLKTRHRLEK            | 152                        |     |
| NTDB id   | 445    | SPYM3     | RS01720 | WP          | 002985850.1                                                                          | LAIVDTMNFIKA                                                                       | DVQTI VMGMAASMGTVIASSG  | TGKGRFMLPNAEYMIHQPMGGTGGGT | QGQTDMAIAAAEHLLKTRHRLEK            | 152                        |     |
| NTDB id   | 376    | SMU       | RS07595 | WP          | 255262720.1                                                                          | LAIVDTMNFIKS                                                                       | DVQTI VMGTAASMGTTIASSG  | AKGGRFMLPNAEYL             | LHQP MGGTGGGTQQSDMAIAAEQLLKTRKKLEK | 160                        |     |
| NTDB id   | 423227 | G4D59     | RS16025 | WP          | 007500118.1                                                                          | MAIYDTMQFIKPKVSTICIGMAASMGAFLLAAGEKGKRYALPNSEVMIHQPLGGAAGG..QATEIEIAAKRIILSLRDKLNQ | 152                     |                            |                                    |                            |     |
| NTDB id   | 86     | BSU       | 34540   | NP          | 391334.1                                                                             | MAIYDTMQFIKPKVSTICIGMAASMGAFLLAAGEKGKRYALPNSEVMIHQPLGGAAGG..QATEIEIAAKRIILLRDKLNK  | 152                     |                            |                                    |                            |     |
| NTDB id   | 1223   | Cj0192c   | YP      | 002343650.1 | FSAIYDTMNYIKPFDVCTICIGQAASMGAFILLSCGAEGKRFALPNSRIMIHQPLGLGAR.G.QATDIEIQAKEILRLKITLND | 151                                                                                |                         |                            |                                    |                            |     |
| consensus |        |           |         |             |                                                                                      | **!*!!!!**!!                                                                       | *!*****!                | *****!                     | *****!                             | *****!                     | *** |

|                                              |             |                  |                      |     |
|----------------------------------------------|-------------|------------------|----------------------|-----|
| NTDB id 602 KW2 RS03060 WP 011834647.1       | ILADNSNRSL  | EQIHKDAERDHWMDAK | ETLEYGFIDEIMENNSLK.. | 199 |
| NTDB id 611 V4T04 RS07970 WP 003129593.1     | ILADNSNRSL  | EQIHKDAERDHWMDAK | ETLEYGFIDEIMENNSLK.. | 199 |
| NTDB id 330 STU RS11365 WP 002949732.1       | ILADNSGQPI  | EKVHVDAERDNWMSAQ | ETLEYGFIDEIMTNNQLK.. | 196 |
| NTDB id 298 STER RS01925 WP 002949732.1      | ILADNSGQPI  | EKVHVDAERDNWMSAQ | ETLEYGFIDEIMTNNQLK.. | 196 |
| NTDB id 282 KZH43 RS03215 WP 000613477.1     | ILAE NSGQSM | EKVHADAERDNWMSAQ | ETLEYGFIDEIMANNSLN.. | 196 |
| NTDB id 246 SPD RS03495 WP 000613477.1       | ILAE NSGQSM | EKVHADAERDNWMSAQ | ETLEYGFIDEIMANNSLN.. | 196 |
| NTDB id 244 SPR RS03300 WP 000613477.1       | ILAE NSGQSM | EKVHADAERDNWMSAQ | ETLEYGFIDEIMANNSLN.. | 196 |
| NTDB id 242 SP RS03655 WP 000613477.1        | ILAE NSGQSM | EKVHADAERDNWMSAQ | ETLEYGFIDEIMANNSLN.. | 196 |
| NTDB id 446 SpyM6JRS4 RS01695 WP 002985850.1 | ILAAQNAKGT  | IKIHKDAERDYWMSAE | ETLAYGFIDEIMENNELK.. | 196 |
| NTDB id 445 SPYM3 RS01720 WP 002985850.1     | ILAAQNAKGT  | IKIHKDAERDYWMSAE | ETLAYGFIDEIMENNELK.. | 196 |
| NTDB id 376 SMU RS07595 WP 255262720.1       | ILSDNSGKTI  | IKIHKDAERDYWMDAK | ETLKYGFIDEIMENNELK.. | 204 |
| NTDB id 423227 G4D59 RS16025 WP 007500118.1  | VLAERTGQPI  | EVIERDTRDRNFKTAE | EALQYGLIDKVLTRNTEEQK | 198 |
| NTDB id 86 BSU 34540 NP 391334.1             | VLAERTGQPI  | EVIERDTRDRNFKSAE | EALQYGLIDKILTHTEDKK. | 197 |
| NTDB id 1223 Cj0192c YP 002343650.1          | ILAKNTIKQKV | IAKDTERDFFMSAQE  | AKYGLIDKVLKSF..      | 194 |
| consensus                                    | *****       | *****            | *****                |     |

 non conserved  
 similar  
  $\geq 50\%$  conserved