

[illegible]

|           |       |           |         |             |               |                    |                     |                            |                   |                            |                    |                     |             |       |       |
|-----------|-------|-----------|---------|-------------|---------------|--------------------|---------------------|----------------------------|-------------------|----------------------------|--------------------|---------------------|-------------|-------|-------|
| NTDB id   | 602   | KW2       | RS03060 | WP          | 011834647.1   | LAIVDTMNFIKS       | DVQTI               | VMGMAASMG                  | TIASSGT           | KGKRFMLPNAEYL              | LHQPMGGAGQG        | TQQTDMAI            | VAEQLLKTRKR | LEQ   | 155   |
| NTDB id   | 611   | V4T04     | RS07970 | WP          | 003129593.1   | LAIVDTMNFIKS       | DVQTI               | VMGMAASMG                  | TIASSGT           | KGKRFMLPNAEYL              | LHQPMGGTGQG        | TQQTDMAI            | VAEQLLKTRKR | LEQ   | 155   |
| NTDB id   | 282   | KZH43     | RS03215 | WP          | 000613477.1   | LAIVDTMNFKA        | DVQTI               | VMGMAASMG                  | VIASSG            | AKGKRFMLPNAEYMIHQP         | MGGTGGGT           | TQQTDMAIAAEHLLKTRNT | LEK         | 152   |       |
| NTDB id   | 246   | SPZ       | RS03495 | WP          | 000613477.1   | LAIVDTMNFIKA       | DVQTI               | VMGMAASMG                  | VIASSG            | AKGKRFMLPNAEYMIHQP         | MGGTGGGT           | TQQTDMAIAAEHLLKTRNT | LEK         | 152   |       |
| NTDB id   | 244   | SPR       | RS03300 | WP          | 000613477.1   | LAIVDTMNFKA        | DVQTI               | VMGMAASMG                  | VIASSG            | AKGKRFMLPNAEYMIHQP         | MGGTGGGT           | TQQTDMAIAAEHLLKTRNT | LEK         | 152   |       |
| NTDB id   | 242   | SP        | RS03655 | WP          | 000613477.1   | LAIVDTMNFKA        | DVQTI               | VMGMAASMG                  | VIASSG            | AKGKRFMLPNAEYMIHQP         | MGGTGGGT           | TQQTDMAIAAEHLLKTRNT | LEK         | 152   |       |
| NTDB id   | 330   | STU       | RS11365 | WP          | 002949732.1   | LAIVDTMNFIKS       | DVQTI               | VMGMAASMG                  | TIASSGT           | KGKRFMLPNAEYMIHQP          | MGGTGGGT           | TQQTDMAIAAEHLLKTRNN | LEQ         | 152   |       |
| NTDB id   | 298   | STER      | RS01925 | WP          | 002949732.1   | LAIVDTMNFIKS       | DVQTI               | VMGMAASMG                  | TIASSGT           | KGKRFMLPNAEYMIHQP          | MGGTGGGT           | TQQTDMAIAAEHLLKTRNN | LEQ         | 152   |       |
| NTDB id   | 446   | SpyM6JRS4 | RS01695 | WP          | 002985850.1   | LAIVDTMNFKA        | DVQTI               | VMGMAASMG                  | VIASSG            | AKGKRFMLPNAEYMIHQP         | MGGTGGGT           | TQQTDMAIAAEHLLKTRHR | LEK         | 152   |       |
| NTDB id   | 445   | SPYM3     | RS01720 | WP          | 002985850.1   | LAIVDTMNFKA        | DVQTI               | VMGMAASMG                  | VIASSG            | AKGKRFMLPNAEYMIHQP         | MGGTGGGT           | TQQTDMAIAAEHLLKTRHR | LEK         | 152   |       |
| NTDB id   | 376   | SMU       | RS07595 | WP          | 255262720.1   | LAIVDTMNFIKS       | DVQTI               | VMGTAASMG                  | TIASSG            | AKGKRFMLPNAEYLIHQPMGGTGGGT | QQSDMAIAAEQLLKTRKK | LEK                 | 160         |       |       |
| NTDB id   | 84987 | RC47      | RS07175 | WP          | 002806309.1   | FSIIYDTMNYIKP      | DVCTICIGQAASMGAFLL  | LSCGAEGKRFALPN             | SRIMIHQPLGGARG..  | QATDIEIQAKEILRLK           | ITILND             | 151                 |             |       |       |
| NTDB id   | 1223  | Cj0192c   | YP      | 002343650.1 | FSIIYDTMNYIKP | DVCTICIGQAASMGAFLL | LSCGAEGKRFALPN      | SRIMIHQPLGGARG..           | QATDIEIQAKEILRLK  | ITILND                     | 151                |                     |             |       |       |
| NTDB id   | 86    | BSU       | 34540   | NP          | 391334.1      | MAIYDTMQFIKPVS     | TJCIGMAASMGAFLLAAGE | EKGKRYALPNSEVMIHQPLGGAQG.. | QATEIEIAAKRIILLRD | KLNK                       | 152                |                     |             |       |       |
| consensus |       |           |         |             |               | **!*!*             | !!**!               | *!*                        | !!**!             | !!**!                      | !!**!              | !!**!               | !!**!       | !!**! | !!**! |

|                                              |                                                |     |
|----------------------------------------------|------------------------------------------------|-----|
| NTDB id 602 KW2 RS03060 WP 011834647.1       | ILADNSNRSLQIHKDAERDHWMDAKETLEYGFIDEIMENNSLK.   | 199 |
| NTDB id 611 V4T04 RS07970 WP 003129593.1     | ILADNSNRSLQIHKDAERDHWMDAKETLEYGFIDEIMENNSLK.   | 199 |
| NTDB id 282 KZH43 RS03215 WP 000613477.1     | ILAENSGQSMEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN.  | 196 |
| NTDB id 246 SPD RS03495 WP 000613477.1       | ILAENSGQSMEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN.  | 196 |
| NTDB id 244 SPR RS03300 WP 000613477.1       | ILAENSGQSMEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN.  | 196 |
| NTDB id 242 SP RS03655 WP 000613477.1        | ILAENSGQSMEKVHADAERDNWMSAQETLEYGFIDEIMANNSLN.  | 196 |
| NTDB id 330 STU RS11365 WP 002949732.1       | ILADNSGQPTEKVVHVAERDNWMSAQETLEYGFIDEIMTNQLK.   | 196 |
| NTDB id 298 STER RS01925 WP 002949732.1      | ILADNSGQPTEKVVHVAERDNWMSAQETLEYGFIDEIMTNQLK.   | 196 |
| NTDB id 446 SpyM6JRS4 RS01695 WP 002985850.1 | ILAAQNAGKTIKKIHKAERDYWMSAEBETLAYGFIDEIMENNELK. | 196 |
| NTDB id 445 SPYM3 RS01720 WP 002985850.1     | ILAAQNAGKTIKKIHKAERDYWMSAEBETLAYGFIDEIMENNELK. | 196 |
| NTDB id 376 SMU RS07595 WP 255262720.1       | ILSDNSGKTIKKIHKAERDYWMDAKETLKYGFIDEIMENNELK.   | 204 |
| NTDB id 84987 RC47 RS07175 WP 002806309.1    | ILAKNTKQKVKAKIAKDTERDFFMSAQEAKEYGLIDKVLKSFK..  | 194 |
| NTDB id 1223 Cj0192c YP 002343650.1          | ILAKNTKQKVKAKIAKDTERDFFMSAQEAKEYGLIDKVLKSFK..  | 194 |
| NTDB id 86 BSU 34540 NP 391334.1             | VLAERTGGPLEVIERDTDRDNFKAEEALEYGLIDKILTHTEDKK   | 197 |
| consensus                                    | *!*****!!**!* **!* **!* **!* **!* **!          |     |

 non conserved  
 similar  
  $\geq 50\%$  conserved