

|                                             |                           |                                                           |    |
|---------------------------------------------|---------------------------|-----------------------------------------------------------|----|
| NTDB id 587 KW2 RS10850 WP 042211510.1      | .....MQT                  | DILRLLRPKGKKLALIKQAKLIQLMGNLLNNGFNLGEVINFLALSKLVEKEFVFKM  | 59 |
| NTDB id 166334 AVT04 RS05760 WP 148148900.1 | MPEKISKTIIRLPTGISSWKVWLNK | DVSLRGISKGKKLKIQQQVKVIQLFKQLLKAGFTLTETIIVAFLESHLLKEASLSLM | 80 |
| NTDB id 395 FSA28 RS09400 WP 257638827.1    | .....MTFLQQ               | DISLKEKHKQKKLKIKQKQKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKM  | 62 |
| NTDB id 386 SMU RS09030 WP 255262721.1      | .....MTFLQQ               | DISLKEKHKQKKLKIKQKQKVIQLFNNLFTSGFNLTEIIDFLERSHLLAEIYTKKM  | 62 |
| NTDB id 430 SGO RS09415 WP 012130941.1      | .....MISFLQQ              | DISILSKQKQKKLGTSKQKQVIELFNNLFSSGFHLAETVDFLGRSALLEKNYVQQM  | 63 |
| NTDB id 271 KZH43 RS09260 WP 074196785.1    | .....                     | MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM | 57 |
| NTDB id 230 SPD RS09890 WP 074196785.1      | .....                     | MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM | 57 |
| NTDB id 196 SPR RS09425 WP 074196785.1      | .....                     | MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM | 57 |
| NTDB id 161 SP RS10375 WP 074196785.1       | .....                     | MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM | 57 |
| NTDB id 529 SMSK321 RS09235 WP 080550783.1  | .....                     | MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM | 57 |
| NTDB id 501 SM12261 RS00950 WP 004238896.1  | .....                     | MDISQVFRLRRKKLATAKQKNIITLFNNLFSSGFHLVETISFLDRSALLDKQCVTQM | 57 |
| consensus                                   |                           | *!!!!!!!!!!!!!!*****!*****!*****!*****!*****!*****!*****! |    |

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|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----|
| NTDB id 587 KW2 RS10850 WP 042211510.1      | HQGLSSGKSLSEILSLSFSKNVVTQLALVEVHGNLVGTMLQVELHLKKQLKVKKKLIEVATYPVVLLVFLIGIMWGLKN                                                         | 139 |
| NTDB id 166334 AVT04 RS05760 WP 148148900.1 | KESLIRGDRLDQMLALVGFSDNIVTQISLADKHGNLLGSLTKIETYMLRMTKVRKKLMEVATYPIILLGFLILIMLGLKN                                                        | 160 |
| NTDB id 395 FSA28 RS09400 WP 257638827.1    | RQGLLNGLHLAEISMSSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNLLILVKKKLVEVITYPIILLIFLVVIMLGLKN                                                       | 142 |
| NTDB id 386 SMU RS09030 WP 255262721.1      | RQGLLNGLHLAEISMSSLGFSDDVVTQLALSEVHGNTQKSLLKIESYLNLLILVKKKLVEVITYPIILLIFLVVIMLGLKN                                                       | 142 |
| NTDB id 430 SGO RS09415 WP 012130941.1      | RQGLANGQAFFEIMASLGFSDAVVTQLSLAELHGNLSALLKIEEYLDNLAKVKKKLIEVATYPMMLLGFVLIMIGLRN                                                          | 143 |
| NTDB id 271 KZH43 RS09260 WP 074196785.1    | RVGLSQGKSFSEMMESSLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRN                                                       | 137 |
| NTDB id 230 SPD RS09890 WP 074196785.1      | RVGLSQGKSFSEMMESSLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRN                                                       | 137 |
| NTDB id 196 SPR RS09425 WP 074196785.1      | RVGLSQGKSFSEMMESSLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRN                                                       | 137 |
| NTDB id 161 SP RS10375 WP 074196785.1       | RVGLSQGKSFSEMMESSLGCSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRN                                                       | 137 |
| NTDB id 529 SMSK321 RS09235 WP 080550783.1  | RTDLSQKGKSFSEMESSLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLSIMLGLRN                                                       | 137 |
| NTDB id 501 SM12261 RS00950 WP 004238896.1  | RAGLSQGKSFSEMESSLGFSSAIVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLIEVATYPLILLGFLLLIMLGLRN                                                        | 137 |
| consensus                                   | * * ! * * ! * * * * * * * * * * ! * * * ! ! * * ! * * ! ! ! * * * * * * ! * * * * * * * ! * ! ! * ! * ! ! ! * * ! ! * ! ! * ! ! * ! ! * |     |

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|-----------|-------------------------------------|-------------------------------------------------------------------------------------|------------|------------------------------------------------------------------|--------|
| NTDB id   | 587 KW2 RS10850 WP 042211510.1      | YLLPQLDKG...N                                                                       | FATL       | LINHLPLVFFSVGALIVLLTSLSIIIFKHISALTNFITFLVKVPLVSSFIRLYLTAYFSREWGW | 216    |
| NTDB id   | 166334 AVT04 RS05760 WP 148148900.1 | YLLPQLEGGDGKNNWAVQLVQIFPQLFFVSICGLLVLGILILYLWVKRQSALVFYRRMAKIPFIGQTVRLYTTAYYAREWG   |            |                                                                  | 240    |
| NTDB id   | 395 FSA28 RS09400 WP 257638827.1    | YLLPQLEK....GNFATRLISNFPILFLLGCCFFILLVGIFTTFFSRKISRHLHIGFCSHLPFGVKYLLQLYLTAYYAREWG  |            |                                                                  | 218    |
| NTDB id   | 386 SMU RS09030 WP 255262721.1      | YLLPQLER....GNFATRLISNFPILFLLGCCFFILLVGIFTTFFSRKISRHLHIGFCSHLPFGAKYLLQLYLTAYYAREWG  |            |                                                                  | 218    |
| NTDB id   | 430 SGO RS09415 WP 012130941.1      | YLLPQLSS....QNFAATQLIGHLPTIFLLTLVLMLGLTGAIYLVFKGQRIPVYSFLARLPFGSFRVIYLTAYYAREWG     |            |                                                                  | 219    |
| NTDB id   | 271 KZH43 RS09260 WP 074196785.1    | YLLPQLDS....SNFIATQIIGNLPQIFLGMVGLVSVLALLALTIFYKRSSKMMSVFSILARLPFIGIFVQTYLTAYYAREWG |            |                                                                  | 213    |
| NTDB id   | 230 SPD RS09890 WP 074196785.1      | YLLPQLDS....SNFIATQIIGNLPQIFLGMVGLVSVLALLALTIFYKRSSKMMSVFSILARLPFIGIFVQTYLTAYYAREWG |            |                                                                  | 213    |
| NTDB id   | 196 SPR RS09425 WP 074196785.1      | YLLPQLDS....SNFIATQIIGNLPQIFLGMVGLVSVLALLALTIFYKRSSKMMSVFSILARLPFIGIFVQTYLTAYYAREWG |            |                                                                  | 213    |
| NTDB id   | 161 SP RS10375 WP 074196785.1       | YLLPQLDS....SNFIATQIIGNLPQIFLGMVGLVSVLALLALTIFYKRSSKMMSVFSILARLPFIGIFVQTYLTAYYAREWG |            |                                                                  | 213    |
| NTDB id   | 529 SMSK321 RS09235 WP 080550783.1  | YLLPQLDS....SNFIATQIIGNLPQIFLGMVGLVSLTLLALTIFYKRSSKMRSVFSILARIPLGFIFVQTYLTAYYAREWG  |            |                                                                  | 213    |
| NTDB id   | 501 SM12261 RS00950 WP 004238896.1  | YLLPQLDS....SNFIATQIIGNLPQIFLGMVGVFSVGVLLALTIFYKRSSKMRSVFSILARIPLGFIFVQTYLTAYYAREWG |            |                                                                  | 213    |
| consensus |                                     | !!!!!!*                                                                             | *!*!*****! | *!!!!!!!!*                                                       | *****! |

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☒ non conserved  
☒ similar  
☒ ≥ 50% conserved