

|           |       |                                |                                                                                                                                                                           |    |
|-----------|-------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| NTDB id   | 587   | KW2 RS10850 WP 042211510.1     | . . . . M Q T D I L R L L R P K G K K L A L I K Q A K L I Q L M G N L L N N G F N L G E V I N F L A S K L V E K E H V F K M H Q G L S S G K S L S E I L E S I S F S K N   | 81 |
| NTDB id   | 395   | FSA28 RS09400 WP 257638827.1   | . M T F L Q Q D I S L K E K H K Q K K L K I K K Q R K V I Q L F N N L F T S G F N L T E I I D F L E R S H L L A E I Y T K K M R Q G L L N G L H L A E I M S S L G F S D D | 84 |
| NTDB id   | 386   | SMU RS09030 WP 255262721.1     | . M T F L Q Q D I S L K E K H K Q K K L K I K K Q R K V I Q L F N N L F T S G F N L T E I I D F L E R S H L L A E I Y T K K M R Q G L L N G L H L A E I M S S L G F S D D | 84 |
| NTDB id   | 430   | SGO RS09415 WP 012130941.1     | M I S F L Q Q D I S I L S K Q K Q K K L G T S K Q K Q V I E L F N N L F S S G F H L A E T V D F L G R S A L L E K N Y V Q Q M R Q G L A N G Q A F S E I M A S L G F S D A | 85 |
| NTDB id   | 98067 | R9C51 RS10165 WP 075218762.1   | . . . . . M D I S Q V F R L R R K K L A T A K Q N I I T L F N N L F S S G F H L V E T I S F L D R S A L L D K Q C V T Q M R V G L S Q G K S F S E M M E S L G C S S A     | 79 |
| NTDB id   | 271   | KZH43 RS09260 WP 074196785.1   | . . . . . M D I S Q V F R L R R K K L A T A K Q N I I T L F N N L F S S G F H L V E T I S F L D R S A L L D K Q C V T Q M R V G L S Q G K S F S E M M E S L G C S S A     | 79 |
| NTDB id   | 230   | SPD RS09890 WP 074196785.1     | . . . . . M D I S Q V F R L R R K K L A T A K Q N I I T L F N N L F S S G F H L V E T I S F L D R S A L L D K Q C V T Q M R V G L S Q G K S F S E M M E S L G C S S A     | 79 |
| NTDB id   | 196   | SPR RS09425 WP 074196785.1     | . . . . . M D I S Q V F R L R R K K L A T A K Q N I I T L F N N L F S S G F H L V E T I S F L D R S A L L D K Q C V T Q M R V G L S Q G K S F S E M M E S L G C S S A     | 79 |
| NTDB id   | 161   | SP RS10375 WP 074196785.1      | . . . . . M D I S Q V F R L R R K K L A T A K Q N I I T L F N N L F S S G F H L V E T I S F L D R S A L L D K Q C V T Q M R V G L S Q G K S F S E M M E S L G C S S A     | 79 |
| NTDB id   | 529   | SMSK321 RS09235 WP 080550783.1 | . . . . . M D I S Q V F R L R R K K L A T A K Q N I I T L F N N L F S S G F H L V E T I S F L D R S A L L D K Q C V T Q M R T D L S Q G K S F S E M M E S L G F S S A     | 79 |
| NTDB id   | 501   | SM12261 RS00950 WP 004238896.1 | . . . . . M D I S Q V F R L R R K K L A T A K Q N I I T L F N N L F S S G F H L V E T I S F L D R S A L L D K Q C V T Q M R A G L S Q G K S F S E M M E S L G F S S A     | 79 |
| consensus |       |                                | *   ! * * * * * k r l * * * * * g t s * * * * * i e l f n n l f s s g f h l v e t i s f l d r s a l l d k q c v t q m r a g l s q g k s f s e m m e s l g f s s a         |    |

|                                                                                       |     |
|---------------------------------------------------------------------------------------|-----|
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 166 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 167 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 168 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 169 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 170 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 171 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 172 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 173 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 174 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 175 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 176 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 177 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 178 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 179 |
| VVTQLSLAEVHGNLHLSLGKIEEYLDNLAKVKKKLEI VATYPLILLGFLLLIMLGLRNYLLPQLDSSNIATQIIGNLPQIFLGM | 180 |

|                                      |                           |                                                     |                                       |                 |     |
|--------------------------------------|---------------------------|-----------------------------------------------------|---------------------------------------|-----------------|-----|
| VGLVSVLALLALT                        | FYKRSSKMSVFSILARLP        | EFIVQTYLTAYYAREWGNMISQGMELTQIFQMMEEQGSQLFKEVGQDLAQT |                                       |                 |     |
| GALIVLTSLSIIIFKHISALINFTFLVKVPLVSSFI | RLYLTAYFSREWGNLIAAGGV     | VELRQIIEIMKKQKSRLFAE                                | VGIKLDLGL                             | 251             |     |
| CCFFILLVGIFTTFSRKISRHLHIGFC          | SHPFVKGYLQLYLTAYYAREWGNLI | GGVEMAQIVRLMQDQKSQLFREIGYDM                         | EKAL                                  | 253             |     |
| CCFFILLVGIFTTFSRKISRHLHIGFC          | SHPFVKGYLQLYLTAYYAREWGNLI | GGVEMAQIVRLMQDQKSQLFREIGYDM                         | EKAL                                  | 253             |     |
| VLMLGLTGAIYLVFKGQRIPVYSFLARLP        | VGSFVR                    | IYLTAYYAREWGNMIGGLELSQIFQIMQEQR                     | SVLFQEI                               | GQDLGQAL        | 254 |
| VGLVSVLALLALT                        | FYKRSSKMSVFSILARLP        | IGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMEEQGSQLFKE        | VGQDLAQT                              | TL              | 248 |
| VGLVSVLALLALT                        | FYKRSSKMSVFSILARLP        | IGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMEEQGSQLFKE        | VGQDLAQT                              | TL              | 248 |
| VGLVSVLALLALT                        | FYKRSSKMSVFSILARLP        | IGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMEEQGSQLFKE        | VGQDLAQT                              | TL              | 248 |
| VGLVSVLALLALT                        | FYKRSSKMSVFSILARLP        | IGIFVQTYLTAYYAREWGNMISQGMELTQIFQMMEEQGSQLFKE        | VGQDLAQT                              | TL              | 248 |
| VGLVSVLALLALT                        | FYKRSSKMRVFSILARIPFL      | GIFVQTYLTAYYAREWGNMISQGMELTQIFQIMQEQR               | SQLFKEIGQDLAQSL                       |                 | 248 |
| VGFVS                                | GVLLALT                   | FYKRGSKMRVFSILARIPFL                                | GIFVQTYLTAYYAREWGNMISQGMELTQIFQIMQEQR | SQLFKEIGQDMAHAL | 248 |
| * * * * *                            | * * * * *                 | * * * * *                                           | * * * * *                             | * * * * *       |     |

[illegible]

|                                            |       |     |
|--------------------------------------------|-------|-----|
| NTDB id 587 KW2 RS10850 WP 042211510.1     | MGSGI | 341 |
| NTDB id 395 FSA28 RS09400 WP 257638827.1   | MEVNL | 343 |
| NTDB id 386 SMU RS09030 WP 255262721.1     | MEVNL | 343 |
| NTDB id 430 SGO RS09415 WP 012130941.1     | MEVHL | 344 |
| NTDB id 98067 R9C51 RS10165 WP 075218762.1 | MEVNF | 338 |
| NTDB id 271 KZH43 RS09260 WP 074196785.1   | MEVNF | 338 |
| NTDB id 230 SPD RS09890 WP 074196785.1     | MEVNF | 338 |
| NTDB id 196 SPR RS09425 WP 074196785.1     | MEVNF | 338 |
| NTDB id 161 SP RS10375 WP 074196785.1      | MEVNF | 338 |
| NTDB id 529 SMSK321 RS09235 WP 080550783.1 | MEVNF | 338 |
| NTDB id 501 SM12261 RS00950 WP 004238896.1 | MEVNF | 338 |
| consensus                                  | !**** |     |

- X non conserved
- X similar
- X  $\geq 50\%$  conserved