

|                |                              |                                                                                         |    |
|----------------|------------------------------|-----------------------------------------------------------------------------------------|----|
| NTDB id 85     | BSU 00860 NP 387967.1        | ..MMFGRFTERAQKVLALAQEEALRLGHNNIGTEHILLGLVREGEGIAAKALQALGLGSEKIQKEVESLIGRG.....          | 71 |
| NTDB id 610    | V4T04 RS10165 WP 012897346.1 | MKFENIKYIPTLDRILEKAEYAHQVQYGTIESAHLIAAMATTSGSIAYSLLAGMNVDSDDLIDLEDLS.....SH             | 72 |
| NTDB id 377    | SMU RS09275 WP 002262344.1   | ....MTDYSLKMQEVFRLAQFEAAARFESSYLESWHVLLAMVEIDSGSVAGLSFAEFEDVRFEDYQAAAILAIGKKPKSS        | 76 |
| NTDB id 297    | STER RS00545 WP 011680614.1  | ....MTIYSRKMQAIFHRAQLEAERFESPFLETHVHLLAMVEVTSVAYLTFTDFEDRIHSEEIETAAVLAMFKRPKDL          | 76 |
| NTDB id 329    | STU RS10020 WP 011225298.1   | ....MTIYSRKMQAIFHRAQLEAERFESPFLETHVHLLAMVEVPGSVAYLTFTDFEDRIHSEEIETAAVLAMFKRPKDL         | 76 |
| NTDB id 157365 | AN924 RS06420 WP 009910884.1 | .....MKISTGLQRVFEAQLVAQRYACDYLETWHVLLSFVINHDTVAGAVLAEYPISIS..DYEHATFVVTDKVY..RE         | 71 |
| NTDB id 287    | SP RS11210 WP 001109712.1    | .....MNYSKALNECTESAYMVAGHFGARYLESWHLLIAMSNSHSYSVAGATLNDYPYEMD..RLEEVALELTETDY..SQ       | 71 |
| NTDB id 290    | KZH43 RS10025 WP 001109677.1 | .....MNYSKALNECTESAYMVAGHFGARYLESWHLLIAMSNSHSYSVAGATLNDYPYEMD..RLEEVALELTETDY..SQ       | 71 |
| NTDB id 289    | SPD RS10700 WP 001109677.1   | .....MNYSKALNECTESAYMVAGHFGARYLESWHLLIAMSNSHSYSVAGATLNDYPYEMD..RLEEVALELTETDY..SQ       | 71 |
| consensus      |                              | * * * * * ! * * ! * * * * * ! * * * * * ! * * * * * ! * * * * * ! * * * * * ! * * * * * |    |

|                |                              |                                                                                      |     |
|----------------|------------------------------|--------------------------------------------------------------------------------------|-----|
| NTDB id 85     | BSU 00860 NP 387967.1        | .QEMSQTHYTPRAKKVIELSMDEARKLGHSYVGTEHILLGLIREGEGVAARVLNNLGVSLNKARQQVLQL..L.....       | 142 |
| NTDB id 610    | V4T04 RS10165 WP 012897346.1 | VKVKRSTLRFSPPRAEEVMTAASFLLAIHNNSAEAVGTEHLLYALLQVEDCFGLQLLLKLLLL.....QKINIVSLRKELEKR  | 143 |
| NTDB id 377    | SMU RS09275 WP 002262344.1   | N...DIMLLEGSHALKRTLAEAAAISSQVTHAKVEVGTSEHVLFAMLLNPNLLATRILELVGFHAKDDGESIRLLDLRKVIERY | 154 |
| NTDB id 297    | STER RS00545 WP 011680614.1  | ESDIIDLRAQSPLAAMLQEAEQIASVTGAIVEGSEHVLMAFLHHKLDMVCRLLEVAGFGYKDDSDDKPRIIDLRRLSRLRN    | 156 |
| NTDB id 329    | STU RS10020 WP 011225298.1   | ESDIIDLRAQSPLAAMLQEAEQIASVTGAIVEGSEHVLMAFLHHKLDMVCRLLEVAGFGYKDDSDDKPRIIDLRRLSRLRN    | 156 |
| NTDB id 157365 | AN924 RS06420 WP 009910884.1 | ELDSFRILPSSKRLDETASFAKKIAEVVKAKELGTEHLMFAMLLDKRSTASQILDVKVGFCFEDSDDKFRFLDLRKNLEAR    | 151 |
| NTDB id 287    | SP RS11210 WP 001109712.1    | D.ETFTLPFSRRLLQVLFDEAEYVASVVHAKVLGTEHVLVAILHDSNALATRILERAGFSYEDKKDQVKIIAALRRNLEER    | 150 |
| NTDB id 290    | KZH43 RS10025 WP 001109677.1 | D.ETFTLPFSRRLLQVLFDEAEYVASVVHAKVLGTEHVLVAILHDGNALATRILERAGFSYEDKKDQVKIIAALRRNLEER    | 150 |
| NTDB id 289    | SPD RS10700 WP 001109677.1   | D.ETFTLPFSRRLLQVLFDEAEYVASVVHAKVLGTEHVLVAILHDGNALATRILERAGFSYEDKKDQVKIIAALRRNLEER    | 150 |
| consensus      |                              | * * * * *                                                                            |     |

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|----------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------|-----|
| NTDB id 85     | BSU 00860 NP 387967.1        | .G.....SNETGSSAAGTNSNANTPTLDSLARDLTAAIKEDSLDPVIGRSKEIQRVTEVLSRRTKN                                                      | 202 |
| NTDB id 610    | V4T04 RS10165 WP 012897346.1 | TGLKVPESKKAVTPMSKRKMA.....KGVAENSTTPTLDSVSSDLTEEARLGKLDPMIGRFAEIDRLIHILSRRTKN                                           | 215 |
| NTDB id 377    | SMU RS09275 WP 002262344.1   | ACFSKEDLKAT.FEMRKPKKVKNSSFSDLMKPP.SVTGELADFTRDTELARQGRLEPVIGREQEISRMVQILSRKTKN                                          | 232 |
| NTDB id 297    | STER RS00545 WP 011680614.1  | ACL <del>SKQDL</del> KAL.HDLRKPKKS <del>KASANFANMMQP</del> PQSS <del>TGELADYTKDLTALAESGNLDPVIGRDE</del> EISRMIVLSRKTKN  | 235 |
| NTDB id 329    | STU RS10020 WP 011225298.1   | ACL <del>SKQDL</del> KAL.HDLRKPKKS <del>KASANFANMMQP</del> PQSS <del>TGELADYTKDLTALAESGNLDP</del> IIGRDEEISRMIVLSRKTKN  | 235 |
| NTDB id 157365 | AN924 RS06420 WP 009910884.1 | AC <del>FTKED</del> LKAL.RSVMKGGKAKPTNMGMQMGPAPQSGGLEDYTRDALTALAREGKIPEVIGRDAEIARMIQILSRKTKN                            | 230 |
| NTDB id 287    | SP RS11210 WP 001109712.1    | ACWTR <del>EDL</del> KAL.RQRHRTVADKKNSMANMGMGPQT.PSGGLEDYTHDLTEQARS <del>GKLEP</del> VIGRDK <del>EISRM</del> IQILSRKTKN | 228 |
| NTDB id 290    | KZH43 RS10025 WP 001109677.1 | ACWTR <del>EDL</del> KAL.RQRHRTVADKKNSMANMGMGPQT.PSGGLEDYTHDLTEQARS <del>GKLEP</del> VIGRDK <del>EISRM</del> IQILSRKTKN | 228 |
| NTDB id 289    | SPD RS10700 WP 001109677.1   | ACWTR <del>EDL</del> KAL.RQRHRTVADKKNSMANMGMGPQT.PSGGLEDYTHDLTEQARS <del>GKLEP</del> VIGRDK <del>EISRM</del> IQILSRKTKN | 228 |
| consensus      |                              | *!***** * * * * *                                                                                                       |     |

[illegible]

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NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
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NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
NTDB id 157365 AN924 RS06420 WP 009910884.1
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NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
consensus

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NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
consensus
```



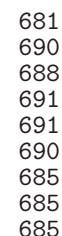
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NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
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NTDB id 297 STER RS00545 WP 011680614.1
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NTDB id 289 SPD RS10700 WP 001109677.1
consensus

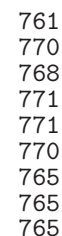
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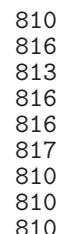
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NTDB id 290 KZH43 RS10025 WP 001109677.1
NTDB id 289 SPD RS10700 WP 001109677.1
consensus
```



-  non conserved
-  similar
-  >50% conserved