

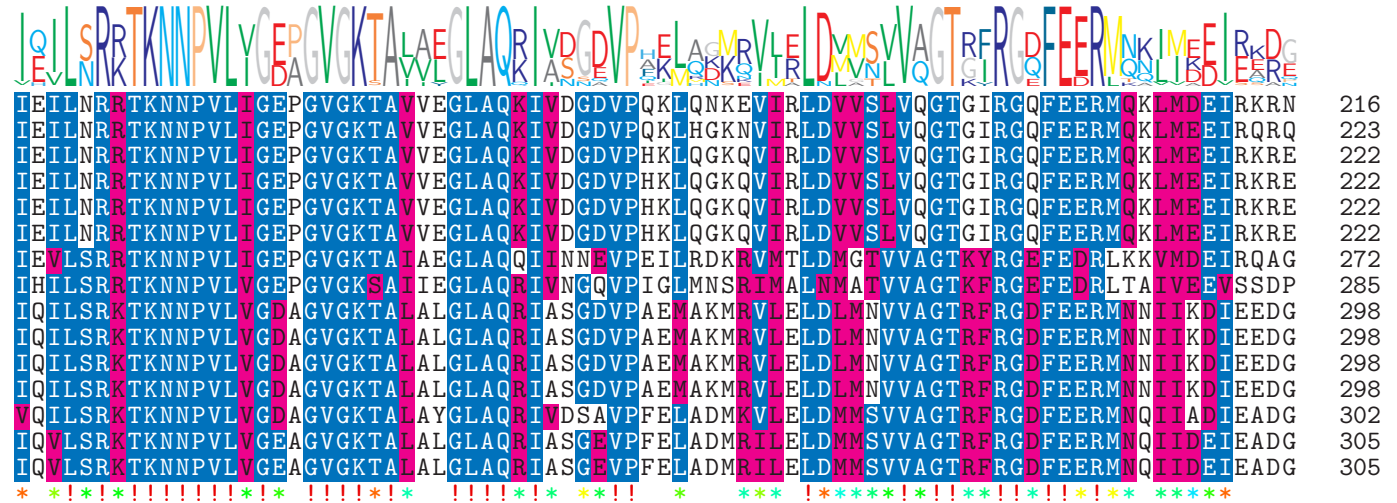
|           |         |       |         |    |             |                                                                                      |    |
|-----------|---------|-------|---------|----|-------------|--------------------------------------------------------------------------------------|----|
| NTDB id   | 601     | KW2   | RS02615 | WP | 021036805.1 | .....MLCQNCNINEA.....                                                                | 11 |
| NTDB id   | 378     | SMU   | RS02690 | WP | 002263569.1 | .....MLCQNCKINEA.....                                                                | 11 |
| NTDB id   | 281     | KZH43 | RS03550 | WP | 000882517.1 | .....MLCQNCKINDS.....                                                                | 11 |
| NTDB id   | 245     | SPD   | RS03860 | WP | 000882517.1 | .....MLCQNCKINDS.....                                                                | 11 |
| NTDB id   | 243     | SPR   | RS03635 | WP | 000882517.1 | .....MLCQNCKINDS.....                                                                | 11 |
| NTDB id   | 241     | SP    | RS04015 | WP | 000882523.1 | .....MLCQNCKINDS.....                                                                | 11 |
| NTDB id   | 85      | BSU   | O0860   | NP | 387967.1    | ..MMFGRFTERAQKVLALAQEEALRLGHNNIGTEHLLCLVREGEGIAAKALQALGLGSEKIQKEVESLI.....GR         | 70 |
| NTDB id   | 610     | V4T04 | RS10165 | WP | 012897346.1 | MKFENIKYPTLDRILEKAEEYAHQYQYGTTESAHLLAAMATTSGSTAYSLLAGMNVDSDDLII.....DLEDLSSH         | 72 |
| NTDB id   | 287     | SP    | RS11210 | WP | 001109712.1 | ....MNYSKALNECIESAYMVAGHFGARYLESWHLLIAMSNHSYSVAGATLNDYPYEMDRLE....EVALELTETDYS       | 70 |
| NTDB id   | 1126597 | E0F34 | RS10995 | WP | 001109696.1 | ....MNYSKALNECIESAYMVAGHFGARYLESWHLLIAMSNHSYSVAGATLNDYPYEMDRLE....EVALELTETDYS       | 70 |
| NTDB id   | 290     | KZH43 | RS10025 | WP | 001109677.1 | ....MNYSKALNECIESAYMVAGHFGARYLESWHLLIAMSNHSYSVAGATLNDYPYEMDRLE....EVALELTETDYS       | 70 |
| NTDB id   | 289     | SPD   | RS10700 | WP | 001109677.1 | ....MNYSKALNECIESAYMVAGHFGARYLESWHLLIAMSNHSYSVAGATLNDYPYEMDRLE....EVALELTETDYS       | 70 |
| NTDB id   | 377     | SMU   | RS09275 | WP | 002262344.1 | ....MTDYSLKMQEVRFLAQFEAAERFESSYLESWHVILLAMVEIDSSVAGLSFAEFEADVRFEDYQAAAAILAIGKKPKSSS  | 76 |
| NTDB id   | 297     | STER  | RS00545 | WP | 011680614.1 | ....MTIYSRKMQAIFHRAQLEAERFESPFLLETWHVILLAMVEVTGSVAYLTFDTDFEDRIHSEEIETA AVLAMEKRPKDLS | 76 |
| NTDB id   | 329     | STU   | RS10020 | WP | 011225298.1 | ....MTIYSRKMQAIFHRAQLEAERFESPFLLETWHVILLAMVEVPGSVAYLTFDTDFEDRIHSEEIETA AVLAMEKRPKDLS | 76 |
| consensus |         |       |         |    |             | ***                **                ****                ***                         |    |

|      |    |         |       |         |    |             |       |            |      |    |        |      |       |      |      |      |       |       |        |       |      |     |      |   |     |    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |        |   |   |   |   |   |   |   |   |   |     |   |   |   |   |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |     |
|------|----|---------|-------|---------|----|-------------|-------|------------|------|----|--------|------|-------|------|------|------|-------|-------|--------|-------|------|-----|------|---|-----|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|--------|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|-------|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|
| NTDB | id | 601     | KW2   | RS02615 | WP | 021036805.1 | ...   | TIHLYTSVNG | QKKQ | DL | CQNCYQ | I... | MKS   | GG   | REAL | FG   | AGNAS | NG    | NSDE   | ..... | PFNP | FND | IFSA | L | QGG | 72 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |        |   |   |   |   |   |   |   |   |   |     |   |   |   |   |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |     |
| NTDB | id | 378     | SMU   | RS02690 | WP | 002263569.1 | ...   | TIHLYANVNG | QKKQ | DL | CQNCYQ | I... | MKTDP | ENG  | PLNH | SQ   | QNSSS | ..... | INPFFD | DF    | FGDL | L   | NNF  |   |     | 70 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |        |   |   |   |   |   |   |   |   |   |     |   |   |   |   |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |     |
| NTDB | id | 281     | KZH43 | RS03550 | WP | 000882517.1 | ...   | TIHLYTNLNG | QKKQ | DL | CQNCYQ | I... | IKTDP | NNSL | FK   | GMTL | LN    | NRD   | .....  | FDP   | FG   | DF  | FN   | L | NNF | 69 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |        |   |   |   |   |   |   |   |   |   |     |   |   |   |   |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |     |
| NTDB | id | 245     | SPD   | RS03860 | WP | 000882517.1 | ...   | TIHLYTNLNG | QKKQ | DL | CQNCYQ | I... | IKTDP | NNSL | FK   | GMTL | LN    | NRD   | .....  | FDP   | FG   | DF  | FN   | L | NNF | 69 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |        |   |   |   |   |   |   |   |   |   |     |   |   |   |   |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |     |
| NTDB | id | 243     | SPR   | RS03635 | WP | 000882517.1 | ...   | TIHLYTNLNG | QKKQ | DL | CQNCYQ | I... | IKTDP | NNSL | FK   | GMTL | LN    | NRD   | .....  | FDP   | FG   | DF  | FN   | L | NNF | 69 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |        |   |   |   |   |   |   |   |   |   |     |   |   |   |   |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |     |
| NTDB | id | 241     | SP    | RS04015 | WP | 000882523.1 | ...   | TIHLYTNLNG | QKKQ | DL | CQNCYQ | I... | IKTDP | NNSL | FK   | GMTL | LN    | NRD   | .....  | FDP   | FG   | DF  | FN   | L | NNF | 69 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |       |        |   |   |   |   |   |   |   |   |   |     |   |   |   |   |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |     |
| NTDB | id | 85      | BSU   | O0860   | NP | 387967.1    | GQEMS | QTIHY      | T    | P  | R      | A    | K     | K    | V    | I    | E     | L     | S      | M     | D    | E   | A    | R | K   | L  | G | H | S | Y | V | G | T | E | H | L | L | G | L | I | R | E | G | E | G | V | A | A | R | V | L | N | N     | L      | G | V | S | L | N | K | A | R | Q | Q   | V | L | Q | L | ..... | 141 |   |   |   |   |   |   |   |   |   |   |   |   |   |     |
| NTDB | id | 610     | V4T04 | RS10165 | WP | 012897346.1 | VKVKR | STLRF      | S    | P  | R      | A    | F     | E    | V    | M    | T     | A     | A      | S     | F    | L   | A    | I | H   | N  | N | S | E | A | V | G | T | E | H | L | Y | A | L | L | Q | V | E | D | G | F | G | L | Q | L | K | L | ..... | QKINIV | S | T | R | K | E | L | E | K | R | 143 |   |   |   |   |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |     |
| NTDB | id | 287     | SP    | RS11210 | WP | 001109712.1 | QDET  | F          | T    | E  | L      | P    | F     | S    | R    | R    | L     | Q     | I      | L     | F    | D   | E    | A | E   | Y  | V | A | S | V | V | H | A | K | V | L | G | T | E | H | V | L | Y | A | I | L | H | D | G | N | A | L | A     | T      | R | I | L | E | R | A | G | F | S | Y   | E | D | K | K | D     | Q   | V | K | I | A | A | L | R | R | N | L | E | E | R | 150 |
| NTDB | id | 1126597 | E0F34 | RS10995 | WP | 001109696.1 | QDET  | F          | T    | E  | L      | P    | F     | S    | R    | R    | L     | Q     | I      | L     | F    | D   | E    | A | E   | Y  | V | A | S | V | V | H | A | K | V | L | G | T | E | H | V | L | Y | A | I | L | H | D | G | N | A | L | A     | T      | R | I | L | E | R | A | G | F | S | Y   | E | D | K | K | D     | Q   | V | K | I | A | A | L | R | R | N | L | E | E | R | 150 |
| NTDB | id | 290     | KZH43 | RS10025 | WP | 001109677.1 | QDET  | F          | T    | E  | L      | P    | F     | S    | R    | R    | L     | Q     | I      | L     | F    | D   | E    | A | E   | Y  | V | A | S | V | V | H | A | K | V | L | G | T | E | H | V | L | Y | A | I | L | H | D | G | N | A | L | A     | T      | R | I | L | E | R | A | G | F | S | Y   | E | D | K | K | D     | Q   | V | K | I | A | A | L | R | R | N | L | E | E | R | 150 |
| NTDB | id | 289     | SPD   | RS10700 | WP | 001109677.1 | QDET  | F          | T    | E  | L      | P    | F     | S    | R    | R    | L     | Q     | I      | L     | F    | D   | E    | A | E   | Y  | V | A | S | V | V | H | A | K | V | L | G | T | E | H | V | L | Y | A | I | L | H | D | G | N | A | L | A     | T      | R | I | L | E | R | A | G | F | S | Y   | E | D | K | K | D     | Q   | V | K | I | A | A | L | R | R | N | L | E | E | R | 150 |
| NTDB | id | 377     | SMU   | RS09275 | WP | 002262344.1 | N..   | D          | I    | M  | L      | E    | Q     | S    | H    | A    | L     | K     | R      | T     | L    | A   | E    | A | A   | A  | I | S | Q | V | T | H | A | K | E | V | G | T | E | H | V | L | F | A |   |   |   |   |   |   |   |   |       |        |   |   |   |   |   |   |   |   |   |     |   |   |   |   |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |     |

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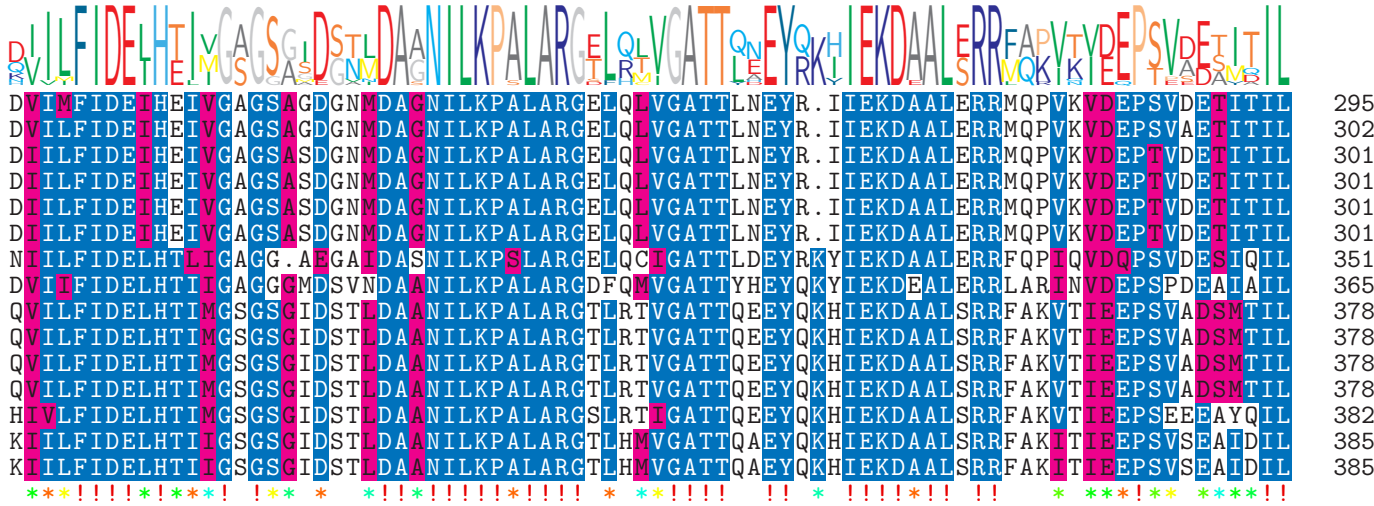
NTDB id 601 KW2 RS02615 WP 021036805.1
NTDB id 378 SMU RS02690 WP 002263569.1
NTDB id 281 KZH43 RS03550 WP 000882517.1
NTDB id 245 SPD RS03860 WP 000882517.1
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NTDB id 241 SP RS04015 WP 000882523.1
NTDB id 85 BSU 00860 NP 387967.1
NTDB id 610 V4T04 RS10165 WP 012897346.1
NTDB id 287 SP RS11210 WP 001109712.1
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NTDB id 289 SPD RS10700 WP 001109677.1
NTDB id 377 SMU RS09275 WP 002262344.1
NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus

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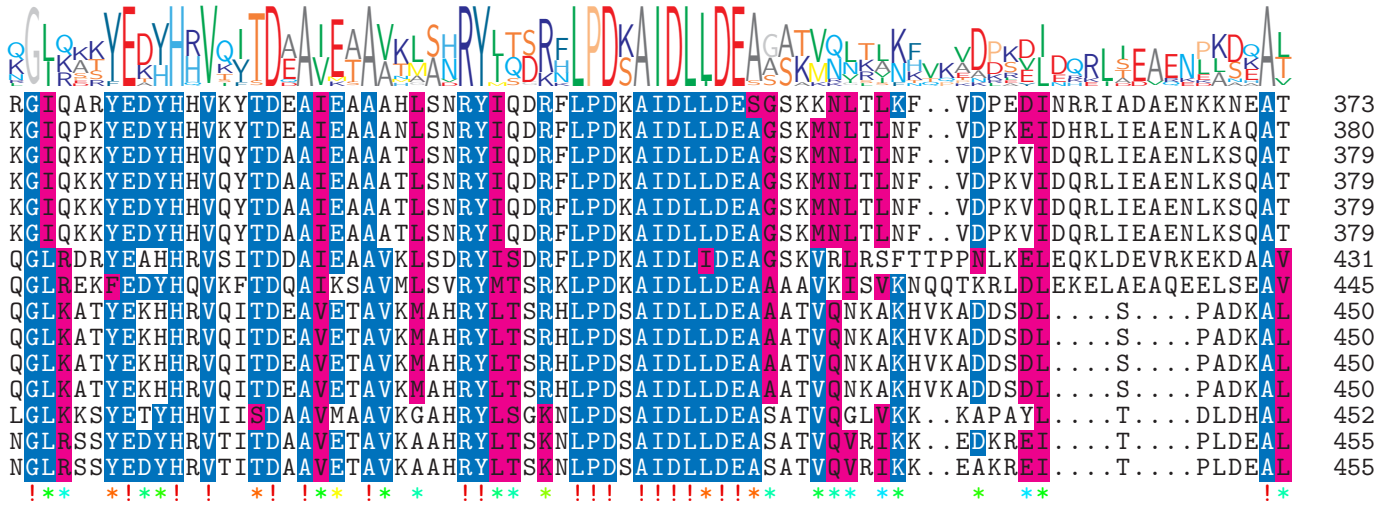
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|-----------|----|---------|-------|---------|----|-------------|
| NTDB      | id | 601     | KW2   | RS02615 | WP | 021036805.1 |
| NTDB      | id | 378     | SMU   | RS02690 | WP | 002263569.1 |
| NTDB      | id | 281     | KZH43 | RS03550 | WP | 000882517.1 |
| NTDB      | id | 245     | SPD   | RS03860 | WP | 000882517.1 |
| NTDB      | id | 243     | SPR   | RS03635 | WP | 000882517.1 |
| NTDB      | id | 241     | SP    | RS04015 | WP | 000882523.1 |
| NTDB      | id | 85      | BSU   | 00860   | NP | 387967.1    |
| NTDB      | id | 610     | V4T04 | RS10165 | WP | 012897346.1 |
| NTDB      | id | 287     | SP    | RS11210 | WP | 001109712.1 |
| NTDB      | id | 1126597 | E0F34 | RS10995 | WP | 001109696.1 |
| NTDB      | id | 290     | KZH43 | RS10025 | WP | 001109677.1 |
| NTDB      | id | 289     | SPD   | RS10700 | WP | 001109677.1 |
| NTDB      | id | 377     | SMU   | RS09275 | WP | 002262344.1 |
| NTDB      | id | 297     | STER  | RS00545 | WP | 011680614.1 |
| NTDB      | id | 329     | STU   | RS10020 | WP | 011225298.1 |
| consensus |    |         |       |         |    |             |



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|           |    |         |       |         |    |             |
|-----------|----|---------|-------|---------|----|-------------|
| NTDB      | id | 601     | KW2   | RS02615 | WP | 021036805.1 |
| NTDB      | id | 378     | SMU   | RS02690 | WP | 002263569.1 |
| NTDB      | id | 281     | KZH43 | RS03550 | WP | 000882517.1 |
| NTDB      | id | 245     | SPD   | RS03860 | WP | 000882517.1 |
| NTDB      | id | 243     | SPR   | RS03635 | WP | 000882517.1 |
| NTDB      | id | 241     | SP    | RS04015 | WP | 000882523.1 |
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| NTDB      | id | 610     | V4T04 | RS10165 | WP | 012897346.1 |
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| NTDB      | id | 1126597 | E0F34 | RS10995 | WP | 001109696.1 |
| NTDB      | id | 290     | KZH43 | RS10025 | WP | 001109677.1 |
| NTDB      | id | 289     | SPD   | RS10700 | WP | 001109677.1 |
| NTDB      | id | 377     | SMU   | RS09275 | WP | 002262344.1 |
| NTDB      | id | 297     | STER  | RS00545 | WP | 011680614.1 |
| NTDB      | id | 329     | STU   | RS10020 | WP | 011225298.1 |
| consensus |    |         |       |         |    |             |



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NTDB id 297 STER RS00545 WP 011680614.1
NTDB id 329 STU RS10020 WP 011225298.1
consensus

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|----------------------------------------------|------------------------------------------------------------------------|-----|
| NTDB id 601 KW2 RS02615 WP 021036805.1       | VDLGYNPAMGARPLRRTIQENTEDSADFYIEHPEYKQ.LVADLIDDKIVISNQTQETAETTTDEEVP    | 748 |
| NTDB id 378 SMU RS02690 WP 002263569.1       | VDLGYDPKMGARPLRRTIQEHTEDAITDFYLEHPEQKE.LKAITMTSNCKIVIKASNK.VETVTKATSD. | 753 |
| NTDB id 281 KZH43 RS03550 WP 000882517.1     | VDLGYDPKMGARPLRRTIQDYIEDTITDYYLENPSEKD.LKAVMTSKCNIIQIKSAKK.AEVKSSEKEK. | 752 |
| NTDB id 245 SPD RS03860 WP 000882517.1       | VDLGYDPKMGARPLRRTIQDYIEDTITDYYLENPSEKD.LKAVMTSKCNIIQIKSAKK.AEVKSSEKEK. | 752 |
| NTDB id 243 SPR RS03635 WP 000882517.1       | VDLGYDPKMGARPLRRTIQDYIEDTITDYYLENPSEKD.LKAVMTSKCNIIQIKSAKK.AEVKSSEKEK. | 752 |
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| NTDB id 85 BSU 00860 NP 387967.1             | AEEGVLDLEYGARPLRRRIQKHVEDRLSEELRLGNTHKQQHIVLDVEDGEFVVKTAKTN.....       | 810 |
| NTDB id 610 V4T04 RS10165 WP 012897346.1     | AEVGFDPYEGARPLRKALQKEVEDLLSEQLLSGEIKACNHVSTIGASNKKIKIAQIV.....         | 816 |
| NTDB id 287 SP RS11210 WP 001109712.1        | ANQGYDPEMGARPLRRTIQTEVEDKLAELLLKCDIVAGSTLKIIGVKAGQLKFDIA.....          | 810 |
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| NTDB id 290 KZH43 RS10025 WP 001109677.1     | ANQGYDPEMGARPLRRTIQTEVEDKLAELLLKCDIVAGSILKIIGVKAGQLKFDIA.....          | 810 |
| NTDB id 289 SPD RS10700 WP 001109677.1       | ANQGYDPEMGARPLRRTIQTEVEDKLAELLLKCDIVAGSILKIIGVKAGQLKFDIA.....          | 810 |
| NTDB id 377 SMU RS09275 WP 002262344.1       | ALAGYDAEMGARPLRRTIQTEVEDKLAELLLSCKLASGQTLKIGIQKEKIKFDIV.....           | 813 |
| NTDB id 297 STER RS00545 WP 011680614.1      | AKDGYDIEMGARPLRRTIQTVEDKLSLELLLGQQVVSQQTLLIGCSKDKITFTVV.....           | 816 |
| NTDB id 329 STU RS10020 WP 011225298.1       | AKDGYDIEMGARPLRRTIQTVEDKLSLELLLGQQVVSQQTLLIGCSKDKITFTVV.....           | 816 |
| consensus                                    | * !*****!!!!!!*!! *!! *** * * * * * * * * *                            |     |

- non conserved
- similar
- ≥ 50% conserved