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|--|---------------------------|-------------------------|--|-------------------------------|----|
| NTDB id 600 KW2 RS01765 WP 011675413.1 | MATKK....KTNFDDITKKYGAERD | KALADALALIEKD | FGKGSIMRLGEA | .ANQKVSVVSSGSLALDIALGAGGYPKGR | 74 |
| NTDB id 157728 SanJ4211 RS09210 WP 021002199.1 | .MAKK....QKKLEEISKKFGEER | QKALDTALKNI EKDFGKGA | IMRLGER.AEQKVQVMSSGSLALDIALGAGGYPKGR | 73 | |
| NTDB id 269 KZH43 RS08665 WP 001085462.1 | .MAKK....PKKLEEISKKFGEER | EKALNDALKLEKDFGKGS | IMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR | 73 | |
| NTDB id 228 SPD RS09265 WP 001085462.1 | .MAKK....PKKLEEISKKFGEER | EKALNDALKLEKDFGKGS | IMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR | 73 | |
| NTDB id 194 SPR RS08825 WP 001085462.1 | .MAKK....PKKLEEISKKFGEER | EKALNDALKLEKDFGKGS | IMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR | 73 | |
| NTDB id 159 SP RS09750 WP 001085462.1 | .MAKK....PKKLEEISKKFGEER | EKALNDALKLEKDFGKGS | IMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR | 73 | |
| NTDB id 499 SM12261 RS08315 WP 078228268.1 | .MAKK....PKKLDEISKKFGEER | EKALNDALKLEKDFGKGS | IMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR | 73 | |
| NTDB id 527 SMSK321 RS11065 WP 001085454.1 | .MAKK....PKKLDEISKKFGEER | EKALNDALKLEKDFGKGS | IMRLGER.AEQKVQVMSSGSLALDIALGSGGYPKGR | 73 | |
| NTDB id 408 SMU RS09530 WP 002262392.1 | .MAKR....IKKTEEITKKFGDER | KKALDDALKNI EKDFGKGA | VMLGER.AEQKVQVMSSGSLALDIALGAGGYPKGR | 73 | |
| NTDB id 453 Spy49 1753c ACI62003.1 | .MAKK....LKKNEEITKKFGDER | RKALDDALKNI EKDFGKGA | VMLGER.AEQKVQVMSSGSLALDIALGAGGYPKGR | 73 | |
| NTDB id 625 LCA RS02525 WP 011374196.1 |MAKDERQAALDAAL | KKIEKNFGKGSIMRMGEK | .VDTQVSTVSSGSLALDIALGVGGYPGR | 60 | |
| NTDB id 115 BSU 16940 NP 389576.2 |MSDRQAALDMALK | QIEKQFGKGSIMKLG EK | .TDTRLSTVPSGSLALDIALGICGYPGR | 58 | |
| NTDB id 1313 DR RS12030 WP 010888966.1 |MSKDATKEISAPTD | AKERSKALLETAMSGIEK | AFGKGSIMKLGAE.SKLDVQVVSTGSLSLDIALGVGGIPGR | 72 | |
| NTDB id 1245 Cj1673c YP 002345041.1 |MDNKRKSLDAAL | KSLDKTFGKGTILRLGDK | .EVEQIDSLTGSVGLDIALGIGGYPKGR | 59 | |
| NTDB id 1211 C694 RS00795 WP 000963128.1 |MAIDEDKQKATSLA | IKQIDKVFGKGALVRLGDK | .QVEKIDSLTGSGLDIALGIGGYPKGR | 61 | |
| NTDB id 1214 NCTC11637 00359 SQJ03206.1 |MAIDEDKQKATSLA | IKQIDKVFGKGALVRLGDK | .QVEKIDSLTGSGLDIALGIGGYPKGR | 61 | |
| NTDB id 1334 RAOC RS04870 WP 004918236.1 |MAKT.ETTSPND | DKKALAAVLEKLDKTYGKGTVMK | LGDTVDHNTIEVPSGSLGLDIALGVGGYPKGR | 68 | |
| NTDB id 1389 A4U84 RS07560 WP 021112712.1 | .MAENKKSSKNNTV.VKQ | VEPEQKKQALEAALAQIEK | QFGKGSIMKLGQT.EQLDIESVSTGSLGLDIALGIGGLPMGR | 76 | |
| NTDB id 1130 NGFG RS03960 WP 003688695.1 |MSDDKSKALAAAL | AQIEKSFGKGAIMKMDGSQQEEN | LEVIETGSLGLDIALGVGGLPRGR | 60 | |
| NTDB id 1124 NGFG RS03960 WP 003688695.1 |MSDDKSKALAAAL | AQIEKSFGKGAIMKMDGSQQEEN | LEVIETGSLGLDIALGVGGLPRGR | 60 | |
| NTDB id 1123 OK783 RS03845 WP 003688695.1 |MSDDKSKALAAAL | AQIEKSFGKGAIMKMDGSQQEEN | LEVIETGSLGLDIALGVGGLPRGR | 60 | |
| NTDB id 1427 RS RS02760 WP 011000510.1 | .MEDG.....K.KAASMSA | EKKALAAALAQIEKQFGKGS | IMKMDA.EVEPVQVVSTGSLGLDIALGVGGLPRGR | 68 | |
| NTDB id 1165 A1552VC RS01565 WP 000344154.1 |MDENKQKALAAAL | GQIEKQFGKGSIMRLGDN | .RAMDVETISTGSLSLDIALGAGGLPMGR | 59 | |
| NTDB id 1142 GTF74 RS11550 WP 000344154.1 |MDENKQKALAAAL | GQIEKQFGKGSIMRLGDN | .RAMDVETISTGSLSLDIALGAGGLPMGR | 59 | |
| NTDB id 1074 ABD1 RS10195 WP 000344167.1 |MDENKSKALQAALS | QIEKQFGKNTVMRLGDN | .TVQAVEAVSTGSLTLDIALGIGGLPKGR | 59 | |
| NTDB id 1022 ACIAD RS06390 WP 004925639.1 |MDDNKSKALQAALS | QIEKQFGKNTVMRLGDN | .TVQAVEAVSTGSLTLDIALGIGGLPKGR | 59 | |
| NTDB id 1205 PSJM300 05545 AFN77183.1 |MDENKKRALAAAL | GAIEKQFGKGAVMRMGDH | .DRQAIPSTGSLGLDIALGIGGLPKGR | 59 | |
| consensus | *** ** * | ***! *! !** ** ** ** | * ** ** ! * * ! * ! ! ! ! ! ! ! ! ! | | |

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| NTDB id 600 KW2 RS01765 WP 011675413.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | V | A | A | V | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | Y | A | K | A | L | G | V | N | I | D | E | L | L | S | Q | P | D | Y | G | E | Q | G | L | Q | I | A | E | K | L | I | T | S | G | A | V | D | L | | | |
| NTDB id 157728 SanJ4211 RS09210 WP 021002199.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | V | A | Q | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | Y | A | Q | A | L | G | V | N | I | D | E | L | L | S | Q | P | D | S | G | E | Q | G | L | E | I | A | G | K | L | I | D | S | G | A | V | D | L | | | |
| NTDB id 269 KZH43 RS08665 WP 001085462.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | V | A | Q | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | Y | A | A | A | L | G | V | N | I | D | E | L | L | S | Q | P | D | S | G | E | Q | G | L | E | I | A | G | K | L | I | D | S | G | A | V | D | L | | | |
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| NTDB id 159 SP RS09750 WP 001085462.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | V | A | Q | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | Y | A | A | A | L | G | V | N | I | D | E | L | L | S | Q | P | D | S | G | E | Q | G | L | E | I | A | G | K | L | I | D | S | G | A | V | D | L | | | |
| NTDB id 499 SM12261 RS08315 WP 078228268.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | V | A | Q | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | Y | A | A | A | L | G | V | N | I | D | E | L | L | S | Q | P | D | S | G | E | Q | G | L | E | I | A | G | K | L | I | D | S | G | A | V | D | L | | | |
| NTDB id 527 SMSK321 RS11065 WP 001085454.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | V | A | Q | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | Y | A | A | A | L | G | V | N | I | D | E | L | L | S | Q | P | D | S | G | E | Q | G | L | E | I | A | G | K | L | I | D | S | G | A | V | D | L | | | |
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| NTDB id 625 LCA RS02525 WP 011374196.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | V | A | E | V | Q | K | Q | G | G | T | A | A | Y | I | D | A | E | N | A | M | D | P | K | Y | A | T | A | L | G | V | N | I | D | D | L | L | S | Q | P | D | T | G | E | Q | G | L | E | I | A | D | A | L | V | S | S | G | A | V | D | L | | |
| NTDB id 115 BSU 16940 NP 389576.2 | I | V | E | V | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | I | A | E | V | Q | Q | Q | G | G | Q | A | A | F | I | D | A | E | H | A | L | D | P | V | Y | A | Q | K | L | G | V | N | I | E | E | L | L | S | Q | P | D | T | G | E | Q | A | L | E | I | A | E | A | L | V | R | S | G | A | V | D | L | | |
| NTDB id 1313 DR RS12030 WP 010888966.1 | I | T | E | I | Y | G | P | E | S | G | K | T | T | L | A | L | A | I | V | A | Q | A | Q | K | A | G | G | T | C | A | F | I | D | A | E | H | A | L | D | P | V | Y | A | R | A | L | G | V | N | I | D | E | L | L | V | S | Q | P | D | N | G | E | Q | A | L | E | I | M | E | L | L | V | R | S | G | A | T | D | V | | |
| NTDB id 1245 Cj1673c YP 002345041.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | L | T | L | H | I | I | A | E | C | Q | K | A | G | G | V | C | A | F | I | D | A | E | H | A | L | D | V | K | Y | A | K | N | L | G | V | N | I | D | D | L | Y | V | S | Q | P | D | F | G | E | Q | A | L | E | I | V | E | T | I | A | R | S | G | A | V | D | L | |
| NTDB id 1211 C694 RS00795 WP 000963128.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | L | S | L | H | I | I | A | E | C | Q | K | N | G | G | V | C | A | F | I | D | A | E | H | A | L | D | V | H | Y | A | K | R | L | G | V | D | T | E | N | L | L | V | S | Q | P | D | T | G | E | Q | A | L | E | I | L | E | T | I | T | R | S | G | G | I | D | L | |
| NTDB id 1214 NCTC11637 00359 SQJ03206.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | L | S | L | H | I | I | A | E | C | Q | K | N | G | G | V | C | A | F | I | D | A | E | H | A | L | D | V | H | Y | A | K | R | L | G | V | D | T | E | N | L | L | V | S | Q | P | D | T | G | E | Q | A | L | E | I | L | E | T | I | T | R | S | G | G | I | D | L | |
| NTDB id 1334 RAOC RS04870 WP 004918236.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | L | T | L | H | A | I | A | E | A | Q | K | V | G | G | T | A | A | F | I | D | A | E | H | A | L | D | P | V | M | H | Y | A | E | K | L | G | I | N | L | E | L | L | V | S | Q | P | D | N | G | E | Q | A | L | E | I | A | D | S | L | I | T | R | S | G | V | D | L |
| NTDB id 1389 A4U84 RS07560 WP 021112712.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | L | T | L | S | L | I | A | Q | A | Q | K | G | N | K | T | C | A | F | I | D | A | E | H | A | L | D | P | V | Y | A | R | N | L | G | V | N | I | D | E | L | L | S | Q | P | D | N | G | E | Q | A | L | E | I | C | D | A | L | V | R | S | G | A | V | D | V | | |
| NTDB id 1130 NGFG RS03960 WP 003688695.1 | I | V | E | I | F | G | P | E | S | S | G | K | T | T | L | C | L | E | A | V | A | Q | C | Q | K | N | G | G | V | C | A | F | V | D | A | E | H | A | F | D | P | V | Y | A | R | K | L | G | V | K | V | E | E | L | Y | L | S | Q | P | D | T | G | E | Q | A | L | E | I | C | D | T | L | V | R | S | G | G | I | D | M | |
| NTDB id 1124 NGFG RS03960 WP 003688695.1 | I | V | E | I | F | G | P | E | S | S | G | K | T | T | L | C | L | E | A | V | A | Q | C | Q | K | N | G | G | V | C | A | F | V | D | A | E | H | A | F | D | P | V | Y | A | R | K | L | G | V | K | V | E | E | L | Y | L | S | Q | P | D | T | G | E | Q | A | L | E | I | C | D | T | L | V | R | S | G | G | I | D | M | |
| NTDB id 1123 OK783 RS03845 WP 003688695.1 | I | V | E | I | F | G | P | E | S | S | G | K | T | T | L | C | L | E | A | V | A | Q | C | Q | K | N | G | G | V | C | A | F | V | D | A | E | H | A | F | D | P | V | Y | A | R | K | L | G | V | K | V | E | E | L | Y | L | S | Q | P | D | T | G | E | Q | A | L | E | I | C | D | T | L | V | R | S | G | G | I | D | M | |
| NTDB id 1427 RS RS02760 WP 011000510.1 | V | V | E | I | Y | G | P | E | S | S | G | K | T | T | L | T | L | Q | V | V | A | E | M | Q | K | L | G | G | T | C | A | F | I | D | A | E | H | A | L | D | V | T | Y | A | D | K | L | G | V | K | V | P | D | L | L | S | Q | P | D | T | G | E | Q | A | L | E | I | A | D | A | L | V | R | S | G | S | V | D | L | | |
| NTDB id 1165 A1552VC RS01565 WP 000344154.1 | I | V | E | I | F | G | P | E | S | S | G | K | T | T | L | T | L | E | L | I | A | A | A | Q | R | E | G | K | T | C | A | F | I | D | A | E | H | A | L | D | P | V | Y | A | K | K | L | G | V | N | I | D | E | L | L | V | S | Q | P | D | T | G | E | Q | A | L | E | I | C | D | A | L | A | R | S | G | A | V | D | V | |
| NTDB id 1142 GTF74 RS11550 WP 000344154.1 | I | V | E | I | F | G | P | E | S | S | G | K | T | T | L | T | L | E | L | I | A | A | A | Q | R | E | G | K | T | C | A | F | I | D | A | E | H | A | L | D | P | V | Y | A | K | K | L | G | V | N | I | D | E | L | L | V | S | Q | P | D | T | G | E | Q | A | L | E | I | C | D | A | L | A | R | S | G | A | V | D | V | |
| NTDB id 1074 ABD1 RS10195 WP 000344167.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | M | T | L | Q | A | I | A | Q | C | Q | K | S | G | G | T | C | A | F | I | D | A | E | H | A | L | D | P | Q | Y | A | R | K | L | G | V | D | I | D | N | L | L | V | S | Q | P | D | N | G | E | Q | A | L | E | I | A | D | M | L | V | R | S | G | A | T | D | L | |
| NTDB id 1022 ACIAD RS06390 WP 004925639.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | M | T | L | Q | A | I | A | Q | C | Q | K | A | G | G | T | C | A | F | I | D | A | E | H | A | L | D | P | Q | Y | A | R | K | L | G | V | D | I | D | N | L | L | V | S | Q | P | D | H | G | E | Q | A | L | E | I | A | D | M | L | V | R | S | G | A | T | D | L | |
| NTDB id 1205 PSJM300 05545 AFN77183.1 | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | L | T | L | S | V | I | A | A | A | Q | R | M | G | S | T | C | A | F | V | D | A | E | H | A | L | D | P | Y | A | G | K | L | G | V | N | I | D | D | L | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| NTDB id 600 KW2 RS01765 WP 011675413.1 | VV | I | D | S | V | A | A | L | V | P | K | A | E | I | E | G | M | G | D | S | H | V | G | L | Q | A | R | L | M | S | Q | A | L | R | K | L | A | G | H | I | N | K | T | K | T | I | A | I | F | I | N | Q | L | R | E | K | V | G | V | M | . | F | G | N | P | E | T | T | P | G | G | R | A | L | K | F | Y | A | . | 233 | |
| NTDB id 157728 SanJ4211 RS09210 WP 021002199.1 | VV | I | D | S | V | A | A | L | V | P | K | A | E | I | D | G | I | G | D | S | H | V | G | L | Q | A | R | L | M | S | Q | A | M | R | K | L | S | A | S | I | N | K | T | K | T | I | A | I | F | I | N | Q | L | R | E | K | V | G | T | M | . | F | G | N | P | E | T | T | P | G | G | R | A | L | K | F | Y | A | . | 232 | |
| NTDB id 269 KZH43 RS08665 WP 001085462.1 | VVV | D | S | V | A | A | L | V | P | K | A | E | I | D | G | I | G | D | S | H | V | G | L | Q | A | R | L | M | S | Q | A | M | R | K | L | G | A | S | I | N | K | T | K | T | I | A | I | F | I | N | Q | L | R | E | K | V | G | V | M | . | F | G | N | P | E | T | T | P | G | G | R | A | L | K | F | Y | A | . | 232 | | |
| NTDB id 228 SPD RS09265 WP 001085462.1 | VVV | D | S | V | A | A | L | V | P | K | A | E | I | D | G | I | G | D | S | H | V | G | L | Q | A | R | L | M | S | Q | A | M | R | K | L | G | A | S | I | N | K | T | K | T | I | A | I | F | I | N | Q | L | R | E | K | V | G | V | M | . | F | G | N | P | E | T | T | P | G | G | R | A | L | K | F | Y | A | . | 232 | | |
| NTDB id 194 SPR RS08825 WP 001085462.1 | VVV | D | S | V | A | A | L | V | P | K | A | E | I | D | G | I | G | D | S | H | V | G | L | Q | A | R | L | M | S | Q | A | M | R | K | L | G | A | S | I | N | K | T | K | T | I | A | I | F | I | N | Q | L | R | E | K | V | G | V | M | . | F | G | N | P | E | T | T | P | G | G | R | A | L | K | F | Y | A | . | 232 | | |
| NTDB id 159 SP RS09750 WP 001085462.1 | VVV | D | S | V | A | A | L | V | P | K | A | E | I | D | G | I | G | D | S | H | V | G | L | Q | A | R | L | M | S | Q | A | M | R | K | L | G | A | S | I | N | K | T | K | T | I | A | I | F | I | N | Q | L | R | E | K | V | G | V | M | . | F | G | N | P | E | T | T | P | G | G | R | A | L | K | F | Y | A | . | 232 | | |
| NTDB id 499 SM12261 RS08315 WP 078228268.1 | VVV | D | S | V | A | A | L | V | P | K | A | E | I | D | G | I | G | D | S | H | V | G | L | Q | A | R | L | M | S | Q | A | M | R | K | L | G | A | S | I | N | K | T | K | T | I | A | I | F | I | N | Q | L | R | E | K | V | G | V | M | . | F | G | N | P | E | T | T | P | G | G | R | A | L | K | F | Y | A | . | 232 | | |
| NTDB id 527 SMSK321 RS11065 WP 001085454.1 | VVV | D | S | V | A | A | L | V | P | K | A | E | I | D | G | I | G | D | S | H | V | G | L | Q | A | R | L | M | S | Q | A | M | R | K | L | G | A | S | I | N | K | T | K | T | I | A | I | F | I | N | Q | L | R | E | K | V | G | V | M | . | F | G | N | P | E | T | T | P | G | G | R | A | L | K | F | Y | A | . | 232 | | |
| NTDB id 408 SMU RS09530 WP 002262392.1 | VVV | D | S | V | A | A | L | V | P | K | A | E | I | D | G | I | G | D | S | H | V | G | L | Q | A | R | L | M | S | Q | A | M | R | K | L | S | A | S | I | N | K | T | K | T | I | A | I | F | I | N | Q | L | R | E | K | V | G | T | M | . | F | G | N | P | E | T | T | P | G | G | R | A | L | K | F | Y | S | . | 232 | | |
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| NTDB id 1313 DR RS12030 WP 010888966.1 | VVV | D | S | V | A | A | L | T | P | K | A | E | I | E | G | M | G | D | S | L | P | G | L | Q | A | R | L | M | S | Q | A | L | R | K | L | T | A | I | L | S | K | T | G | T | A | A | I | F | I | N | Q | V | R | E | K | I | G | V | M | . | Y | G | N | P | E | T | T | P | G | G | R | A | L | K | F | Y | A | . | 231 | | |
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| NTDB id 1211 C694 RS00795 WP 000963128.1 | VVV | D | S | V | A | A | L | T | P | K | A | E | I | D | G | M | G | D | Q | H | V | G | L | Q | A | R | L | M | S | H | A | L | R | K | I | T | G | V | L | H | K | M | N | T | T | L | I | F | I | N | Q | I | R | M | K | I | G | M | G | Y | G | S | P | E | T | T | P | G | G | N | A | L | K | F | Y | A | . | 221 | | | |
| NTDB id 1214 NCTC11637 00359 SQJ03206.1 | VVV | D | S | V | A | A | L | T | P | K | A | E | I | D | G | M | G | D | Q | H | V | G | L | Q | A | R | L | M | S | H | A | L | R | K | I | T | G | V | L | H | K | M | N | T | T | L | I | F | I | N | Q | I | R | M | K | I | G | M | G | Y | G | S | P | E | T | T | P | G | G | N | A | L | K | F | Y | A | . | 221 | | | |
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- ⊠ non conserved
- ⊠ similar
- ⊠ ≥ 50% conserved