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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 | E | 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   | 154 |     |
| 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 | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | A | Y | 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 | 153 |     |     |     |
| NTDB id 228 SPD RS09265 WP 001085462.1       | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | V | A | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | A | Y | 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 | 153 |     |     |     |
| NTDB id 194 SPR RS08825 WP 001085462.1       | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | V | A | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | A | Y | 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 | 153 |     |     |     |
| 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 | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | A | Y | 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 | 153 |     |     |     |
| 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 | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | A | Y | 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 | 153 |     |     |     |
| 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 | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | A | Y | 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 | 153 |     |     |     |
| NTDB id 453 Spy49 1753c ACI62003.1           | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | V | A | A | Q | K | E | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | A | Y | A | A | L | G | V | N | I | D | E | L | L | A | Q | P | D | S | G | E | Q | G | L | E | I | A | G | K | L | I | D | S | G | A | V | D | L | 153 |     |     |     |
| NTDB id 408 SMU RS09530 WP 002262392.1       | I | V | E | I | Y | G | P | E | S | S | G | K | T | T | V | A | L | H | A | V | A | A | Q | K | D | G | G | I | A | A | F | I | D | A | E | H | A | L | D | P | A | Y | 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 | 153 |     |     |     |
| 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 | V | A | E | V | Q | Q | Q | G | G | A | A | F | I | D | A | E | H | A | L | D | P | V | Y | A | Q | K | L | G | V | N | I | 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 | I | 138 |     |     |     |
| 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 | 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 | I   | 140 |     |     |
| 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   | 152 |     |
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| 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 | 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 | T | T | R | S | G | I | D | L   | 141 |     |     |
| 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 | 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 | T | T | R | S | G | I | D | L   | 141 |     |     |
| 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 | L | A | E | A | Q | K | V | G | G | T | A | A | F | I | D | A | E | H | A | F | D | 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 | T | R | S | G | V | D | I   | 148 |     |     |
| 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 | A | 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 | V | S | Q | P | D | N | G | E | Q | A | L | E | I | C | D | A | L | V | R | S | G | A | V | D | V   | 156 |     |     |
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| 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 | L | L | Y | L | S | Q | P | D | T | G | E | Q | A | L | E | I | C | D | T | L | V | R | S | G | I | D   | M   | 140 |     |
| 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 | L | L | Y | L | S | Q | P | D | T | G | E | Q | A | L | E | I | C | D | T | L | V | R | S | G | I | D   | M   | 140 |     |
| 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 | V | S | Q | P | D | T | G | E | Q | A | L | E | I | A | D | A | L | V | R | S | G | S | V   | D   | L   | 148 |
| NTDB id 1118917 EL098 RS03970 WP 126354955.1 | V | V | E | I | Y | G | P | E | S | S | G | K | T | T | L | T | L | Q | V | V | A | A | A | Q | R | S | G | K | T | C | A | F | I | D | A | E | H | A | L | D | P | V | Y | A | K | K | L | G | V | D | I | D | N | 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   | 141 |
| 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   | 139 |
| 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   | 139 |
| 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 | L | L | V | S | Q | P | D | T | G | E | Q | A | L | E | I | T | D | M | L | V | R | S | N | A | V | D | V   | 139 |     |     |
| 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   | 139 |
| 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 |   |   |   |     |     |     |     |





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consensus
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LEE

non conserved  
 similar  
 ≥ 50% conserved