

Unconserved 0 1 2 3 4 5 6 7 8 9 10 Conserved

|                | 10  |   |   |   |   |   |   |   |   |   | 20 |   |   |   |   |   |   |   |   |   | 30 |     |     |   |   |   |   |   |   |   | 40 |   |   |   |   |   |   |   |   |   | 50 |   |   |   |   |   |   |   |   |   |   |   |   |   |
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| L_pneumophila  | --- | M | K | P | N | - | L | F |   |   | Y  | F | V | L | T | Q | I | L | A | E |    | S   | P   | N | F | K | L | L | D | E | V  |   | R | P | V | H | D | I | T | - | L  | K |   | D | K | K | Y | Y | R | L | E | L | P |   |
| L_norrlandica  | --- | M | S | R | N | A | L | F |   |   | N  | L | V | K | D | K | I | N | K | A |    | --- | --- | K | I | S | G | A | I |   | D  | - | F | S | E | L | T | H | S | K |    | G | T | K | Y | Y | K | F | E | L | P |   |   |   |
| L_taurinensis  | --- | M | P | K | N | T | L | F |   |   | N  | F | I | - | - | T | F | L | K | Q |    | --- | --- | N | N | P | T | T | D | Q | -  |   | E | F | V | L | K | K | N | - | S  | N |   | S | T | D | Y | Y | L | I | P | L | T |   |
| L_gratiana     |     | M | D | I | M | K | L | N | - | I | L  | Y | G | V | L | - | R | L | L | T | E  |     | S   | S | E | F | K | L | C | D | K  | I |   | I | P | I | H | D | R | T | -  | L | E |   | D | K | E | Y | Y | R | L | E | I | P |
| L_shakespearei | --- | M | S | K | K | - | A | L |   |   | Y  | - | N | L | I | R | M | N | H | G |    | T   | T   | T | F | A | L | P | S | G | I  |   | Y | - | L | A | D | K | T | H | T  | S |   | G | G | R | Y | F | L | F | E | L | P |   |
| L_busanensis   | --- | M | K | V | N | - | G | L |   |   | Y  | S | T | L | Q | Y | K | L | A | Q |    | Q   | P   | D | F | K | L | K | N | Q | I  |   | I | P | H | Q | D | V | T | - | L  | N |   | N | K | N | Y | Y | R | L | A | L | P |   |
| L_cherrii      | --- | M | A | K | N | - | T | L |   |   | Y  | N | F | L | D | L | C | V | Y | K |    | N   | K   | K | L | H | L | G | N | D | V  |   | Y | L | I | K | T | Q | D | - | K  | T |   | N | C | P | Y | F | R | F | D | L | P |   |
| L_beliardensis | --- | M | A | K | N | P | - | L | F |   | F  | Y | I | K | T | R | Y | E | E | D |    | S   | L   | Q | N | R | P | - | E | K | I  |   | Y | L | K | H | D | - | - | L | D  |   | G | H | H | Y | L | L | I | K | L | P |   |   |
| Consistency    | 0   | 0 | 0 | 8 | 5 | 3 | 6 | 4 | 0 | 4 | 6  | 5 | 2 | 5 | 4 | 2 | 4 | 3 | 4 | 3 | 4  | 3   | 1   | 3 | 3 | 5 | 6 | 1 | 5 | 4 | 7  | 3 | 1 | 4 | 3 | 6 | 3 | 5 | 0 | 4 | 4  | 5 | 3 | 4 | * | 7 | 5 | 6 | 5 | 9 | 8 |   |   |   |

|                | 60 |   |   |   |   |   |   |   |   |   | 70 |   |   |   |   |   |   |   |   |   | 80 |   |   |   |   |   |   |   |   |   | 90 |   |   |   |   |   |   |   |   |   | 100 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
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| L_pneumophila  | L  | A | - | - | N | I | A | - |   | A | E  | - | - | - | G | F | R | - |   | - | -  | - | L | - | H | D | A | H |   | I | S  | L | Y | E | K | T | D | P | H |   | N   | P | N | L | G | L | S | H | F | T |   |   |   |   |   |   |
| L_norrlandica  | L  | D | K | - | - | E | I | T | - |   | I  | G | - | - | - | E | Y | T | - |   | -  | - | - | L | - | S | H | H | H |   | V  | S | I | F | E | K | P | Y | G | W |     | I | D | S | I | S | Q | Y | H | Y | T |   |   |   |   |   |
| L_taurinensis  | M  | - | T | E | K | I | N | V | A | C |    | G | Q | - | - | G | L | L | - |   | -  | - | - | L | L | T | E | H | H |   | I  | S | V | Y | A | N | E | S | K | D |     | N | P | N | L | S | Q | Y | H | Y | T |   |   |   |   |   |
| L_gratiana     | H  | - | E | - | - | D | I | A | - |   | A  | E | - | - | - | G | L | K | - |   | -  | - | - | L | - | Q | E | I | H |   | M  | S | I | Y | K | K | V | D | P | Q |     | N | A | A | L | G | P | S | H | F | T |   |   |   |   |   |
| L_shakespearei | N  | - | V | - | - | N | K | T | R |   | I  | D | - | - | - | D | L | V | - |   | -  | - | - | L | - | S | S | H | H |   | V  | S | V | Y | E | S | P | T | G | K |     | I | D | L | K | S | Q | Y | H | Y | T |   |   |   |   |   |
| L_busanensis   | V  | - | N | - | - | Q | F | K | L |   | S  | E | - | - | - | N | W | L | - |   | -  | - | - | L | - | N | E | A | H |   | L  | S | I | Y | E | E | L | D | H | K |     | N | P | V | L | G | P | S | H | F | T |   |   |   |   |   |
| L_cherrii      | I  | - | E | - | - | Q | P | I | - |   | S  | F | - | - | - | K | F | K | D |   | L  | E | L | N | L | - | S | K | H |   | I  | S | V | Y | E | G | E | N | S | E |     | N | P | S | L | S | Q | F | H | Y | S |   |   |   |   |   |
| L_beliardensis | W  | - | A | - | - | D | K | V | - |   | L  | E | T | E | N | S | L | T | - |   | -  | - | - | L | - | N | N | H | H |   | I  | S | V | Y | E | K | E | N | E | K |     | I | P | Q | L | S | E | Y | H | Y | T |   |   |   |   |   |
| Consistency    | 3  | 0 | 4 | 0 | 0 | 0 | 5 | 3 | 5 | 0 | 4  | 4 | 0 | 0 | 0 | 0 | 4 | 5 | 4 | 0 | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *  | 0 | 5 | 5 | 5 | * | 8 | * | 8 | 9 | 7   | 5 | 3 | 4 | 3 | 4 | 5 | 5 | 4 | 7 | 7 | 4 | 5 | * | 8 | 8 |

|                | 110 |   |   |   |   |   |   |   |   |   | 120 |   |   |   |   |   |   |   |   |   | 130 |   |   |   |   |   |   |   |   |   | 140 |   |   |   |   |   |   |   |   |   | 150 |   |   |   |   |   |   |   |   |   |
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| L_pneumophila  | A   | I | F | H | D | Q | N | G | Q | T | Y   | R | M | H | L | F | L | N | R | F | D   | A | L | A | C | - | P | A | T | W | E   | - | - | L | L | D | D | D | E | Q | Y   | V | K | V | S | - | P | - | - |   |
| L_norrlandica  | A   | Y | F | K | N | Q | L | G | T | E | Y   | R | L | H | V | Y | F | D | S | E | D   | N | F | V | N | - | R | P | L | F | S   | - | - | R | V | T | S | E | N | E | Y   | I | P | V | D | - | C | - | - |   |
| L_taurinensis  | A   | Y | L | D | D | E | K | G | V | K | Y   | C | L | H | V | Y | F | D | G | H | N   | Q | L | T | R | - | N | P | T | L | E   | K | Y | L | P | D | T | G | S | E | P   | I | D | I | T | - | A | - | - |   |
| L_gratiana     | A   | L | F | H | N | S | Y | G | Q | E | F   | R | M | H | L | F | L | N | C | F | D   | T | L | A | C | - | P | P | T | W | E   | - | - | L | L | D | G | E | H | H | Y   | V | K | V | D | - | P | - | - |   |
| L_shakespearei | A   | F | F | H | N | A | A | G | E | E | F   | R | L | H | V | F | F | D | S | R | D   | F | L | V | T | - | A | P | L | L | S   | - | - | V | L | R | E | G | - | K | Y   | E | P | V | N | - | S | - | - |   |
| L_busanensis   | A   | I | W | E | N | K | E | G | A | A | Y   | R | L | H | I | F | L | D | N | N | D   | V | L | A | C | - | H | P | T | W | D   | - | - | Y | I | D | A | S | G | Q | F   | I | K | A | E | - | M | - | - |   |
| L_cherrii      | A   | Y | F | V | D | K | K | N | Q | E | Y   | V | L | H | V | F | F | N | E | R | D   | N | Q | L | S | Q | - | L | P | V | L   | S | - | - | L | I | T | G | D | D | K   | K | T | H | L | E | I | E | - | - |
| L_beliardensis | A   | N | F | T | D | L | L | G | E | T | Y   | S | L | H | V | Y | F | N | S | N | D   | S | L | T | T | L | P | I | L | R | R   | - | - | I | S | D | S | E | I | V | L   | T | Q | L | N | P | T | L | K | S |
| Consistency    | *   | 4 | 7 | 3 | 7 | 4 | 3 | 8 | 5 | 5 | 8   | 4 | 8 | * | 8 | 8 | 7 | 7 | 4 | 3 | 7   | 3 | 8 | 5 | 3 | 0 | 3 | 6 | 6 | 4 | 5   | 0 | 0 | 5 | 5 | 5 | 4 | 5 | 2 | 4 | 4   | 5 | 4 | 7 | 5 | 0 | 3 | 0 | 0 | 0 |