**Table S1: Accession numbers of the sequences used for phylogenetic analyses.**

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| --- | --- | --- | --- |
| Species | 16S | Rpob (nt) | Rpob (aa) |
| Bacillus subtilis | DQ195067.1 | CP002183.1 | YP\_003864477.1 |
| Bacillus cereus | NR\_074540.1 | FJ188319.1 | FJ188319.1 |
| Bacillus licheniformis | DQ993676.1 | AF172323.1 | AAD48492.1 |
| Bacillus thuringiensis | CP000485.1 | CP000485.1 | YP\_893022.1 |
| Clostridium botulinum | NR\_036786.1 | Y16466.1 | CAC10529.1 |
| Clostridium difficile | NR\_074454.1 | AM180355.1 | YP\_001086530.1 |
| Geobacillus thermodenitrificans | AB546234.1 | EU484374.1 | ACB12773.1 |
| *Candidatus* Paenibacillus glabratella | KF801672  | KF801673 | KF801673 |
| Lactococcuslactis | FJ348447.1 | AF531271.1 | AAM94427.1 |
| Oceanobacillus iheyensis | NR\_075027.1 | BA000028.3 | NP\_691033.1 |
| Paenibacillus alvei | NR\_042091.1 | NA | WP\_005544566.1 |
| Paenibacillus macerans | NR\_040886.1 | AY493863.1 | AY493863.1 |
| Paenibacillus timonensis | NR\_042844.1 | AY728289.1 | AY728289.1 |
| Paenibacillus anaericanus | FN673683.2 | FN673683.2 | FN673683.2 |
| Paenibacillus borealis | AJ011322.1 | AY493866.1 | AY493866.1 |
| Paenibacillus brasilensis | JQ860094.1 | HE972657.1 | HE972657.1 |
| Paenibacillus dendritiformis | NR\_042861.1 | AY728286.1 | AY728286.1 |
| Paenibacillus ginsengisoli | FN673695.1 | FN673684.3 | FN673684.3 |
| Paenibacillus jamilae | HQ844448.1 | HE972655.1 | HE972655.1 |
| Paenibacillus massiliensis | NR\_029098.1 | AY728294.1 | AY728294.1 |
| Paenibacillus pabuli | KF055007.1 | AY728291.1 | AY728291.1 |
| Paenibacillus pasadenensis | AB681404.1 | HQ596205.1 | HQ596205.1 |
| Paenibacillus polymyxa | AY359636.1 | HE972654.1 | HE972654.1 |
| Paenibacillus thiaminolyticus | NR\_040887.1 | AY728285.1 | AY728285.1 |
| Paenibacillus vortex | HQ005270.1 | NA | WP\_006212933.1 |