

1 **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
<i>Candidatus</i> Paenibacillus glabratella	KF801672	KF801673	KF801673
Lactococcus lactis	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 brasiliensis	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

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