

**Table S2.** List including 74 complete genomes of *Lacticaseibacillus* from NCBI GenBank.

Accession number	Strain	Genome length, bp	GC-content, %
CP031785.1	<i>L. paracasei</i> 10266	3012260	46.4
CP006690.1	<i>L. casei</i> 12A	2907892	46.4
CP052065.1	<i>L. paracasei</i> 347-16	3102350	46.3
CP000423.1	<i>L. paracasei</i> ATCC 334	2895264	46.6
CP002618.1	<i>L. paracasei</i> BD-II	3069926	46.3
FM177140.1	<i>L. paracasei</i> BL23 (formerly <i>L. casei</i> )	3079196	46.3
CP048003.1	<i>L. paracasei</i> CACC 566	3123521	46.3
CP012187.1	<i>L. paracasei</i> CAUH35	2770411	46.6
CP041657.1	<i>L. paracasei</i> CBA3611	3035735	46.4
CP029546.1	<i>L. paracasei</i> EG9	2927257	46.6
CP017261.1	<i>L. paracasei</i> FAM18149	2710941	46.7
CP025582.1	<i>L. paracasei</i> HD1-7	3039280	46.4
CP026097.1	<i>L. paracasei</i> HDS-01	3038767	46.4
CP014985.1	<i>L. paracasei</i> IIA	3055892	46.3
AP018392.1	<i>L. paracasei</i> IJH-SONE68	3084917	46.4
CP013921.1	<i>L. paracasei</i> KL1	2918888	46.6
CP012148.1	<i>L. paracasei</i> L9	3076437	46.3
CP002616.1	<i>L. paracasei</i> LC2W	3039042	46.4
CP029536.1	<i>L. paracasei</i> LC355	3044973	46.5
CP005486.1	<i>L. paracasei</i> LOCK919	3113601	46.2
CP039707.1	<i>L. paracasei</i> Lp02	2991176	46.3
CP029686.1	<i>L. paracasei</i> Lpc10	3052122	46.3
LR698988.1	<i>L. paracasei</i> MGYG-HGUT-02388	3076437	46.3
CP007122.1	<i>L. paracasei</i> N1115	2938059	46.6
CP050500.1	<i>L. paracasei</i> NFFJ04	2983945	46.5
CP041944.1	<i>L. paracasei</i> NJ	3083412	46.4
CP049324.1	<i>L. paracasei</i> NSMJ15	2791277	46.6
CP035563.1	<i>L. paracasei</i> SRCM103299	3081420	46.4
CP045567.1	<i>L. paracasei</i> TK-P4A	3020185	46.4
CP001084.2	<i>L. paracasei</i> Zhang	2861969	46.5
CP002391.1	<i>L. paracasei</i> subsp. <i>paracasei</i> 8700:2	2939026	46.4
CP022954.1	<i>L. paracasei</i> subsp. <i>paracasei</i> IBB3423	3183386	46.3
AP012541.1	<i>L. paracasei</i> subsp. <i>paracasei</i> JCM 8130	2995875	46.6
CP016355.1	<i>L. paracasei</i> subsp. <i>paracasei</i> TMW 1-1434	3063698	46.4
CP025499.1	<i>L. paracasei</i> subsp. <i>tolerans</i> AO356 (7112-2)	3022095	46.4
CP064299.1	<i>L. paracasei</i> subsp. <i>tolerans</i> MGB0245	3042298	46.4
CP064311.1	<i>L. paracasei</i> subsp. <i>tolerans</i> MGB0625	3202250	46.3
CP064304.1	<i>L. paracasei</i> subsp. <i>tolerans</i> MGB0734	3079306	46.4
CP064314.1	<i>L. paracasei</i> subsp. <i>tolerans</i> MGB0747	3071809	46.3
CP064316.1	<i>L. paracasei</i> subsp. <i>tolerans</i> MGB0761	3086705	46.3
CP065154.1	<i>L. paracasei</i> subsp. <i>tolerans</i> ZY-1	3148894	46.4
CP038153.1	<i>L. paracasei</i> TCS	3077701	46.3
CP044361.1	<i>L. paracasei</i> TD 062	2667255	46.7
CP017716.1	<i>L. paracasei</i> TK1501	2942538	46.5
HE970764.1	<i>L. paracasei</i> W56 (formerly <i>L. casei</i> )	3075780	46.3
CP032637.1	<i>L. paracasei</i> ZFM54	3015887	46.4
CP017065.1	<i>L. casei</i> LC5	3132867	47.9
AP012544.1	<i>L. casei</i> subsp. <i>casei</i> ATCC 393	2924929	47.9
LS991421.1	<i>L. zeae</i> CECT 9104 (formerly <i>L. casei</i> )	3045762	48.0

CP045068.1	<i>L. manihotivorans</i> LM010	3395916	47.8
CP040780.1	<i>L. rhamnosus</i> 1-0320	2941522	46.7
CP021426.1	<i>L. rhamnosus</i> 4B15	3047840	46.6
CP014645.1	<i>L. rhamnosus</i> ASCC 290	2903890	46.7
CP022109.1	<i>L. rhamnosus</i> ATCC 11443	2990082	46.8
CP003094.1	<i>L. rhamnosus</i> ATCC 8530	2960339	46.8
CP014201.1	<i>L. rhamnosus</i> BFE5264	3068152	46.8
CP046267.1	<i>L. rhamnosus</i> BIO5326	2989570	46.8
CP044506.1	<i>L. rhamnosus</i> BIO6870	3006715	46.7
LT220504.1	<i>L. rhamnosus</i> BPL5	3024027	46.7
CP006804.1	<i>L. rhamnosus</i> DSM 14870	3013149	46.7
CP031290.1	<i>L. rhamnosus</i> GG	3010116	46.7
CP044228.1	<i>L. rhamnosus</i> hsryfm 1301	3022021	46.8
CP045531.1	<i>L. rhamnosus</i> IDCC 3201	3064363	46.7
FM179323.1	<i>L. rhamnosus</i> Lc 705	2968598	46.7
CP005484.1	<i>L. rhamnosus</i> LOCK900	2883376	46.8
CP005485.1	<i>L. rhamnosus</i> LOCK908	2990900	46.8
CP017063.1	<i>L. rhamnosus</i> LR5	2972590	46.7
CP016823.1	<i>L. rhamnosus</i> LRB	2934954	46.8
CP025428.1	<i>L. rhamnosus</i> LR-B1	3007503	46.7
LR134322.1	<i>L. rhamnosus</i> NCTC13710	2991048	46.8
LR134331.1	<i>L. rhamnosus</i> NCTC13764	2988387	46.8
CP020464.1	<i>L. rhamnosus</i> Pen	2884966	46.8
CP019305.1	<i>L. rhamnosus</i> SCT-10-10-60	2990071	46.8
CP020016.1	<i>L. rhamnosus</i> WQ2	2960737	45.9

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