Table S1. Growth of 31 strains of lactic acid bacteria isolated from traditional fermented products in MRS broth at 37°C for 18 h as shown with viable bacterial counts (n = 3, x ± SD).

Strain	Viable bacterial count(log cfu/ml)	Strain	Viable bacterial count(log cfu/ml)	Strain	Viable bacterial count(log cfu/ml)
***Lpb. pentosus* PC11**	10.35±0.27	***Lpb. plantarum* P6**	9.65±0.15	***Lpb. pentosus* PC1**	6.93±0.10
***Lpb. plantarum* NMGL2**	10.19±0.15	***Lcb. casei* JS2**	9.61±0.09	***Lpb. plantarum* NMGL4**	6.86±0.23
***Lpb. plantarum* P4**	10.18±0.04	***Lcb. casei* JS1**	9.57±0.20	***Lab. brevis* JS5**	6.37±0.39
***Lpb. plantarum* NMGL1**	10.14±0.15	***Lab. brevis* PC9**	8.94±0.53	***Lpb. pentosus* PC13**	6.21±0.27
***Lpb. plantarum* P3**	10.10±0.03	***Lab. brevis* PC3**	8.76±0.17	***Lpb. pentosus* PC4**	6.15±0.51
***Lpb. plantarum* NMGL3**	10.07±0.07	***Lab. brevis* PC2**	8.70±0.15	***Lpb. plantarum* NMGL5**	5.98±0.05
***Lpb. plantarum* PC10**	10.06±0.06	***Lab. brevis* PC6**	8.68±0.13	***Lab. brevis* JS3**	5.84±0.31
***Lpb. plantarum* P2**	9.88±0.07	***Lab. brevis* PC5**	8.60±0.24	***Lab. brevis* JS4**	5.19±0.52
***Lpb. plantarum* P5**	9.82±0.07	***Lab. brevis* PC7**	8.47±0.20	***Lpb. plantarum* PC12**	5.18±0.43
***Lpb. plantarum* P7**	9.79±0.20	***Lab. brevis* PC8**	8.45±0.20		
***Lpb. plantarum* P1**	9.71±0.30	***Lpb. pentosus* P7**	7.02±0.20		

Table S2: The gene sequence of *Lpb. plantarum* NMGL2

GGGAGGGCGCGTGCTATAATGCAGTCGAACGAACTCTGGTATTGATTGGTGCTTGCATCATGATTTACATTTG
AGTGAGTGGCGAACTGGTGAGTAACACGTGGGAAACCTGCCCAGAAGCGGGGGATAACACCTGGAAACA
GATGCTAATACCGCATAACAACTTGGACCGCATGGTCCGAGTTTGAAAGATGGCTTCGGCTATCACTTTTGGA
TGGTCCCGCGGCGTATTAGCTAGATGGTGGGGTAATGGCTCACCATGGCAATGATACGTAGCCGACCTGAGA
GGGTAATCGGCCACATTGGGACTGAGACACGGCCCAAACTCCTACGGGAGGCAGCAGTAGGGAATCTTCC
ACAATGGACGAAAGTCTGATGGAGCAACGCCGCGTGAGTGAAGAAGGGTTTCGGCTCGTAAAACTCTGTT
GTTAAAGAAGAACATATCTGAGAGTAACTGTTCAGGTATTGACGGTATTTAACCAGAAAGCCACGGCTAACT
ACGTGCCAGCAGCCGCGGTAATACGTAGGTGGCAAGCGTTGTCCGGATTTATTGGGCGTAAAGCGAGCGCA
GGCGGTTTTTTAAGTCTGATGTGAAAGCCTTCGGCTCAACCGAAGAAGTGCATCGGAAACTGGGAAACTT
GAGTGCAGAAGAGGACAGTGGAACTCCATGTGTAGCGGTGAAATGCGTAGATATATGGAAGAACACCAGTG
GCGAAGGCGGCTGTCTGGTCTGTAACTGACGCTGAGGCTCGAAAGTATGGGTAGCAAACAGGATTAGATAC
CCTGGTAGTCCATACCGTAAACGATGAATGCTAAGTGTTGGAGGGTTTCCGCCCTTCAGTGCTGCAGCTAAC
GCATTAAGCATTCCGCCTGGGGAGTACGGCCGCAAGGCTGAAACTCAAAGGAATTGACGGGGGCCCGCAC
AAGCGGTGGAGCATGTGGTTTAATTCGAAGCTACGCGAAGAACCCTTACCAGTCTTGACATACTATGCAAAT
CTAAGAGATTAGACGTTCCCTTCGGGGACAATGGATACAGTGGTGCATGGTTGTCGTCAGCTCGTGTCGTGA
GATGTTGGATAAGTCCGCAACGAGCGCAACCTTATTATCAGTGCAGCATAAGTGGCACTCTGGTGAGACTGC
CGTGACAACCGAGAGTGGGATGACGTCAATCATCATGCCTATGACTGCTAACACGTGCTACATGATGGTACA
CGAGTTGCGAACCTCGCGAAG

Table S3. The expression levels of low temperature and acid-resistant proteins in *Lpb plantarum* NMGL2 in fermented milk stored at low temperature (4°C) for days 1, 7, 14, and 21.

	Day 1 Quantity				Day 7 Quantity		Day 14 Quantity			Day 21 Quantity		
					1218.94		31887.7	32372.9	34887.9	132057.	127528.	132707.
dnaA	0	0	0	0	2	1233.82	4	5	3	1	6	8
	3805.29	3795.26	4291.25	4256.37	6119.11		92424.6	92574.8	99434.8	359405.	346913.	367442.
dnaJ	9	4	5	4	4	3727.16	1	1	7	6	9	2
	34755.2	36828.5	33994.8	38748.5	42968.2	40247.7	755230.	768227.	828651.			
dnaK	2	5	2	7	9	6	3	7	6	3124662	3047459	3179973
		7625.47	8183.75	7353.17	7529.26	5828.14	163949.		192376.	703937.	726612.	753248.
dnaN	9623.74	7	8	1	9	5	5	162473	7	8	1	8
							20836.3	22556.7	23097.5	76416.5	81724.6	81986.8
dnaX	0	0	0	0	0	0	8	8	1	1	3	3
							68010.1			260744.		281193.
grpE	0	0	0	0	0	0	6	68599.8	72019.2	5	276313	4
	95403.9	99527.3	99294.3	95845.4	97333.3	99768.4						
groEL	7	6	1	7	6	3	2308644	2240559	2507343	8320350	8115493	8557151
	3972.36	4539.80	4723.00	1517.15	122.257		70985.2	67682.2	81461.5	289681.	288781.	296821.
rbfA	6	2	1	4	6	0	9	6	3	4	7	1
					7679.88	8889.86	154467.	147795.	165678.	343556.	346412.	
hsp1	0	0	0	8906.93	2	8	9	5	6	7	6	368582
	1762.36	1339.54	2306.95	1915.67	1497.80	1270.72	44610.6	43775.5	45799.5	160636.	176769.	166639.
hsp2	9	3	7	7	6	5	4	3	5	4	6	1
			4972.72				156180.	150562.	169457.	533801.	522632.	559783.
hsp3	0	0	7	0	0	0	1	7	5	8	7	6
murA						486.231	35503.4	31435.0	35458.4	171943.	180826.	173624.
1	0	0	0	0	0	8	9	5	5	8	2	3
							12577.4	14110.9	15368.5		54802.6	56418.3
murB	0	0	0	0	0	0	2	1	6	55851.3	8	1
					860.301	2584.85	33104.5	34521.5	37088.1	102248.	111729.	113298.
murC	0	0	0	0	1	7	1	6	9	6	4	4
	2000.11	2035.17	1883.12	2404.64		1785.34	36012.5	38024.6	42767.0	119724.	127224.	132681.
murD	5	3	6	6	2664.79	6	1	1	7	6	4	1
	1169.10				1942.33		63393.4	63811.3	71858.8	232787.	216100.	233090.
murE1	5	0	0	0	7	1676.99	4	6	1	8	2	6
	1471.11	1465.11				1414.16	43052.0	44647.6	47934.7	162139.	164235.	
murF	3	1	0	0	0	8	4	2	9	7	7	172024
	2900.81		3875.99	5337.40	5686.64		228692.	224307.	258873.	288471.	297987.	298654.
dacA1	7	3415.7	4	4	5	6326.56	5	6	1	6	6	1
							29276.5	27690.8		35962.2	34832.1	
dacB	0	0	0	0	0	0	9	6	32534.3	5	2	39989.3
	40200.5	36166.3	27443.0	52015.4	52309.0	61281.3						
cspC	4	9	2	4	2	7	1696430	1822298	2056945	2847438	2729481	3183768
	4372.31	4114.33	4376.35	3086.68		3683.66	97415.9	97131.8	110254.	327683.	333298.	335478.
gaLE1	8	9	6	5	3654.22	9	6	2	9	7	2	4

		12973.3	13678.5	8181.83	3962.85	8698.77	301711.	298306.	324952.				
gaLE2	13581.7	4	9	4	7	8	7	4	8	1095517	1062697	1145028	
	25288.1	25348.0	24169.0	12638.3	12480.8	11070.1	487946.	464839.	531454.				
gaLK	6	2	4	1	1	4	2	8	4	2126685	2194526	2260797	
gaLM							9993.96	9949.47	15476.9		42983.9	47165.3	
1	0	0	0	0	0	0	7	2	7	46253.9	6	1	
gaLM	7341.62		7873.89	3466.31	3954.18	4624.28	237730.	235703.	264347.			736947.	
3	5	6477.87	1	3	1	1	3	3	5	735577	699845	8	
	25027.1	25950.5	25558.9	23531.4	24250.9	24761.4	507787.		565960.				
gaLU	9	9	6	5	8	1	9	490675	1	2073073	1907866	2013499	