

Probiotic *Lactobacillus* sp. strains inhibit growth, adhesion, biofilm formation and gene expression of bacterial vaginosis-inducing *Gardnerella vaginalis*

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Supplementary Table 1 Primer sequences used for RT-qPCR assay.

^a*vly*, HMPREF0424_0103, encoding athiol-activated cholesterol-dependent cytolysin, vaginolysin; *sld*, HMPREF0424_1190, encoding glycosyl hydrolase family 25, sialidase; *pat*, HMPREF0424_0125, encoding flp pilus-assembly TadE/G-like family protein; *gtf*, HMPREF0424_0821, encoding glycosyltransferase, group 2 family protein; *stp*, HMPREF0424_1297, encoding sugar ABC transporter permease; *atm*, HMPREF0424_1253, encoding ABC transporter permease; *itm*, HMPREF0424_1189, encoding glycosyltransferase, group 2 family protein; *bcrA*, HMPREF0424_0156, encoding bacitracin transport ATP-binding protein BcrA; *mds*, HMPREF0424_1122, encoding Multidrug resistance ABC transporter; 16s GV rRNA, 16s ribosomal RNA gene sequence.

^b16s gene was used as an internal control in the *Gardnerella vaginalis* gene experiment.

^cIL-8, interleukin-8

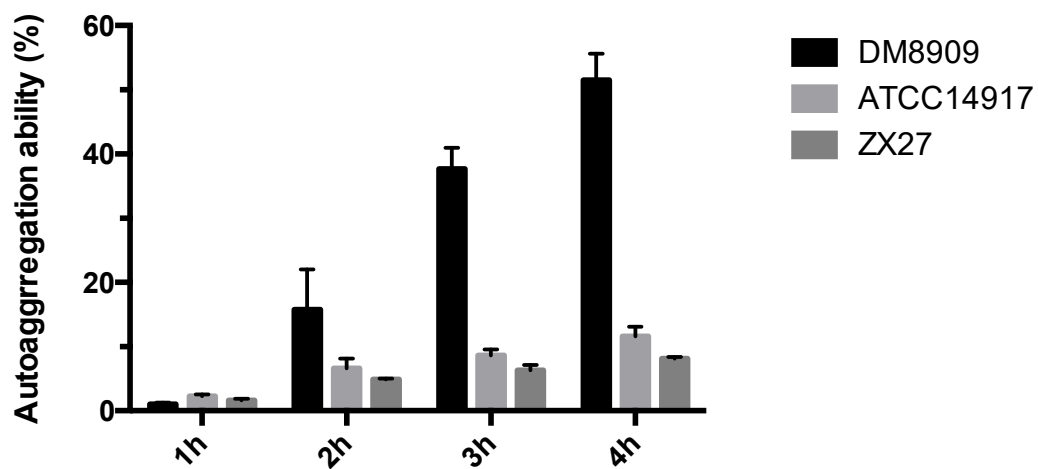
^dGAPDH, glyceraldehyde-3-phosphate dehydrogenase, was used as the housekeeping gene

^eFw, Forward primer, Rv, Reverse primer

Target Gene ^a	Primer sequence (5' to 3') ^c	T _{melting} (°C)	Amplicon size (bp)
<i>vly</i>	Fw CTCGCATGCAGTACGATTCT	58	187
	Rv TCTGGTGCATCAACGCTTAC	58	
<i>sld</i>	Fw GGGTTTATGCACACGCTTTT	56	131
	Rv GAAAATGCAGACAACGCAGA	58	
<i>pat</i>	Fw GGTTCTGGCACTATGCTTGG	58.9	171
	Rv ACACGCATTATCCTCCATCC	57.45	
<i>gff</i>	Fw CAACGAAGGCATAGGTTTCC	59.57	156
	Rv GCGCTTGGAAGTCTTTAAC	60.02	
<i>stp</i>	Fw TGGCTGTTATTGCTATCTACTTCA	57.1	203
	Rv CTTCCAGAATACTTGCCACTTTGT	59.9	
<i>atm</i>	Fw AGCAGCAATAACTGTAATGGTAATA	56.1	155
	Rv CAGACTTTTCTTCTCTAGCAACTCC	58.5	
<i>itm</i>	Fw AGTGCTGCTGCCGTCTAT	59.1	75
	Rv TCTGGAAGTGCCGCTTAA	59.1	
<i>bcrA</i>	Fw CCGACCGCATACTATTTTG	60.34	178
	Rv GCAAGACGGTCTCCAAACTC	59.85	
<i>mds</i>	Fw CAGCACCTGTAGCTCCAACA	60.05	195
	Rv TGGCTCAAGAGATTGTGTGC	59.99	
16s GV rRNA ^b	Fw TGAGTAATGCGTGACCAACC	55.2	167
	Rv AGCCTAGGTGGGCCATTACC	59.3	
IL-8 ^c	Fw TGGCAGCCTTCCTGATTCT	59.3	61
	Rv TTAGCACTCCTTGGCAAACTG	59.38	
GAPDH ^d	Fw AACGGATTGGTCGTATTG	53.40	214
	Rv GCTCCTGGAAGATGGTGAT	56.48	

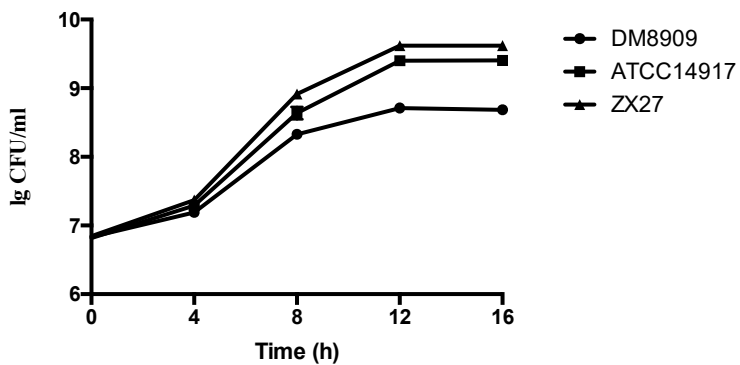
Supplementary Figure S1 Time-dependent auto-aggregation rate of the three tested

Lactobacillus sp.



Data are expressed as the mean \pm standard deviations (S.D) (n=3).

Supplementary Figure S2 The growth curve of the three tested *Lactobacillus* sp.



Data are expressed as the mean \pm standard deviations (S.D) (n=3).