

**Table S1.** Plasmids

Plasmid name	Size and antibiotic resistance	Description
pDL-P <sub>23</sub> <sup>2</sup> -Ll.LtrB-WT	11 kb, Spc <sup>R</sup> (300μg/μl)	<i>E. coli-L. lactis</i> shuttle vector harboring wild-type Ll.LtrB expressed under the control of the P <sub>23</sub> constitutive promoter
pDL-P <sub>23</sub> <sup>2</sup> -Ll.LtrB-ΔLtrA	9.2 kb, Spc <sup>R</sup> (300μg/μl)	Ll.LtrB lacking its essential intron-encoded protein (LtrA)
pDL-P <sub>23</sub> <sup>2</sup> -Ll.LtrB-ΔA-ΔLtrA	9.2 kb, Spc <sup>R</sup> (300μg/μl)	Ll.LtrB lacking LtrA and the branch point adenosine residue
pDL-P <sub>23</sub> <sup>2</sup> - Ll.LtrB-EBS1/Mut-ΔLtrA	9.2 kb, Spc <sup>R</sup> (300μg/μl)	Ll.LtrB lacking LtrA and mutated in the EBS1 (intron) and IBS1 (exon1) regions to modify base pairing specificity
pDL-P <sub>23</sub> <sup>2</sup> - Ll.LtrB-ΔA-EBS1/Mut-ΔLtrA	9.2 kb, Spc <sup>R</sup> (300μg/μl)	Ll.LtrB lacking LtrA, the branch point adenosine and mutated in the EBS1 (intron) and IBS1 (exon1) regions to modify base pairing specificity
pLE-P <sub>23</sub> <sup>2</sup> -LtrA	10.9 kb, Cam <sup>R</sup> (10μg/μl)	<i>E. coli-L. lactis</i> shuttle vector harboring the ltrA gene expressed under the control of the P <sub>23</sub> constitutive promoter
pLE-P <sub>23</sub> <sup>2</sup> -LtrA+AlaS	11.7 kb, Cam <sup>R</sup> (10μg/μl)	Alanyl-tRNA synthetase gene ( <i>alaS</i> ) from <i>L. lactis</i> expressed under the control of the P <sub>23</sub> constitutive promoter
pLE-P <sub>23</sub> <sup>2</sup> -LtrA+EnoA	10.4 kb, Cam <sup>R</sup> (10μg/μl)	Enolase gene ( <i>enoA</i> ) from <i>L. lactis</i> expressed under the control of the P <sub>23</sub> constitutive promoter