**Table S2: Primers used in this study.**

| Primer | Primer sequence[(a)](5'-3') | Use |
|---|---|---|
| ***abpT-US for*** | GATGGATCCGGTTTAGATACGTTTCTAGTTAC | cloning flanks of *abpT* in $pORI_{19\text{-}1}$ |
| ***abpT-US rev*** | AGGGGGATTTTTCTTGTTAAGAAAGTATTTAGTTAATAGTTAGGGGGGAG | cloning flanks of *abpT* in $pORI_{19\text{-}1}$ |
| ***abpT-DS for*** | AATACTCCCCCCTAACTATTAACTAAATACTTTCTTAACAAGAAAAATCC | cloning flanks of *abpT* in $pORI_{19\text{-}1}$ |
| ***abpT-DS rev*** | CCGGAATTCGAGCAGATAAAGATGGCATAG | cloning flanks of *abpT* in $pORI_{19\text{-}1}$ |
| ***abpT KO for*** | GGTTGGAACTTAGAGTATTCCAG | verifying *abpT* deletion |
| ***abpT KO rev*** | TCCTGCACCTTGGATAGTTATCTC | verifying *abpT* deletion |
| ***V4 for-1***[(b)] | CGTATCGCCTCCCTCGCGCCATCAGACGAGTGCGTAYTGGGYDTAAAGNG[(d)] | amplifying V4 region of bacterial 16S rRNA gene |
| ***V4 rev***[(b)] | GCCTTGCCAGCCCGCTCAGTACNVGGGTATCTAATCC[(d)] | amplifying V4 region of bacterial 16S rRNA gene |
| ***V4 for-2***[(c)] | CCATCTCATCCCTGCGTGTCTCCGACTCAGACGAGTGCGTAYTGGGYDTAAAGNG[(d)] | amplifying V4-V5 region of bacterial 16S rRNA gene |
| ***V5 rev***[(c)] | CCTATCCCCTGTGTGCCTTGGCAGTCTCAGCCGTCAATTYYTTTRAGTTT[(d)] | amplifying V4-V5 region of bacterial 16S rRNA gene |

(a) From the annotated sequence of *L. salivarius* UCC118 [13].
(b) Primers used for the mouse trial pyrosequencing analysis.
(c) Primers used for the pig trial pyrosequencing analysis.
(d) Primers used for the pyrosequencing analysis. Each primer contains a sequence homologue to the V4 or V4-V5 region of the bacterial 16S rRNA gene and a 454 adaptor sequence (underlined) used for sequencing. Each forward primer contains in addition a barcode (in red) that was used to distinguish between each sample in the pool of amplicons (a total of 24 different barcodes were used in these studies).