

Table S1. Primer sequences of RT-PCR

Gene <sup>1</sup>	Primer sequence (5'–3')	Size (bp) Product length	Accession no.
$\beta$ -actin	Forward: TCTGGCACCACACCTTCT	144	XM_021086047.1
	Reverse: TGATCTGGGTCATCTTCTCAC		
ZO-1	Forward: CAGCCCCGTACATGGAGA	114	XM_021098896.1
	Reverse: GCGCAGACGGTGTCATAGTT		
IL-1 $\beta$	Forward: TCTGCCCTGTACCCCAACTG	64	XM_02108584.7
	Reverse: CCAGGAAGACGGGCTTTTG		
Mucin2	Forward: GGTGCTGCTGAGCTGGACAGT	181	XM_021082584.1
	Reverse: TGCCTCCTCGGGGTCGTCAC		
Mucin1	Forward: GCTGGTCTGTATTCTGGTCGC	195	XM_021089730.1
	Reverse: TCATAGGGGTTCGTTTGGTA		
Claudin-1	Forward: TCTTAGTTGCCACAGCATGG	106	NM_001244539.1
	Reverse: CCAGTGAAGAGAGCCTGACC		
TNF- $\alpha$	Forward: TGGCCCCTTGAGCATCA	68	NM_214022.1
	Reverse: CGGGCTTATCTGAGGTTTGAGA		

<sup>1</sup> $\beta$ -actin, beta actin; ZO-1, zonula occludens-1, IL-1 $\beta$ , interleukin-1 $\beta$ ; MUC1, mucin-1; MUC2, mucin-2; TNF- $\alpha$ , tumor necrosis factor- $\alpha$

Table S2. Intestinal flora RT-PCR primers and probes

Item	Primers/probes	Product size (bp)	Annealing temperature
Total bacteria	Forward: ACTCCTACGGGAGGCAGCAG	61.5	200
	Reverse: ATTACCGCGGCTGCTGG		
<i>Bifidobacterium</i>	Forward: CGCGTCCGGTGTGAAAG	57.9	121
	Reverse: CTTCCCGATATCTACACATTCCA		
	Probe: ATTCCACCGTTACACCGGGAA		
<i>Lactobacillus</i>	Forward: GAGGCAGCAGTAGGGAATCTTC	53	126
	Reverse: CAACAGTTACTCTGACACCCGTTCTTC		
	Probe: AAGAAGGGTTTCGGCTCGTAAACTCTGTT		
<i>Bacillus</i>	Forward: GCAACGAGCGCAACCCCTTGA	57.9	92
	Reverse: TCATCCCCACCTTCTCCGGT		
	Probe: CGGTTTGTCACCGGCAGTCACCT		
<i>E.coli</i>	Forward: CATGCCGCGTGTATGAAGAA	55	96
	Reverse: CGGGTAACGTCAATGAGCAAA		
	Probe: AGGTATTAACCTTACTCCCTTCCTC		