Table S1. Sequences of primers for genes and intestinal bacteria

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| GENE | Primer sequence (5’ –3’) | Annealing temperature (℃) | Product size (bp) |
| β-Actin | F: TCTGGCACCACACCTTCT | 60 | 114 |
| R: TGATCTGGGTCATCTTCTCAC |
| SGLT-1 | F: AGAAGGGCCCCAAAATGACC | 60 | 96 |
| R: TGTTCACTACTGTCCGCCAC |
| GLUT-2 | F: TGGAATCAGCCAACCTGTTT | 60 | 156 |
| R: ACAAGTCCCACCGACATGA |
| CAT-1 | F: TGCCCATACTTCCCGTCC | 60 | 192 |
| R: GGTCCAGGTTACCGTCAG |
| LAT-1 | F: GCCCATTGTCACCATCATC | 60 | 216 |
| R: GAGCCCACAAAGAAAAGC |
| FATP-1 | F: GGAGTAGAGGGCAAAGCAGG | 60 | 208 |
| R: AGGTCTGGCGTGGGTCAAAG |
| FATP-4 | F: TTCATCAAGACGGTCAGGCG | 60 | 133 |
| R: AGACGGTGGCAGCGAATAAG |
| Zo-1 | F: TGGCATTATTCGCCTTCATAC | 60 | 171 |
| R: AGCCTCATTCGCATTGTTT |
| Occludin | F: CTACTCGTCCAACGGGAAAG | 60 | 158 |
| R: ACGCCTCCAAGTTACCACTG |
| Claudin-1 | F: GCCACAGCAAGGTATGGTAAC | 60 | 140 |
| R: AGTAGGGCACCTCCCAGAAG |
| Total bacteria | F: ACTCCTACGGGAGGCAGCAG | 60 | 200 |
| R: ATTACCGCGGCTGCTGG |
| *Lactobacillus* | F: GAGGCAGCAGTAGGGAATCTTC | 60 | 126 |
| R: CAACAGTTACTCTGACACCCGTTCTTC |
| P: AAGAAGGGTTTCGGCTCGTAAAACTCTGTT |
| *Escherichia coli* | F: CATGCCGCGTGTATGAAGAA | 60 | 96 |
| R: CGGGTAACGTCAATGAGCAAA |
| P: AGGTATTAACTTTACTCCCTTCCTC |
| *Bifidobacterium* | F: CGCGTCCGGTGTGAAAG | 60 | 121 |
| R: CTTCCCGATATCTACACATTCCA |
| P: ATTCCACCGTTACACCGGGAA |
| *Bacillus* | F: GCAACGAGCGCAACCCTTGA | 60 | 92 |
| R: TCATCCCCACCTTCCTCCGGT |
| P: CGGTTTGTCACCGGCAGTCACCT |

SGLT-1, sodium/glucose cotransporter 1; GLUT-2, glucose transporter 2; CAT-1, cationic AA transporter 1; LAT-1, L amino acid transporter 1; FATP, fatty acid transport proteins; ZO-1, zonula occludens 1