

## *Supplementary Material*

### 1 Supplementary Tables and Figures

#### 1.1 Supplementary Tables



**Supplementary Table S1.** The mobile phase gradient of LC-MS.

**Supplementary Table S2.** Analysis of the extract of ACE by LC-MS.

**Supplementary Table S3.** Primer sequences used in qRT-PCR.

**Supplementary Figure S1.** The composition of gut microbiota in mice from different groups. **(A)** The rarefaction curves of two groups. **(B)** The shannon curves of two groups. **(C)** *Firmicutes/Bacteroidetes* ratio of two groups. **(D)** Average relative abundance at the class level in each group. **(E)** The statistical analysis of microbiota at the class level. **(F)** Average relative abundance at the order level in each group. **(G)** The statistical analysis of microbiota at the order level. **(H)** The bacterial clades shown with the taxonomic cladogram. Biomarker taxa are highlighted by colored circles and shaded areas. Each circle's diameter reflects the abundance of that taxa in the community. **(I)** Bacterial clades between two groups analyzed by Linear discriminant analysis (LDA) coupled with effect size (LEfSe). Statistical analysis of *Firmicutes/Bacteroidetes* ratio was conducted by using an independent student-t test, and data were shown as means  $\pm$  S.E.M (n = 8 per group). Statistical analysis was conducted at the Class and Orde taxonomical level by using Wilcoxon rank-sum test, separately (n = 8 per group). \* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$ .