

Figure S1. L9 administration enhanced intestinal villus height at physiology.

(A) Schematic showing that a low dose (L9-L), medium dose (L9-M) or high dose (L9-H) of L9 was administered to eight-week-old mice by gavage. NS was gavaged as a control.

(B) Body weight changes in each group. In the NS group and the L9-L group, n = 4, one mouse in each group died during gavage; in the L9-M group and the L9-H group, n = 5.

(C-D) Quantification of colon length (C) and small intestine length (D) for each group. In the NS group and the L9-L group, n = 4, one mouse in each group died during gavage; in the L9-M group and the L9-H group, n = 5.

(E) H&E staining showing the histological morphology of the small intestine and colon in the different groups. Scale bar: 100 μ m.

(F) Quantification of the villus height of the duodenum (Duo), jejunum (Jej) and ileum (Ile) in each group. In the NS group and the L9-L group, n = 4, one mouse in each group died during gavage; in the L9-M group and the L9-H group, n = 5.

(G) Quantification of the crypt depth of the small intestine and colon (Col) in each group. In the NS and the L9-L groups, n = 4, one mouse in each group died during gavage; in the L9-M and the L9-H groups, n = 5.

(H) Villus height to crypt depth ratio in each group. In the NS group and the L9-L group, n = 4, one mouse in each group died during gavage; in the L9-M group and the L9-H group, n = 5.

Figure S2. L9 increased the ratio of Bacteroidetes to Firmicutes and expanded the abundance of butyrate-producing bacteria at the genus level.

(A) Ratio of Bacteroidetes to Firmicutes between the two groups (n = 7).

(B) Linear discriminant analysis (LDA) scores showing the abundance of the top ten genera in the DSS+NS and the DSS+L9 groups. n = 7 in each group.

(C) The top ten differentially abundant genera between the DSS+NS and the DSS+L9 groups. n = 7 in each group.