Online resource 1 Model of chronic colitis induced by DSS cycles. The chronic colitis was induced by 5 periodical cycles of DSS administration (6 days of DSS administration following by 14 days of water only). Flow cytometry of cecal lymph node at third and fifth cycle of chronic colitis induction. (A) Colon lengths from rectum to cecum. (B) Myeloperoxidase (MPO); (C) eosinophil peroxidase (EPO) activity. (D) Number of T (CD4$^+$, CD8$^+$) and B (CD19$^+$) lymphocytes at third and fifth cycle of DSS. (E) Activated T cells - CD4$^+$CD44$^{hi}$ and CD4$^+$CD69$^{hi}$. (C) Activated T cells - CD8$^+$ CD69$^+$. The data represent mean ± SEM. n=5-10 mice in each group. P<0.05; # versus H$_2$O; * versus DSS 3C
Experimental protocol of chronic colitis induction. Mice were fed with high fiber diet for 20 days prior to the DSS administration (3%) or fed with high fiber diet at the beginning of the third, fourth (data not shown) or fifth cycles of DSS administration. The acetate was started at the beginning of the third cycle as a treatment. (B) Groups division - Pre-HF DSS: mice fed with the high fiber diet prior to the DSS administration; Chow diet: mice fed with the control/chow diet; 3HF DSS: mice were treated/fed with the high fiber diet at the third cycle of DSS until the sacrifice; 5HF DSS: mice were treated/fed with the high fiber diet at the fifth cycle of DSS until the sacrifice; Acet. DSS: mice were treated in drinking water with acetate at the third cycle of DSS until the sacrifice; H₂O: the control mice received normal filter water throughout the experiment (H₂O group)
Online resource 3

A – Protocol of chronic colitis induction

BL, HF or BL+HF treatment

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BL, HF and BL+HF DSS

B – Groups division

Chow DSS

BL

HF

BL+HF

Chow DSS

H2O

H2O

Online resource 3 Experimental protocol of chronic colitis II. (A) Protocol of chronic colitis induction. Mice were fed with the high fiber diet for 20 days prior to the DSS administration (3%) and/or fed with high fiber diet at the beginning of the third cycles of DSS administration and the probiotic until the sacrifice. (B) Groups division Pre-HF DSS: mice fed with the high fiber diet prior to the DSS administration; Chow diet: mice fed with the control/chow diet; BL DSS: mice were treated with the *Bifidobacterium longum* (BL) at the third cycle of DSS until the sacrifice; HF DSS: mice were treated/fed with the high fiber diet at the third cycle of DSS until the sacrifice; BL+HF DSS mice were treated/fed with the *Bifidobacterium longum* (BL) and high fiber diet at the third cycle of DSS until the sacrifice; H2O: the control mice received normal filter water throughout the experiment (H2O group)
Preventive rather than therapeutic treatment with high fiber diet attenuates clinical and inflammatory markers of acute and chronic DSS-induced colitis in mice

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