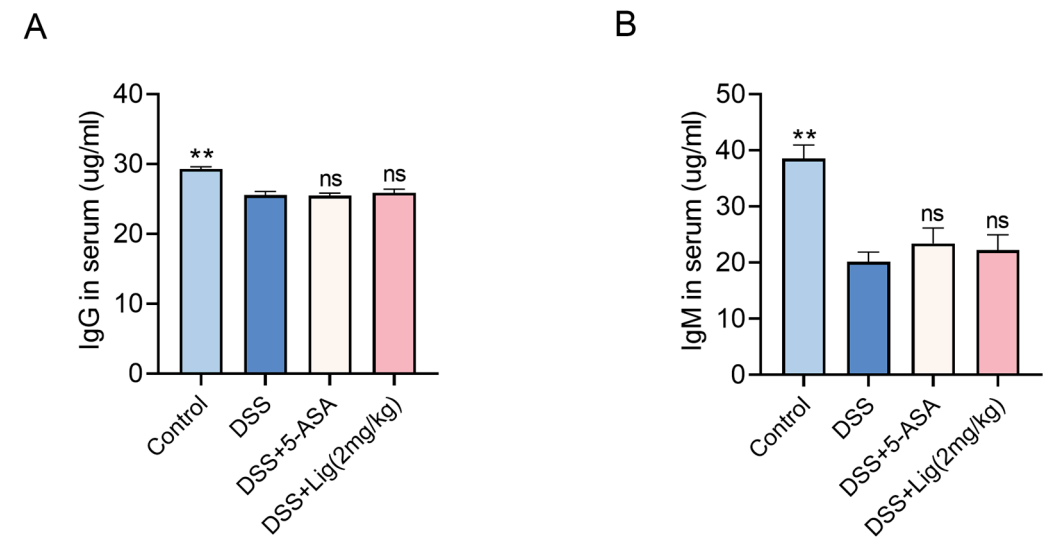
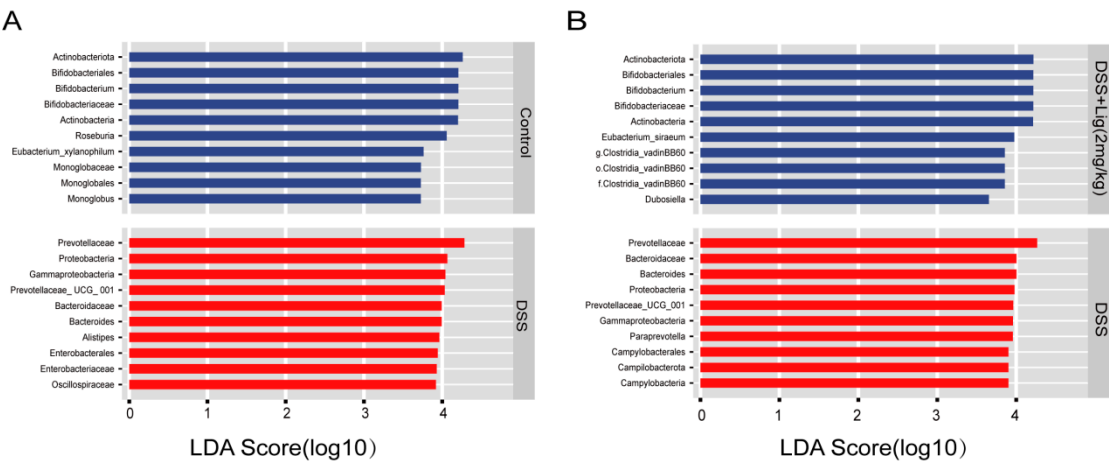


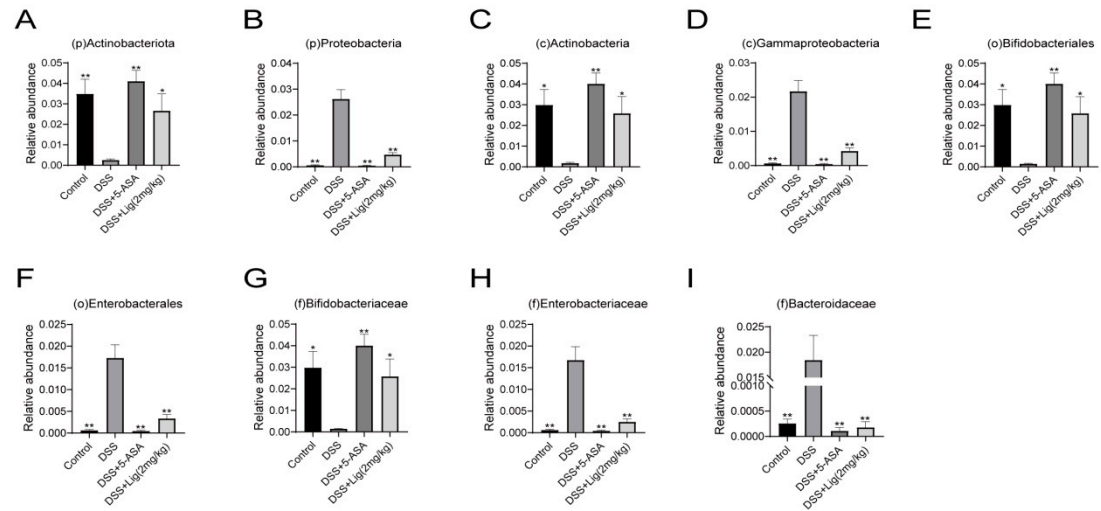
Supplementary Materials



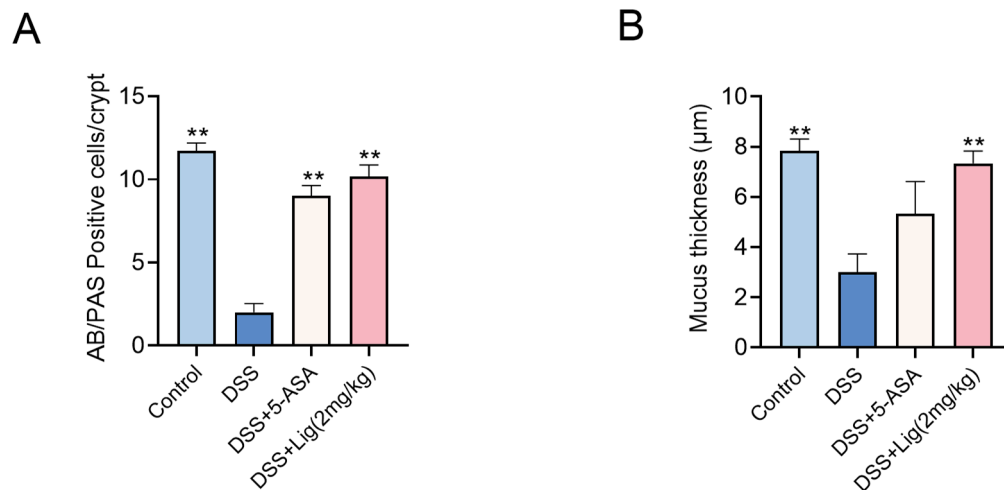
**Supplementary Figure S1.** The concentrations of IgG (**A**) and IgM (**B**) in serum. Data were presented as means  $\pm$  SEM. \*  $p < 0.05$  and \*\*  $p < 0.01$  vs. DSS group, ns means  $p > 0.05$  vs. DSS group,  $n = 5$ .



**Supplementary Figure S2.** Top ten Linear discriminant analysis (LDA) score for different taxa abundances (**A**) between control and DSS groups and (**B**) between DSS + Lig (2 mg/kg) and DSS groups,  $n = 5$ .



**Supplementary Figure S3.** Relative abundance of predominant bacteria is shown for the phylum (A,B), class (C,D), order (E,F) and family (G–I) levels. Data are presented as means  $\pm$  SEM. \*  $p < 0.05$  and \*\*  $p < 0.01$  vs. DSS group, ns means  $p > 0.05$  vs. DSS group,  $n = 5$ .



**Supplementary Figure S4.** (A) The quantification of AB/PAS Positive cells/crypt in colon tissue. (B) Mucus thickness of colon tissue. Data are presented as means  $\pm$  SEM. \*  $p < 0.05$  and \*\*  $p < 0.01$  vs. DSS group, ns means  $p > 0.05$  vs. DSS group,  $n = 5$ .

**Table S1.** The composition of diet for mice.

<b>Energy Ratio</b>	
protein	20.6%
fat	12.0%
carbohydrate	67.4%
gross heat	3530 Kcal/kg
<b>Vitamin</b>	
Vitamin A, IU/kg	≥7000
Vitamin D, IU/kg	≥800
Vitamin E, IU/kg	≥60
Vitamin E, mg/kg	≥3.0
Vitamin B1, mg/kg	≥8
Vitamin B2, mg/kg	≥10
Vitamin B6, mg/kg	≥6
Vitamin B12, mg/kg	≥0.02
niacin, mg/kg	≥45
pantothenic acid, mg/kg	≥17
folacin, mg/kg	≥4.0
biotin, mg/kg	≥0.10
bilineurine, mg/kg	≥1250
Vitamin C, mg/kg	/
<b>Mineral Substance</b>	
Magnesium (Mg), g/kg	≥2.0
Potassium (K), g/kg	≥5.0
Sodium (Na), g/kg	≥2.0
Ferrum (Fe), mg/kg	≥100
Manganese (Mn), mg/kg	≥75
Copper (Cu), mg/kg	≥10
Zinc (Zn), mg/kg	≥30
Iodine (I), mg/kg	≥0.5
Selenium (Se), mg/kg	0.1~0.2