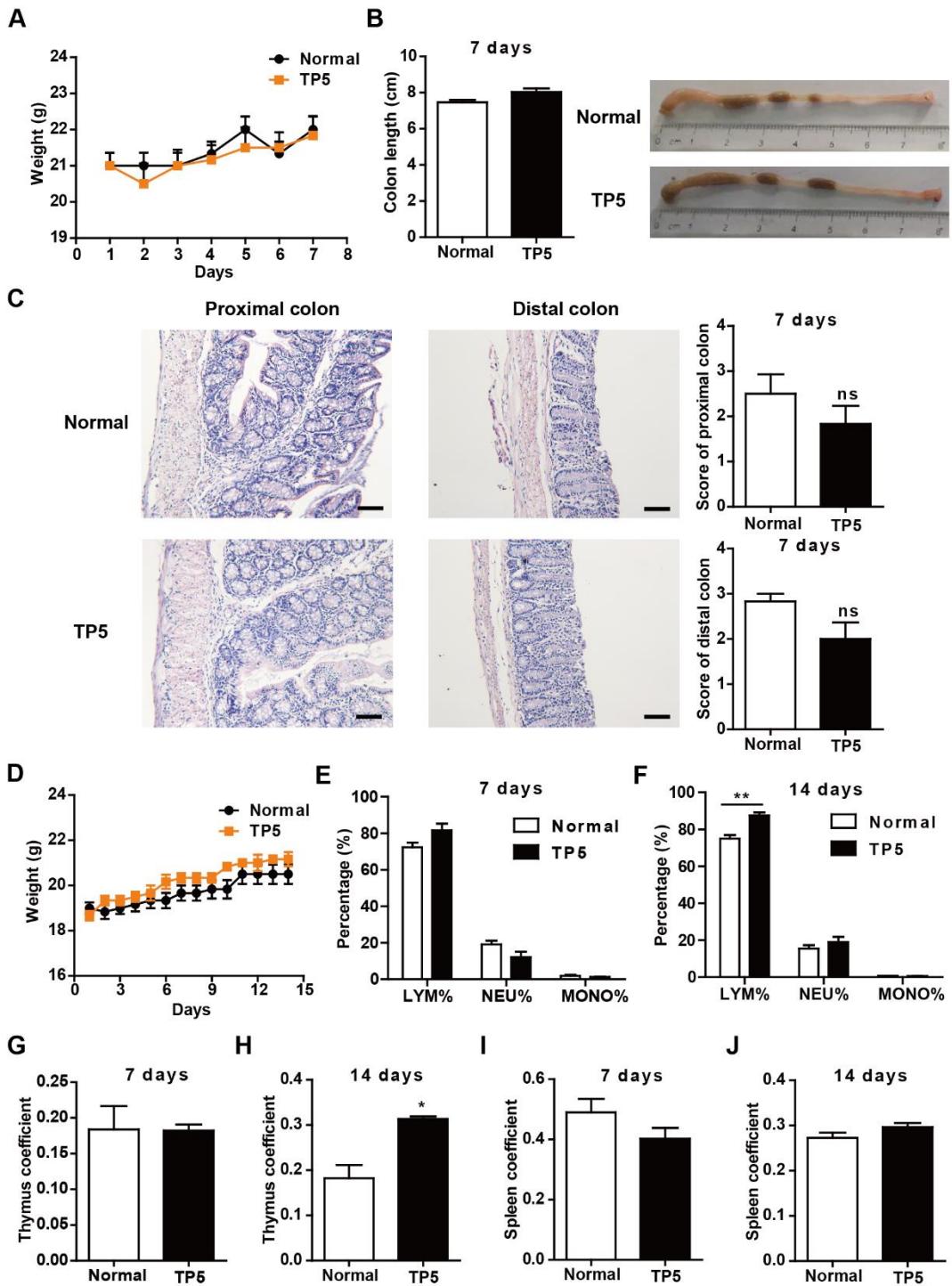


## Supplementary Figures



**Figure S1.** TP5 has no significant effect on the physiological function of normal mice.

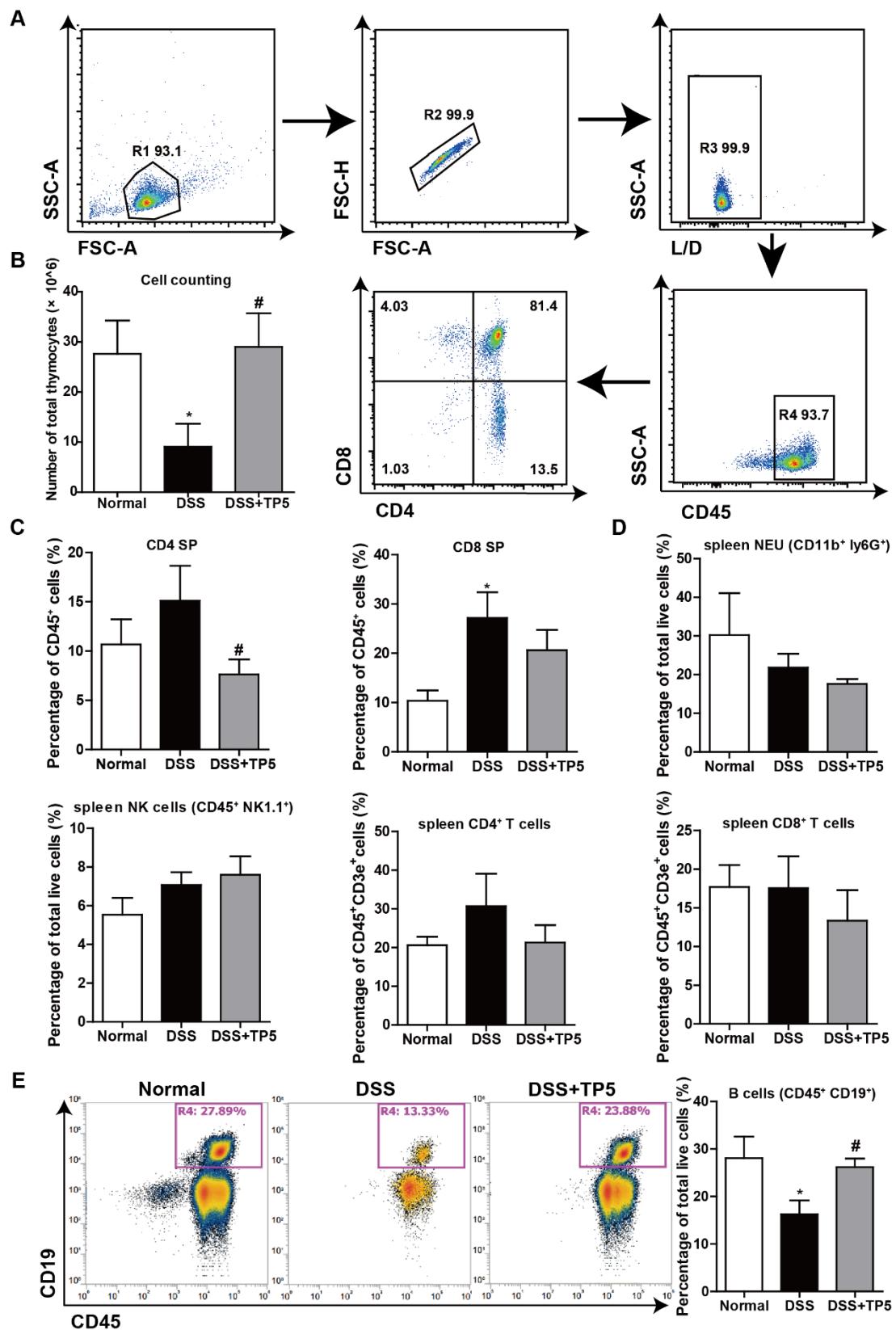
(A-C, E, G, I) The mice were treated with saline or 20 mg/kg TP5 for 7 days. (n=5). (A)

Body weight curve of mice for 7 days. (n=5). (B) Colon length and representative colon

photographs in the two groups. (C) Left: Representative H&E staining of proximal

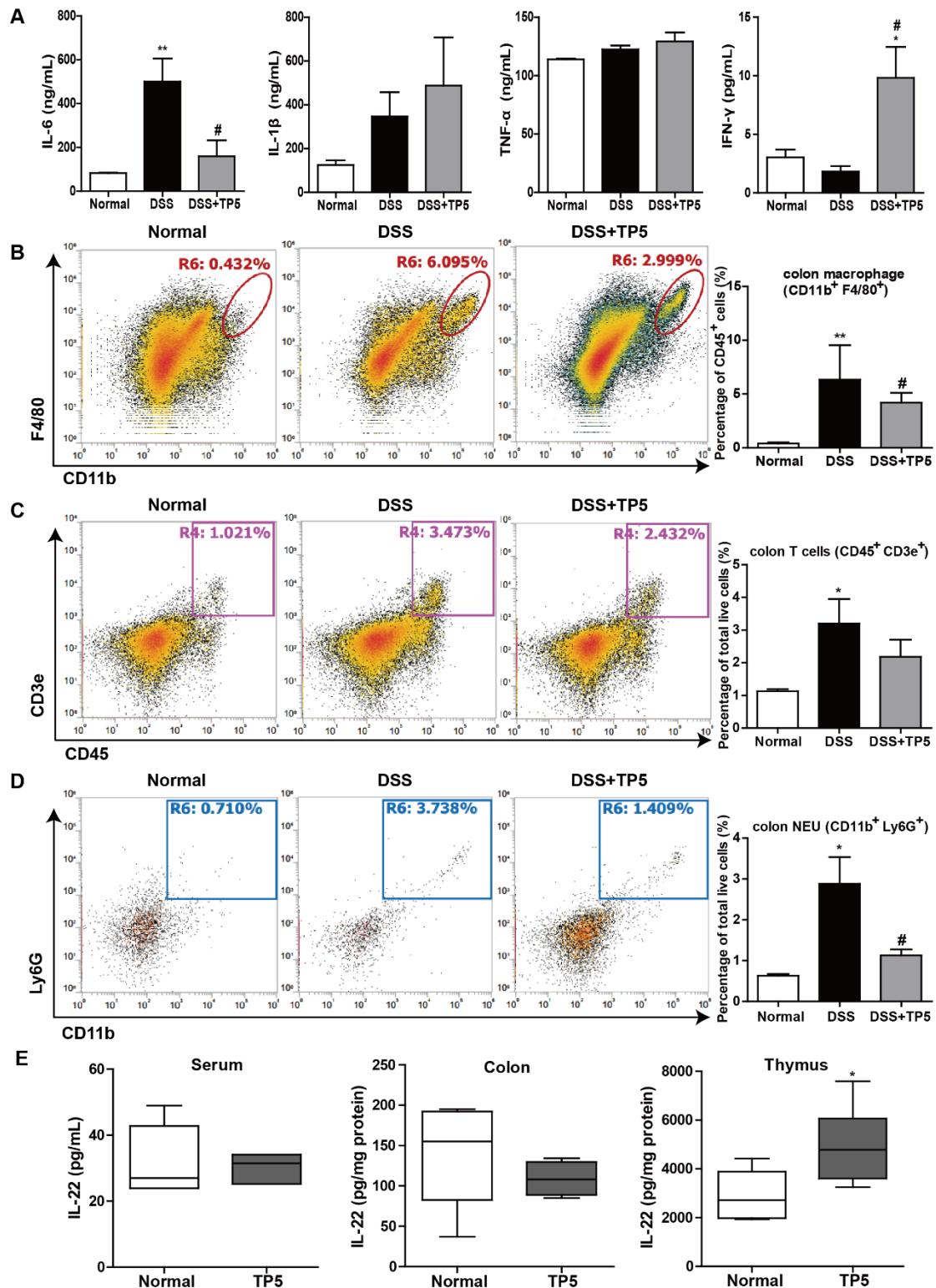
colon and distal colon. Scale bar represents 50  $\mu$ m. Right: Histological score. (D, F, H, J) Mice were treated with saline or 20 mg/kg TP5 for 14 days. (n=5). (D) Body weight curve of mice for 14 days. (E) Percentage of lymphocytes, neutrophils, and monocytes in peripheral blood in mice treated for 7 days. (F) The percentage of lymphocytes, neutrophils, and monocytes in peripheral blood in mice treated for 14 days. (G) Thymus coefficient of saline- or TP5-treated mice for 7 days. (H) Thymus coefficient of saline- or TP5-treated mice for 14 days. (I) Spleen coefficient of saline- or TP5-treated mice for 7 days. (J) Spleen coefficient of saline- or TP5-treated mice for 14 days.

\*  $P < 0.05$ , compared with the normal group. DSS: dextran sulfate sodium; LYM: lymphocyte; MONO: monocyte; NEU: neutrophil; TP5: thymopentin. At least two independent experiments were performed.



**Figure S2.** Immune cell analysis of the thymus and spleen. (A) Gating strategy for lymphocyte analysis by flow cytometry. (B) The numbers of total thymocytes detected

by cell counter. (n=4-5). (C) Flow cytometry analysis of CD4 single positive (CD4 SP) cells (CD45<sup>+</sup>, CD4<sup>+</sup>) and CD8 single positive (CD8 SP) cells (CD45<sup>+</sup>, CD8<sup>+</sup>) in the thymus. (n=4-5). (D) Flow cytometry analysis of NEU (CD45<sup>+</sup>, CD11b<sup>+</sup>, Ly6G<sup>+</sup>), NK cells (CD45<sup>+</sup>, NK1.1<sup>+</sup>), CD4 T cells (CD45<sup>+</sup>, CD3e<sup>+</sup>, CD4<sup>+</sup>), and CD8 T cells (CD45<sup>+</sup>, CD3e<sup>+</sup>, CD8<sup>+</sup>) in the spleen. (n=4-5). (E) Flow cytometry analysis of B cells (CD45<sup>+</sup>, CD19<sup>+</sup>) in the spleen. (n=4-5). \* P < 0.05, compared with the normal group; # P < 0.05, compared with the DSS group. DSS: dextran sulfate sodium; NEU: neutrophil; SP: single positive; TP5: thymopentin. At least two independent experiments were performed.



**Figure S3.** Detection of cytokines and inflammatory cells in the colon. (A) ELISA detection of IL-6, IL-1 $\beta$ , TNF- $\alpha$ , and IFN- $\gamma$  in the colon. (n=4-5). (B-D) Flow cytometry analysis of macrophages (CD45 $^{+}$ , CD11b $^{+}$ , F4/80 $^{+}$ ), T cells (CD45 $^{+}$ , CD3e $^{+}$ ), and NEU

(CD45<sup>+</sup>, CD11b<sup>+</sup>, Ly6G<sup>+</sup>) in colon. (n=4-5). (E) Concentration of IL-22 in serum, colon, and thymus in mice treated for 14 days. (n=5). \*  $P < 0.05$ , \*\*  $P < 0.01$ , compared with the normal group; #  $P < 0.05$ , compared with the DSS group. DSS: dextran sulfate sodium; NEU: neutrophil; TP5: thymopentin.

**Table1.** The primer sequences used for qPCR.

| Gene           |   | Sequence (5' to 3')     |
|----------------|---|-------------------------|
| mTjp1          | F | GCCGCTAAGAGCACAGCAA     |
|                | R | GCCCTCCTTTAACACATCAGA   |
| mOcln          | F | TTGAAAGTCCACCTCCTACAGA  |
|                | R | CCGGATAAAAAGAGTACGCTGG  |
| mCldn2         | F | CAACTGGTGGGCTACATCCTA   |
|                | R | CCCTTGAAAAGCCAACCG      |
| mIL-6          | F | TAGTCCTCCTACCCCAATTCC   |
|                | R | TTGGTCCTTAGCCACTCCTTC   |
| mIL-1 $\beta$  | F | CAATGGACAGAATATCAAC     |
|                | R | ACAGGACAGGTATAGATT      |
| mIL-1 $\alpha$ | F | CGAAGACTACAGTTCTGCCATT  |
|                | R | GACGTTTCAGAGGTTCTCAGAG  |
| mTNF- $\alpha$ | F | TTCTGTCTACTGAACCTTC     |
|                | R | CCATAGAACTGATGAGAG      |
| mIL-18         | F | GACTCTCGTCAACTCAAGG     |
|                | R | CAGGCTGTCTTGTCAACGA     |
| mIFN- $\gamma$ | F | AGGCAGTATCACTCATTGT     |
|                | R | CAGCAGGTTATCATCATCATC   |
| mCCL2          | F | ATGAGATCAGAACCTACAAC    |
|                | R | TCCTACAGAAGTGCTTGAG     |
| mIL-10         | F | GGC CCA GAA ATC AAG GAG |
|                | R | CCT TGT AGA CAC CTT GGT |
| mIL-23a        | F | AATAATGTGCCCGTATCCAGT   |
|                | R | GCTCCCCTTGAAGATGTCAG    |
| mIL-22         | F | GAGGAGTCAGTGCTAAGG      |
|                | R | CATTCTTCTGGATGTTCTGG    |
| mIL-12         | F | ACATCTGCTGCTCCACAAG     |
|                | R | GGTGCTTCACACTTCAGGAA    |
| mTGF- $\beta$  | F | GGATACCAACTATTGCTTCAG   |
|                | R | TGTCCAGGCTCCAAATATAG    |
| mMUC2          | F | ACCATTACCACCACTACAG     |
|                | R | CAGGAGCACTACAGACAT      |

| Gene             |   | Sequence (5' to 3')     |
|------------------|---|-------------------------|
| mlysozyme        | F | GAGACCGAAGCACC GACTATG  |
|                  | R | CGGTTTGACATTGTGTT CGC   |
| mROR $\gamma$ t  | F | GACCCACACCTCACAAATTGA   |
|                  | R | AGTAGGCCACATTACACTGCT   |
| mNF-AT           | F | TCATCCAACAACAGACTGCC    |
|                  | R | GGGAGGGAGGT CCTGAAA ACT |
| mstat3           | F | AGCTGGACACACGCTACCT     |
|                  | R | AGGAATCGGCTATATTGCTGGT  |
| mAhr             | F | AGCCGGTGCAGAAA CAG TAA  |
|                  | R | AGGC GGTCTAACTCTGTGTT C |
| m $\beta$ -actin | F | ACCACACCTCTACAATGAG     |
|                  | R | ACGACCAGAGGCATACAG      |
| hTjp1            | F | ACCAGTAAGTCGT CCTGATCC  |
|                  | R | TCGGCCAAATCTTCTCACTCC   |
| h $\beta$ -actin | F | GCGTGACATTAAGGAGAAG     |
|                  | R | GAAGGAAGGCTGGAAGAG      |