

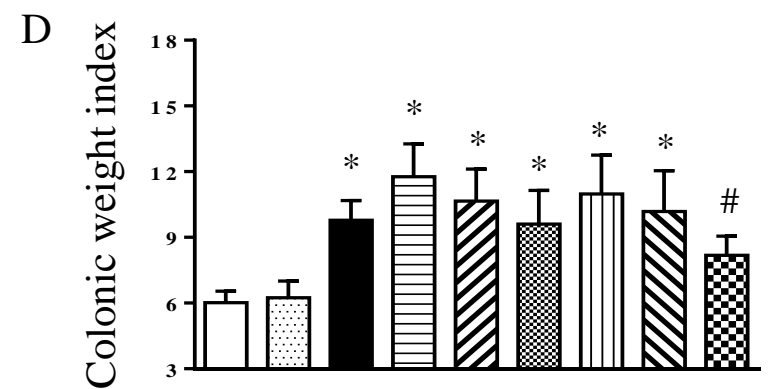
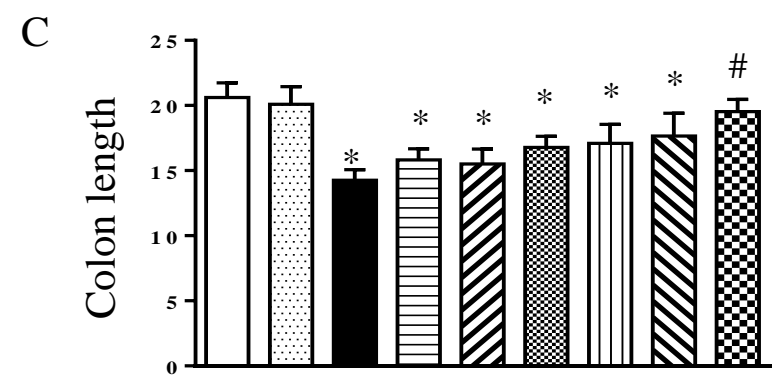
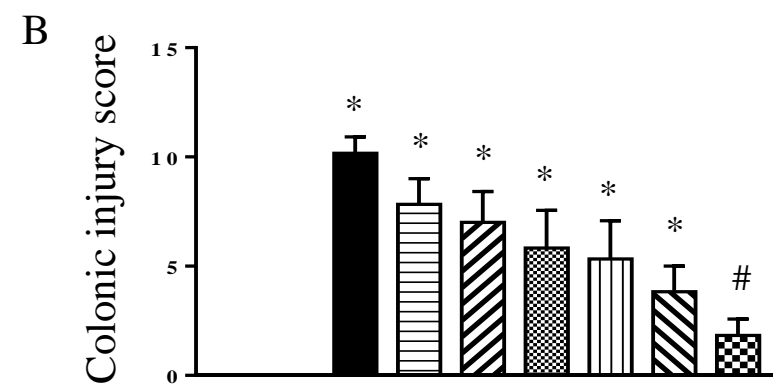
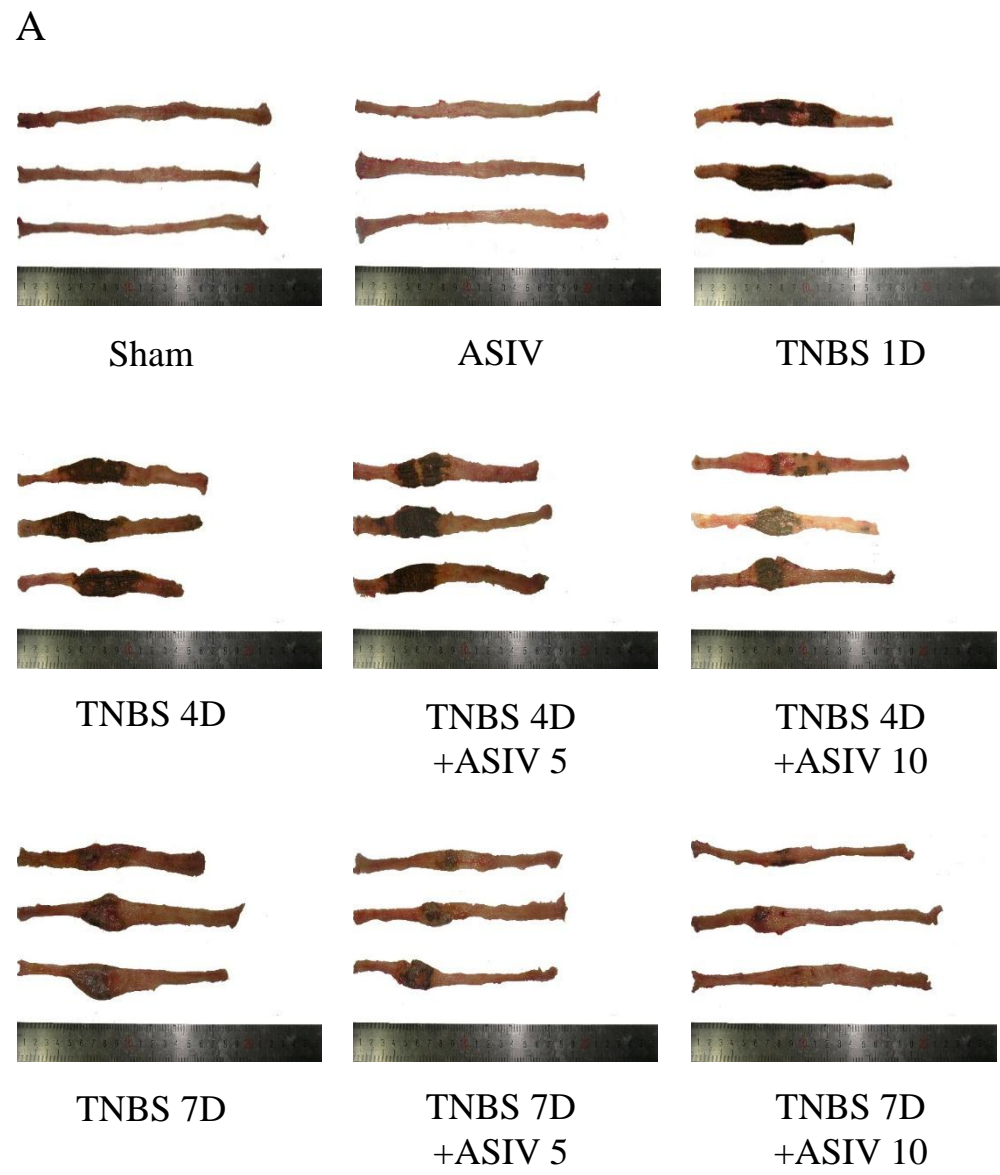
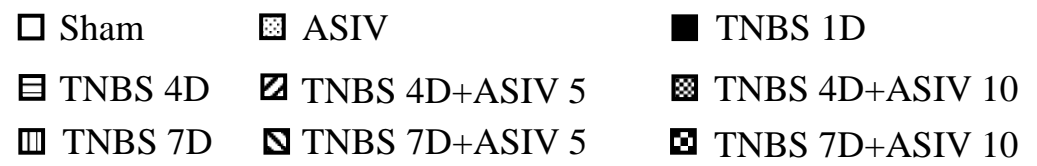
Astragaloside IV ameliorates 2,4,6-trinitrobenzene sulfonic acid (TNBS)-induced colitis implicating regulation of energy metabolism

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Wang^{1,3,4,5}, Jing-Yan Han^{1,3,4,5,*}

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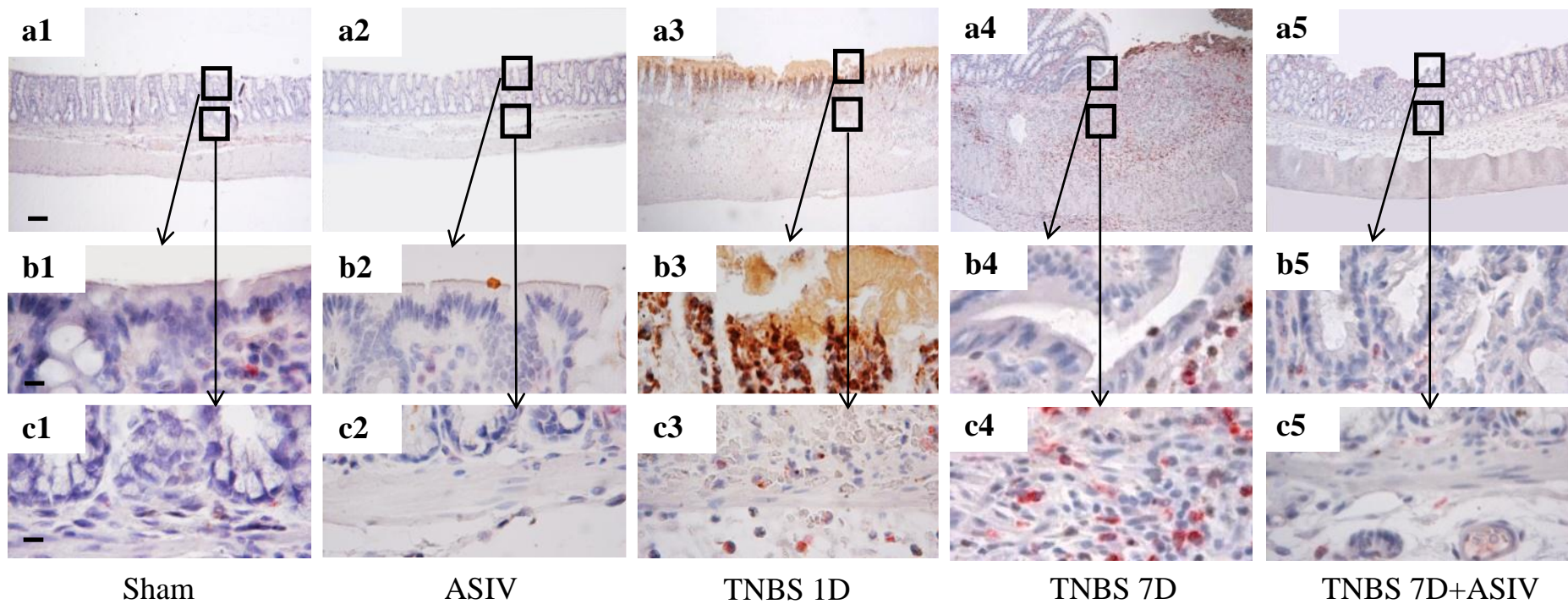
¶Co-first author of this paper and contribute equally

Supplement Figure 1

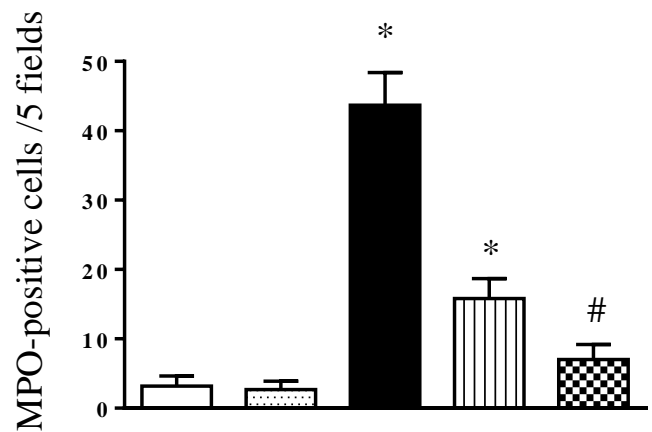


Supplement Figure 2

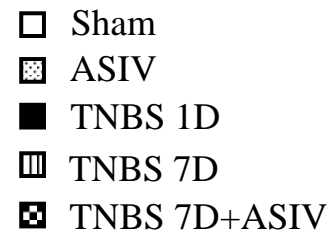
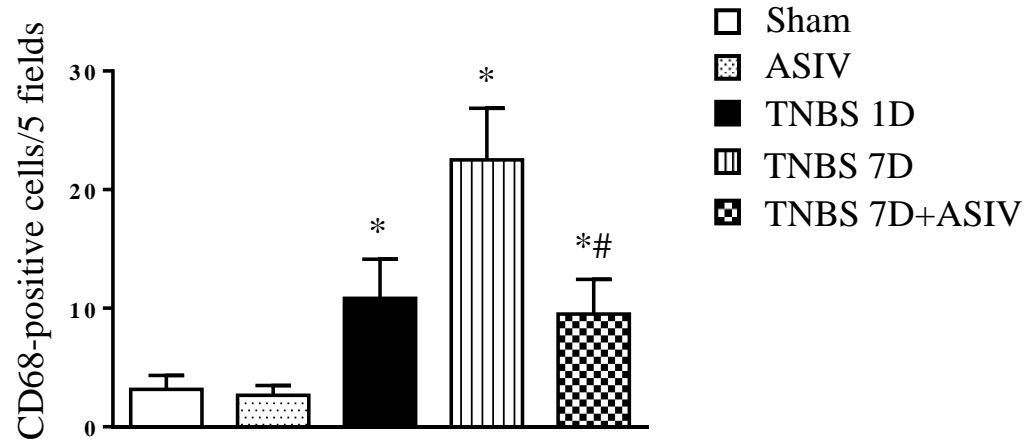
A



B

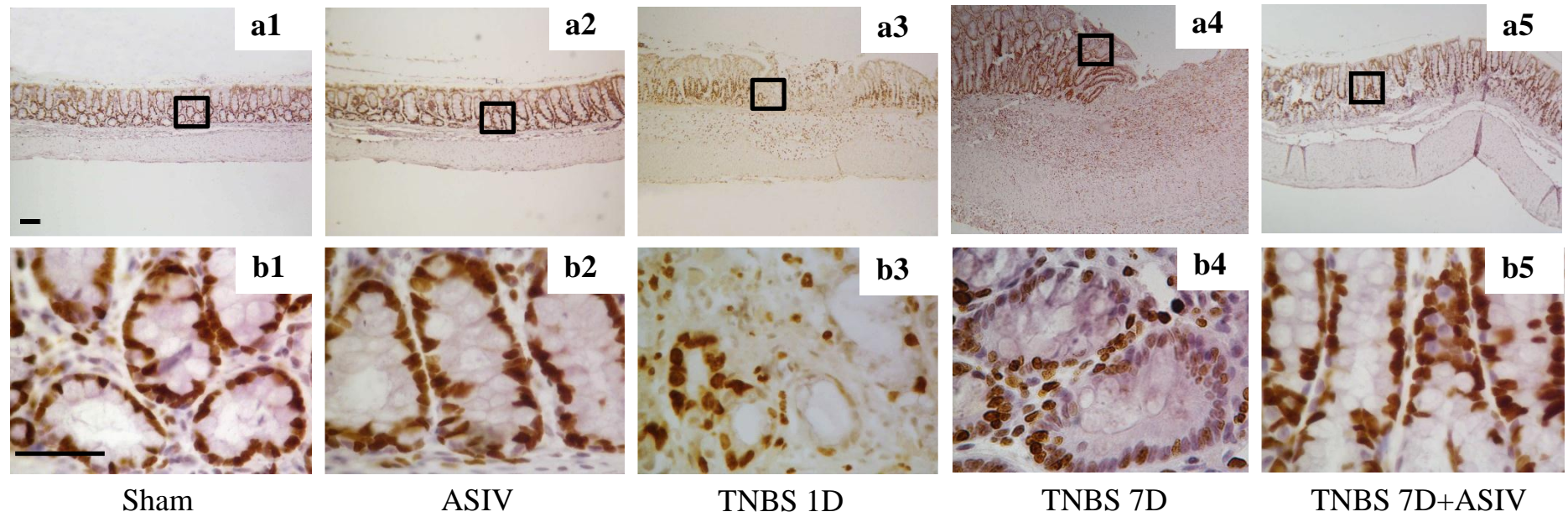


C

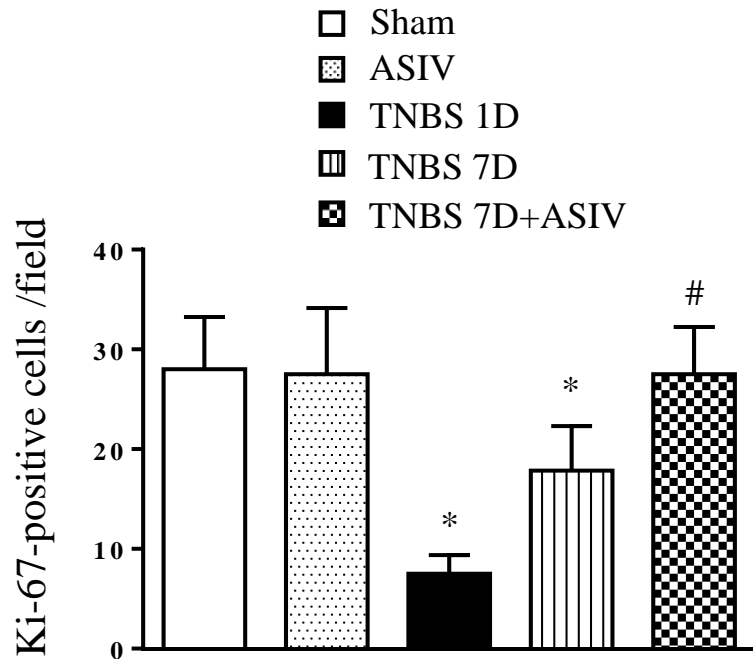


Supplement Figure 3

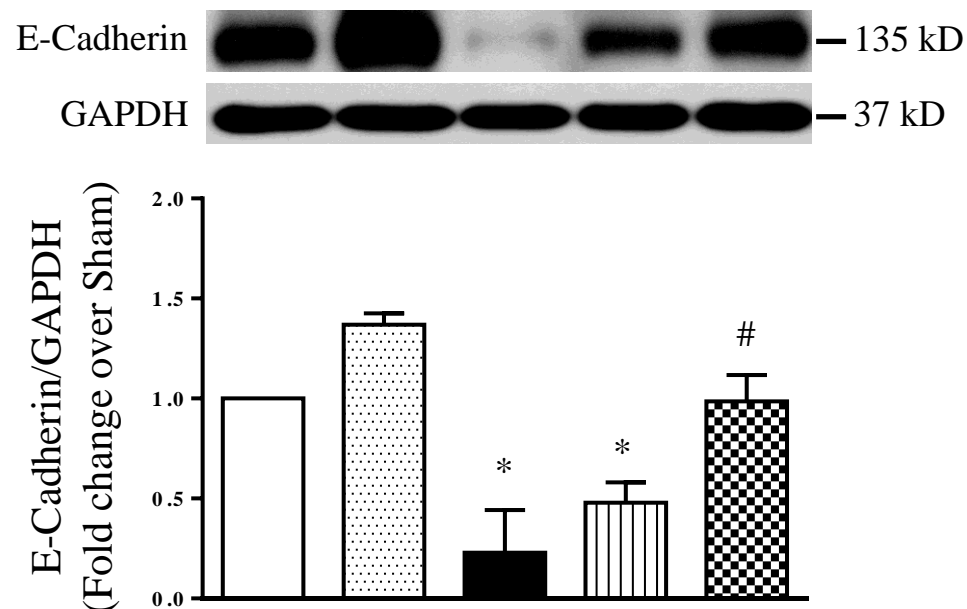
A



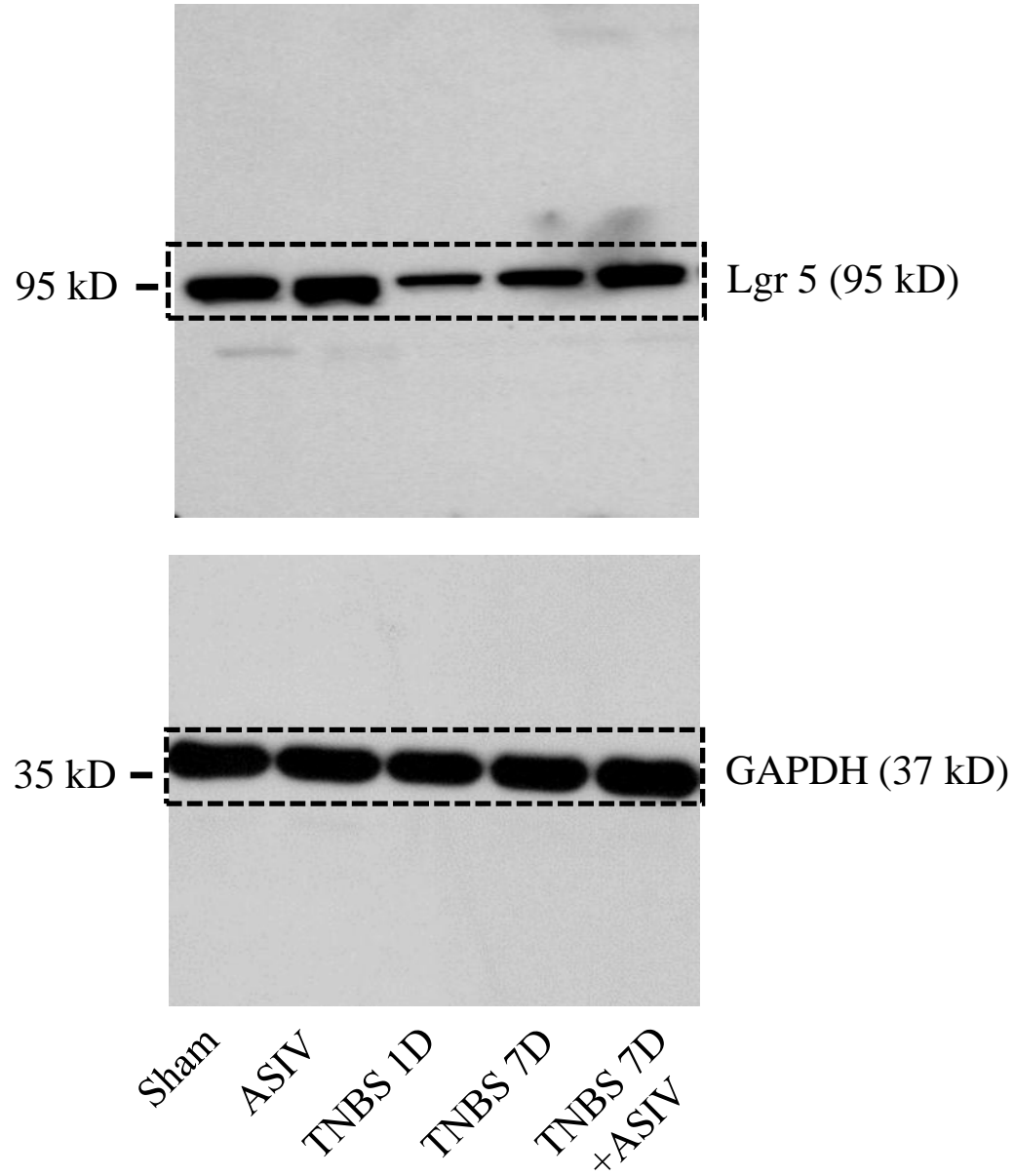
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C

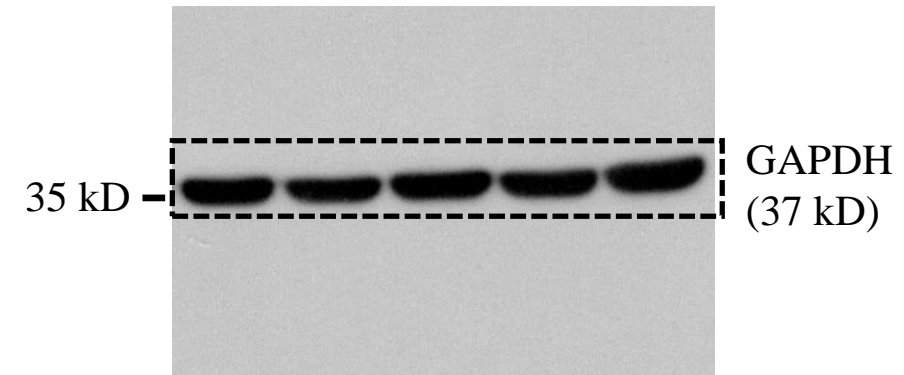
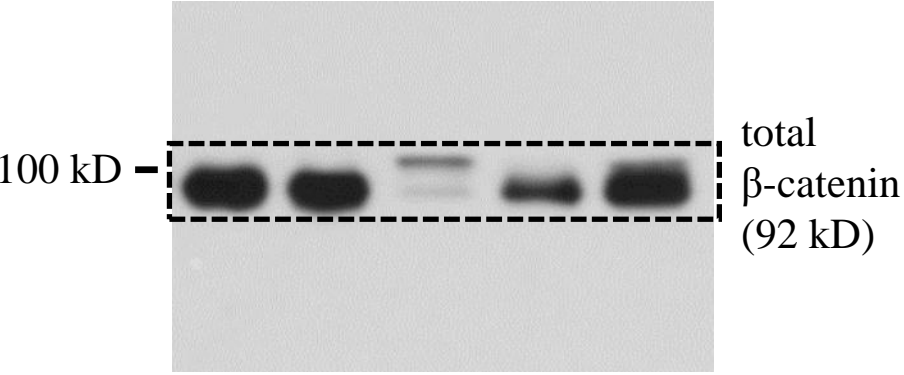


Supplement Figure 4



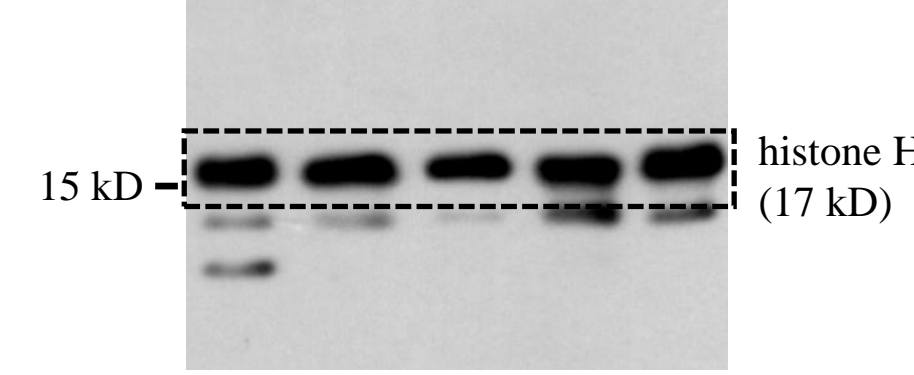
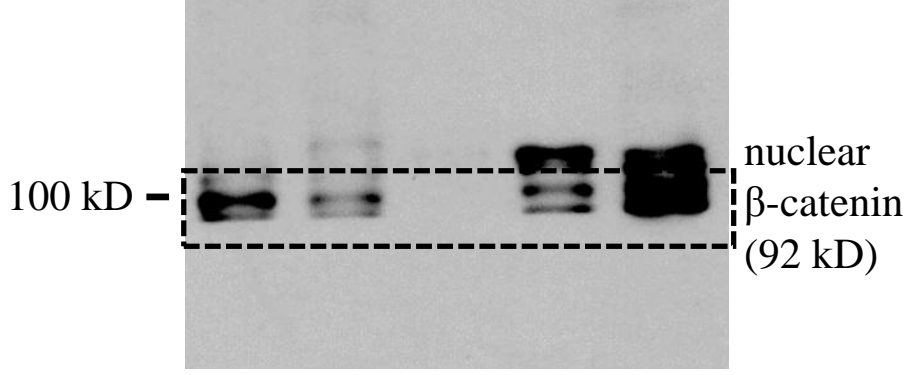
Supplement Figure 5

Fig. 5A



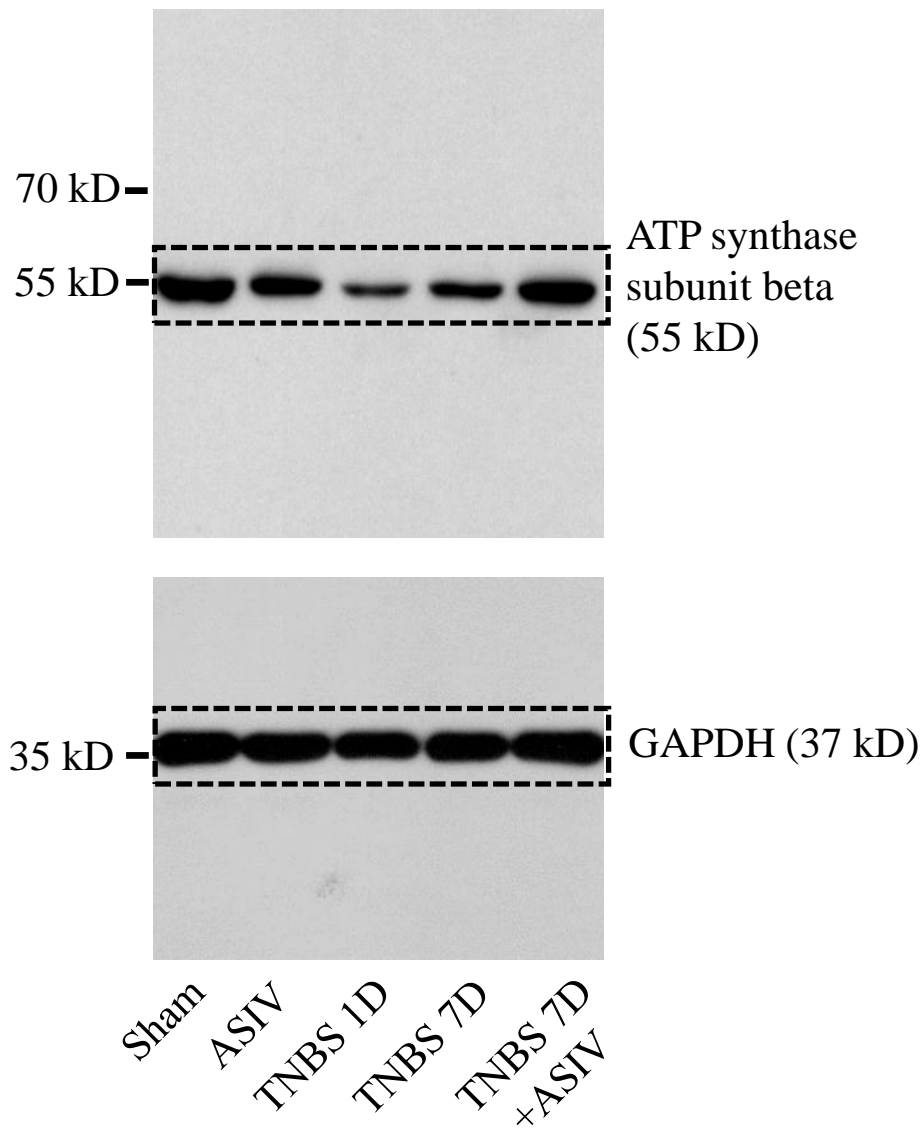
Sham
ASIV
TNBS 1D
TNBS 7D
TNBS 7D + ASIV

Fig. 5B

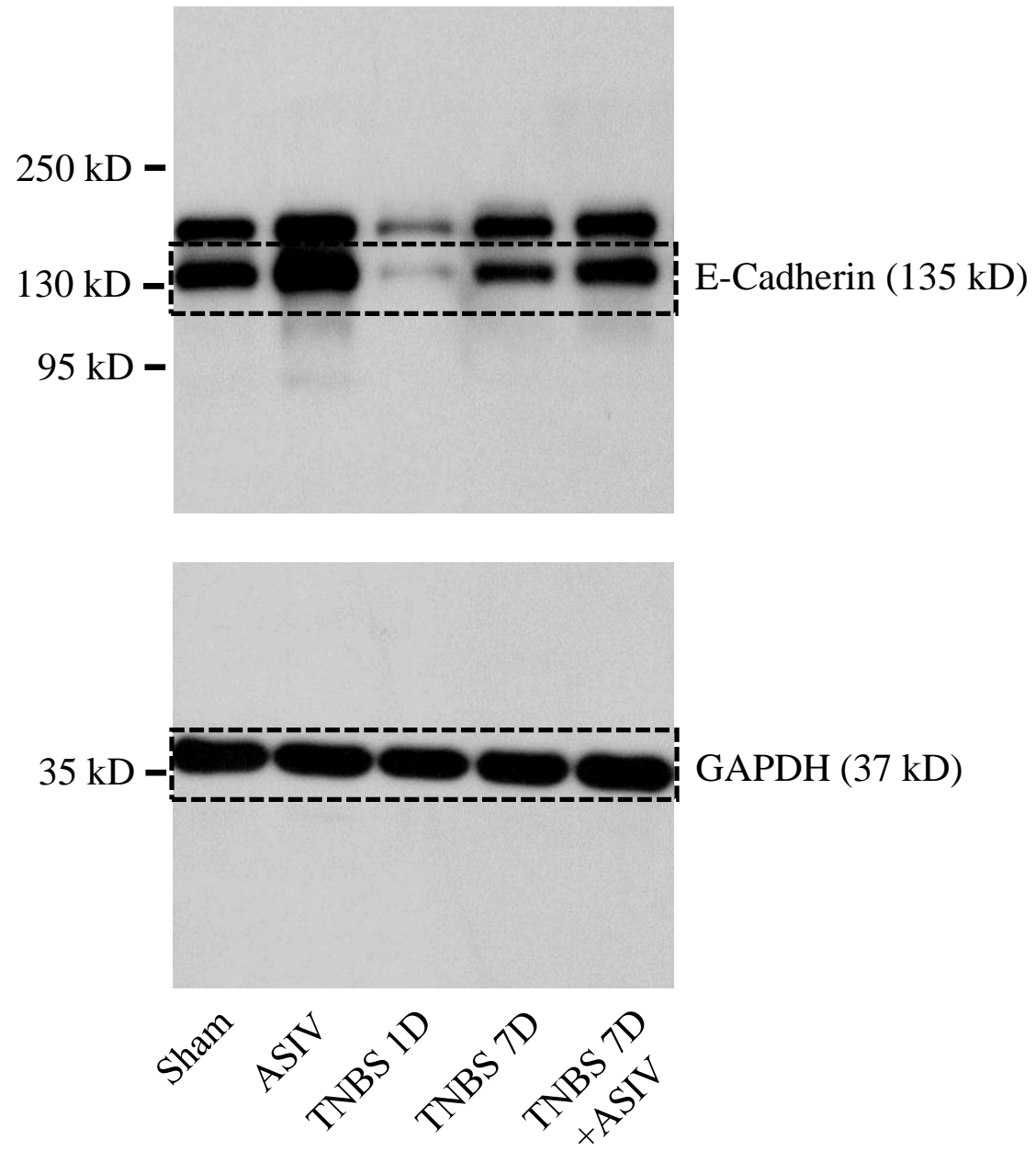


Sham
ASIV
TNBS 1D
TNBS 7D
TNBS 7D + ASIV

Supplement Figure 6



Supplement Figure 7



Supplement figure legend

Supplement Figure 1. ASIV reduces TNBS-induced colitis in rats in a dose- and time-dependent manner. (A) Representative image of colon in different groups. (B) Macroscopic injury score. (C) Colon length. (D) Colon weight index. Sham: sham group; ASIV: ASIV (10 mg/kg) alone group; TNBS 1D: TNBS treatment for 1 day group; TNBS 4D: TNBS treatment for 1 days followed by saline treatment for 3 days group; TNBS 4D+ASIV 5: TNBS treatment for 1 day followed by ASIV (5 mg/kg) treatment for 3 days group; TNBS 4D+ASIV 10: TNBS treatment for 1 day followed by ASIV (10 mg/kg) treatment for 3 days group; TNBS 7D: TNBS treatment for 1 days followed by saline treatment for 6 days group; TNBS 7D+ASIV 5: TNBS treatment for 1 day followed by ASIV (5 mg/kg) treatment for 6 days group; TNBS 7D+ASIV 10: TNBS treatment for 1 day followed by ASIV (10 mg/kg) treatment for 6 days group. Data are mean \pm SEM (N=8). * $p < 0.05$ vs. Sham group, # $p < 0.05$ vs. TNBS 7D group.

Supplement Figure 2. ASIV suppresses inflammatory cell infiltration in TNBS-induced colitis in rats. (A) Representative images of immunohistochemistry of the tissues from different groups with double staining for MPO (brown) and CD68 (red) (a1-a5). Bar = 100 μ m. The area within the rectangle in each picture is enlarged and presented below, correspondingly, to display the mucosa (b1-b5) and submucosa (c1-c5) in each group. Bar = 10 μ m. (B) Quantification analysis of MPO-positive cells in different groups. (C) Quantification analysis of CD68-positive cells in different groups. Sham: sham group; ASIV: ASIV alone group; TNBS 1D: TNBS treatment for 1 day group; TNBS 7D: TNBS treatment for 1 days followed by saline treatment for 6 days group; TNBS 7D+ASIV: TNBS treatment for 1 day followed by ASIV treatment for 6 days group. Data are mean \pm SEM (N=8). * $p < 0.05$ vs. Sham group, # $p < 0.05$ vs. TNBS 7D group.

Supplement Figure 3. ASIV promotes epithelial cell regeneration in TNBS-induced colitis in rats. (A) Representative images of immunohistochemistry staining for Ki67 (brown) of colonic tissues from different groups (a1-a5). Bar = 100 μ m. The area within

the rectangle in each picture is enlarged and presented below correspondingly (b1-b5). Bar = 50 μ m. (B) Quantification analysis of Ki67-positive cells in different groups (N=8). (C) Representative Western blots and statistical analysis of E-Cadherin in colon tissues from different groups (N=5). Sham: sham group; ASIV: ASIV alone group; TNBS 1D: TNBS treatment for 1 day group; TNBS 7D: TNBS treatment for 1 days followed by saline treatment for 6 days group; TNBS 7D+ASIV: TNBS treatment for 1 day followed by ASIV treatment for 6 days group. Data are mean \pm SEM. * $p < 0.05$ vs. Sham group, # $p < 0.05$ vs. TNBS 7D group.

Supplement Figure 4. Source data for Figure 4C. Sham: sham group; ASIV: ASIV alone group; TNBS 1D: TNBS treatment for 1 day group; TNBS 7D: TNBS treatment for 1 days followed by saline treatment for 6 days group; TNBS 7D+ASIV: TNBS treatment for 1 day followed by ASIV treatment for 6 days group.

Supplement Figure 5. Source data for Figure 5A and B. Sham: sham group; ASIV: ASIV alone group; TNBS 1D: TNBS treatment for 1 day group; TNBS 7D: TNBS treatment for 1 days followed by saline treatment for 6 days group; TNBS 7D+ASIV: TNBS treatment for 1 day followed by ASIV treatment for 6 days group.

Supplement Figure 6. Source data for Figure 8D. Sham: sham group; ASIV: ASIV alone group; TNBS 1D: TNBS treatment for 1 day group; TNBS 7D: TNBS treatment for 1 days followed by saline treatment for 6 days group; TNBS 7D+ASIV: TNBS treatment for 1 day followed by ASIV treatment for 6 days group.

Supplement Figure 7. Source data for supplement Figure 3C. Sham: sham group; ASIV: ASIV alone group; TNBS 1D: TNBS treatment for 1 day group; TNBS 7D: TNBS treatment for 1 days followed by saline treatment for 6 days group; TNBS 7D+ASIV: TNBS treatment for 1 day followed by ASIV treatment for 6 days group.