Supplemental Figures

Figure S1. (A) qRT-PCR analysis of RNA transcripts from thymus of WT and *Foxo4* KO mice.(B) Relative mRNA levels of FoxO family members in epithelial cell (left panel) and non-epithelial cell fractions (right panel) of colonic mucosa from WT and *Foxo4*-null mice.

Figure S2. IHC staining of colonic CD4+ cells (dark brown) along the surface-crypt axis of WT and *Foxo4*-KO mice.

Figure S3. Foxo4 transcripts were detected by in situ hybridization in mouse colonic tissue sections using sense (left panel) and anti-sense (right panel) Dig-labeled oligonucleotide probes. Foxo4 is expressed in the epithelial cells (upper panel) and colonic lymphoid follicles containing T and B cells (lower panel).

Figure S4. TUNEL staining of apoptotic cells (red, arrows) in colonic epithelium of WT and *Foxo4*-KO mice. Nuclei were stained with DAPI (blue).

Figure S5. (A) Relative mRNA of Foxo4, ZO-1, and claudin-1 in intestinal epithelial cell line HT-29 transfected with either non-specific control siRNA (NSC) or Foxo4 specific siRNAs (Foxo4-1 or Foxo4-2) (n= $3 \pm$ SEM, *, *p* < 0.05). (B) Transmission electron micrographs of colons of WT and *Foxo4*-KO mice.



Supplemental Figure S1

anti-CD4



supplement Figure S2

Sense

Anti-sense



Supplemental Figure S3



Genotype WT (n=5) KO (n=5) (mean±SD)% 0.80 ± 0.16 1.09 ± 0.18

Supplemental Figure S4



WT

KO Supplemental Figure S5