**Gut epithelial vitamin D receptor regulates microbiota-dependent mucosal inflammation by suppressing intestinal epithelial cell apoptosis**

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|  | Supplemental Figure 1. Characterization of VDRf/f;villin-Cre (VDRΔIEC) mice. (A) VDR immunostaining of distal colons from VDRf/f and VDRΔIEC mice, using anti-VDR antibody. *Arrows* indicate examples of VDR-positive epithelial cells. Note the negative staining in VDRΔIEC epithelial cells. (B) Serum total calcium levels; (C) Serum phosphorus levels; (D) Serum 1,25(OH)2D3 levels; (E) Serum PTH levels, in VDRf/f and VDRΔIEC mice. \*\*P<0.01 vs. VDRf/f; n=3-5 in each genotype. | | |
|  | | | Supplemental Figure 2. Characterization of VDRf/f;CDX2-Cre (VDRΔCEC) mice. (A) Serum total calcium; (B) Serum 1,25(OH)2D3; (C) Serum PTH, in VDRf/f and VDRΔCEC mice. \*P<0.05 vs. VDRf/f; n=3-5 in each genotype. (D) Western blot analysis of VDR expression in the kidney. Note VDR protein is absent from the kidney lysate of VDRΔCEC mice, but not VDRΔIEC mice. VDRf/f and VDR-/- mice are positive and negative controls, respectively. |
|  | | Supplemental Figure 3. Deletion of colonic epithelial VDR has little effects on T regulatory cells in the colonic mucosa during colitis development. VDRf/f and VDRΔIEC mice were treated with TNBS, and lamina propria cells were isolated and analyzed by FACS on day 3. Shown are cell percentage and cell numbers of Treg cells quantified by FACS. (A) FoxP3+ cells; (B) CD25+FoxP3+ cells; and (C) IL-10+ Treg cells. | |