

Figure S1. Macrophage infiltration in DSS colitis. (A) Representative flow cytometry dot plots and (B) quantification of F4/80⁺/Cd11b⁺ cells in DSS colitis time course. *p<0.05.

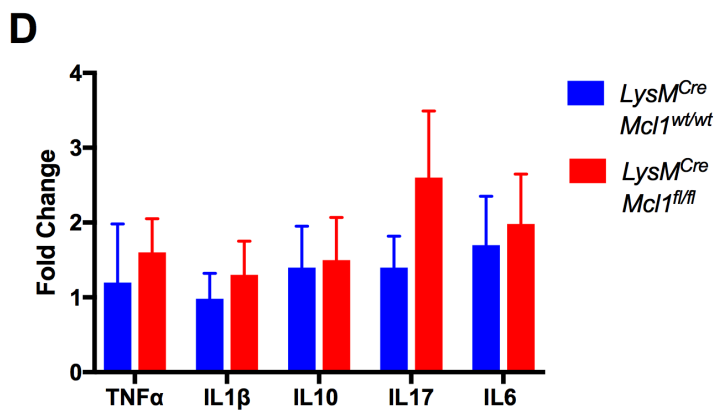
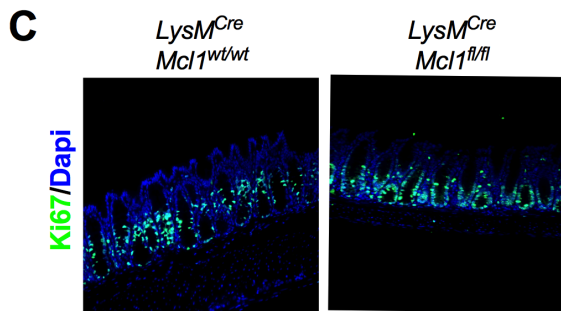
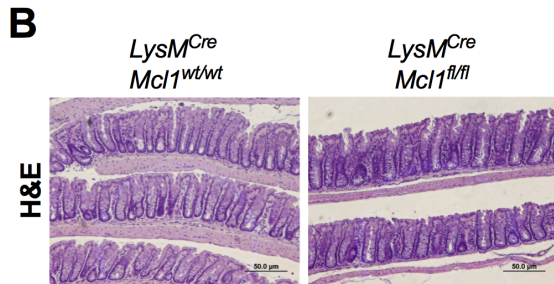
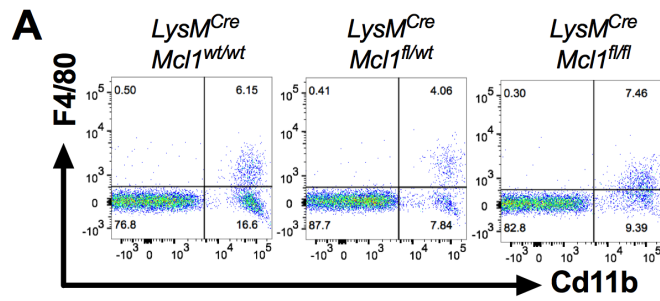


Figure S2. Characterization of *LysM^{Cre};Mcl1^{fl/fl}* mice. (A) Representative flow cytometry dot plots of F4/80⁺/Cd11b⁺ cells in peripheral blood. (B) Representative H&E staining and (C) Ki67 immunofluorescence from *LysM^{Cre};Mcl1^{wt/wt}* and *LysM^{Cre};Mcl1^{fl/fl}* mouse colon tissue. (D) Cytokine array analysis from colon tissue lysates from *LysM^{Cre};Mcl1^{wt/wt}* (n=5) and *LysM^{Cre};Mcl1^{fl/fl}* (n=7).

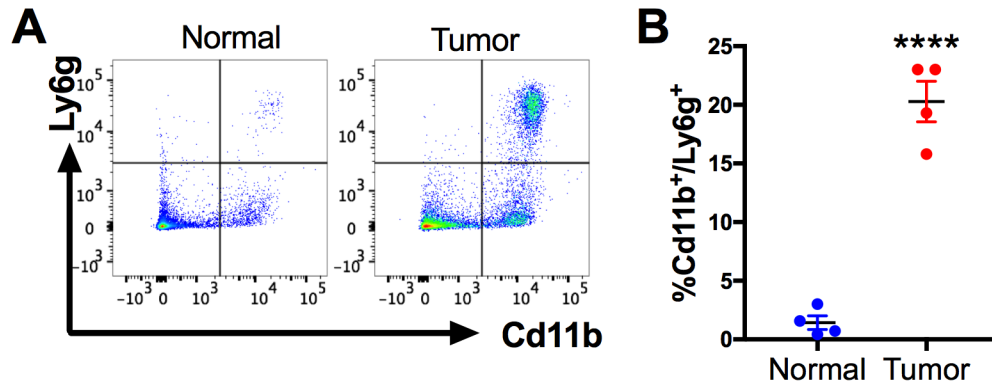


Figure S3. Neutrophils are highly infiltrated in AOM/DSS colon tumors. (A) Representative flow cytometry dot plots and **(B)** quantification of Ly6g⁺/Cd11b⁺ cells in AOM/DSS colon tumors from WT mice. ****p<0.001. Statistical analysis performed by student's t test.

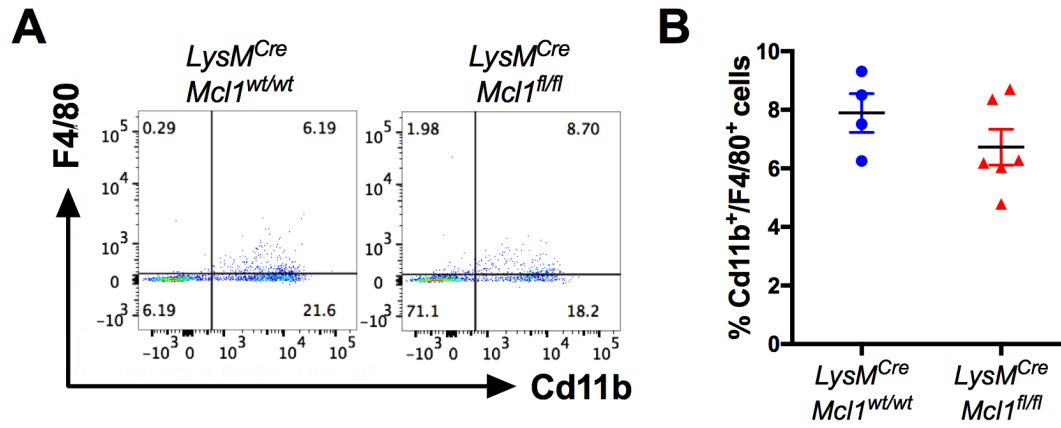


Figure S4. Tumor infiltration of macrophages is unaltered in *LysM^{Cre};Mcl1^{fl/fl}* mice. (A) Representative flow cytometry dot plots and **(B)** quantification of F4/80⁺/Cd11b⁺ cells in colon tumors from *LysM^{Cre};Mcl1^{wt/wt}* and *LysM^{Cre};Mcl1^{fl/fl}* mice. Statistical analysis performed by student's t test.

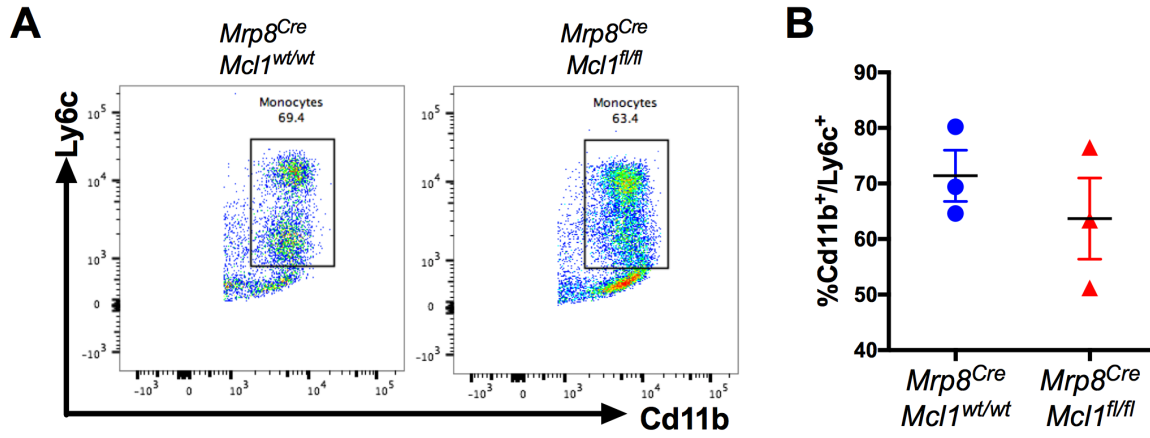


Figure S5. Monocytes are unchanged in *Mrp8-Cre/Mcl1^{fl/fl}* mice. (A) Representative flow cytometry dot plots and (B) quantification of Ly6c⁺/Cd11b⁺ cells as a percentage of total myeloid cells from *Mrp8^{Cre};Mcl1^{wt/wt}* and *Mrp8^{Cre};Mcl1^{fl/fl}* mice. Statistical analysis performed by student's t test.

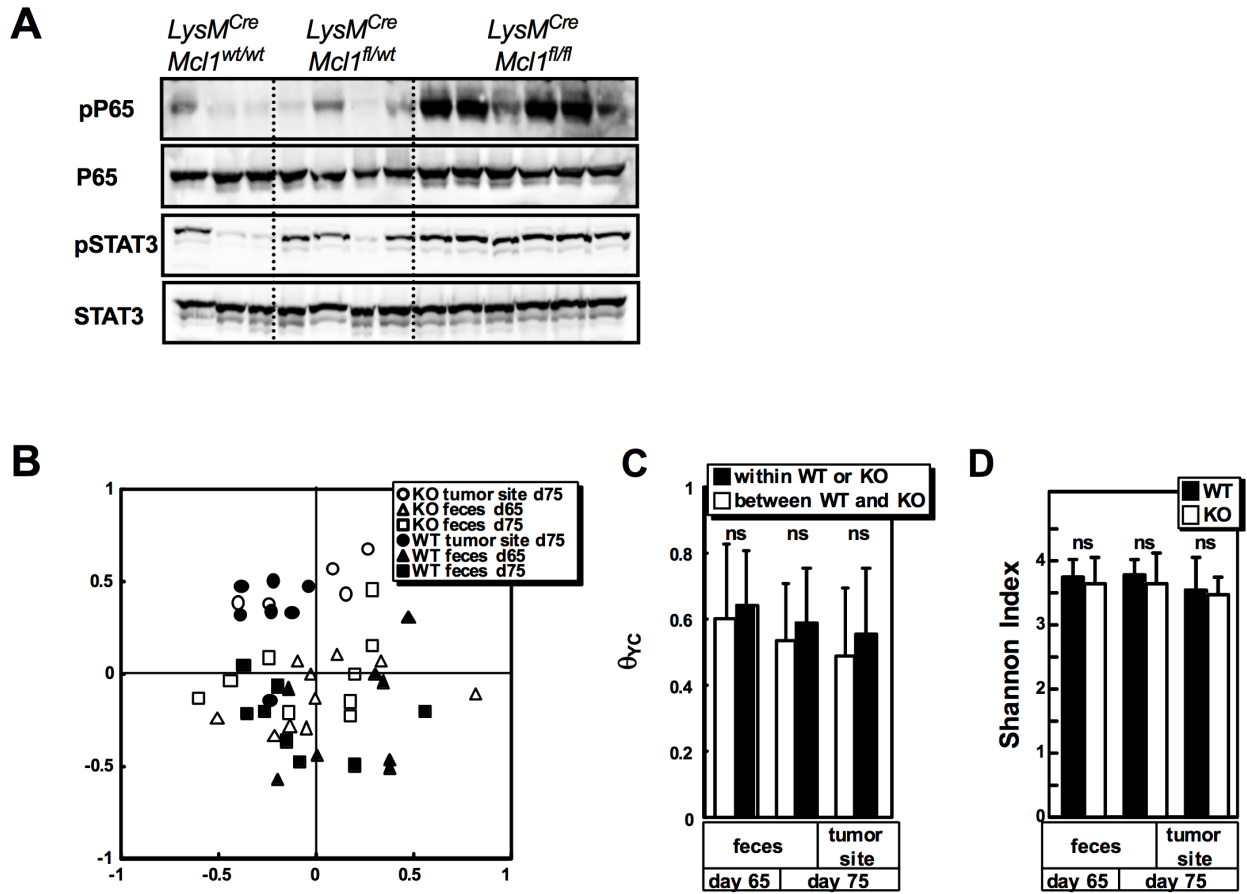


Figure S6. PMN depletion increases microbiota-dependent inflammatory responses. (A) Western blot analysis of colon tumors from *LysM^{Cre};Mcl1^{wt/wt}*, *LysM^{Cre};Mcl1^{fl/wt}*, and *LysM^{Cre};Mcl1^{fl/fl}* mice. Statistical analysis was performed with student's t-test. (B) NMDS plot based on θ_{YC} of *LysM^{Cre};Mcl1^{wt/wt}* (WT) and *LysM^{Cre};Mcl1^{fl/fl}* (KO) (C) β -diversity index, θ_{YC} of WT and KO mice. (D) Shannon's α -diversity index of WT and KO mice.

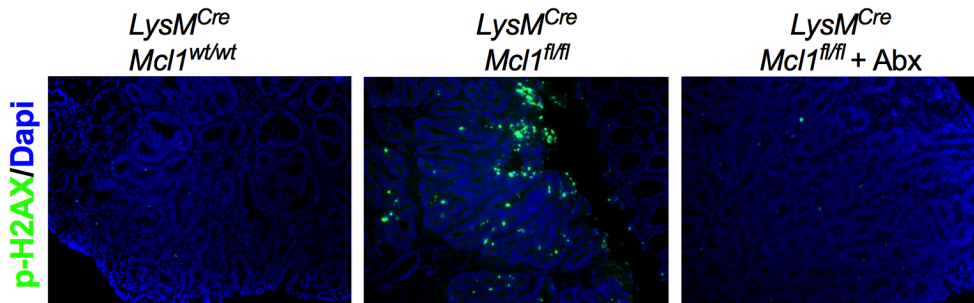
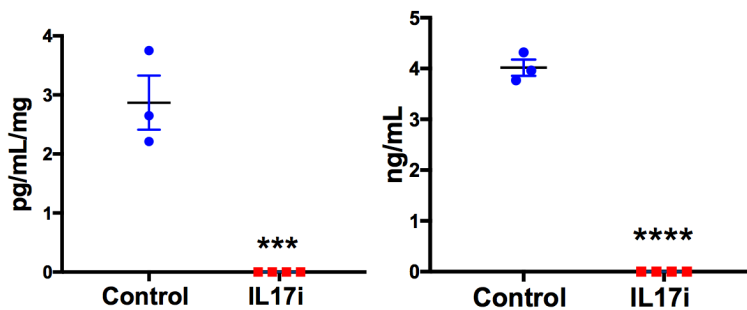
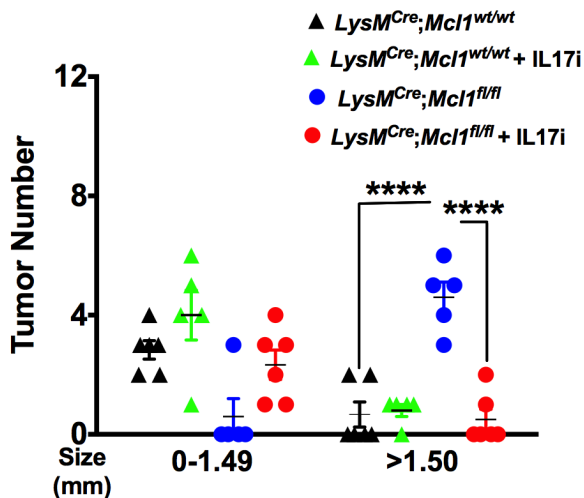
A**B****C**

Figure S7. Bacteria and IL-17 are important for neutrophil-deficient colon tumorigenesis.

(A) Representative images of immunofluorescence staining of p-H2AX in *LysM^{Cre};Mcl1^{wt/wt}* and *LysM^{Cre};Mcl1^{fl/fl}* colon tumors treated with Ctrl or antibiotics (Abx). (B) ELISA analysis of IL-17 protein in colon tissue explants and (C) serum of mice treated with Ctrl IgG or IL-17 IgG (IL17i). **** p < 0.001. (D) Tumor size of colon tumors in *LysM^{Cre};Mcl1^{wt/wt}* and *LysM^{Cre};Mcl1^{fl/fl}* treated with Ctrl IgG or IL-17 IgG (IL17i). **** p < 0.0001.

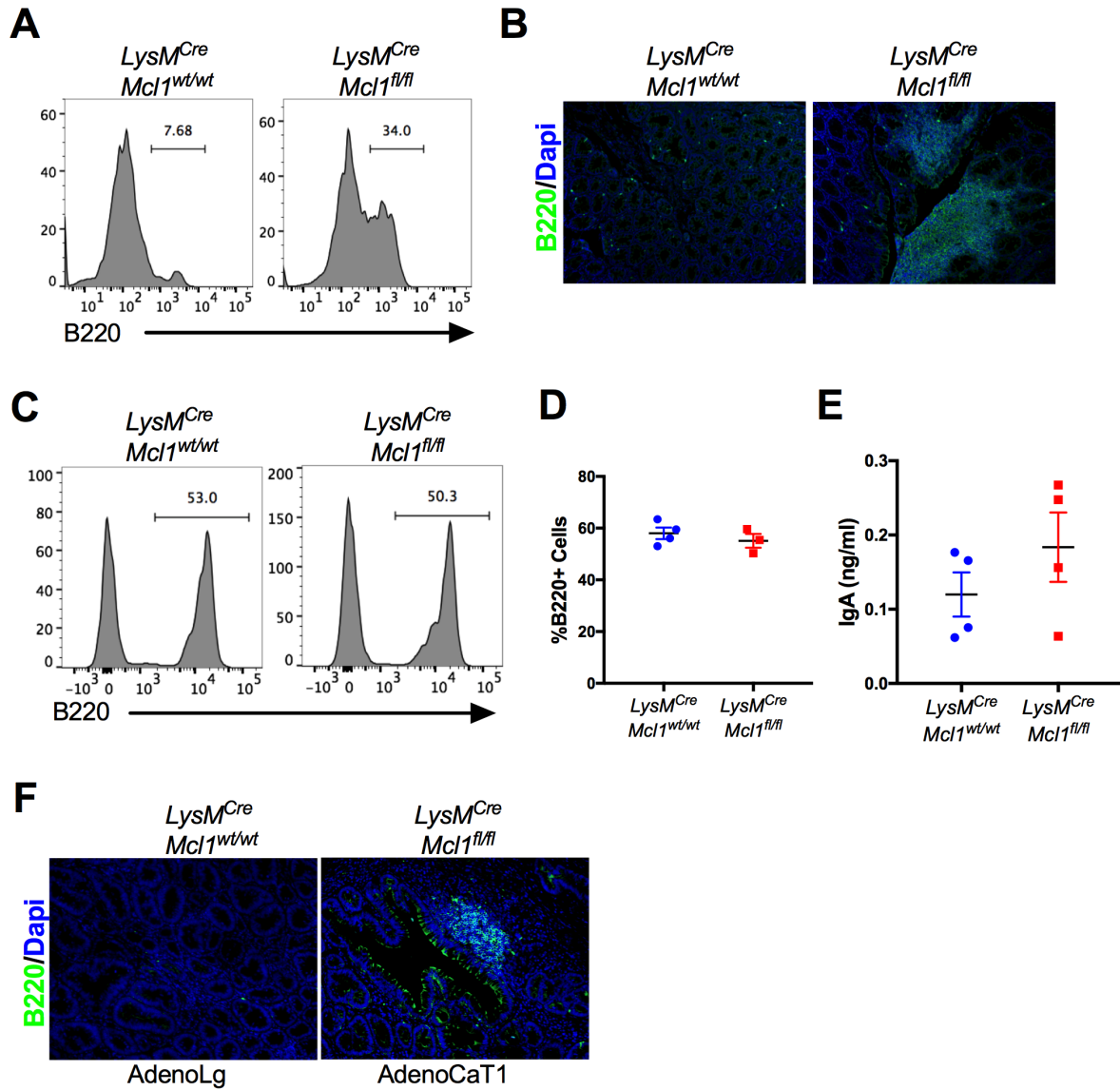


Figure S8. Increased B-cells in PMN-deficient colon tumors. (A) Flow cytometric analysis and (B) representative images of B220 staining of colon tumor tissue from *LysM^{Cre};Mcl1^{wt/wt}* and *LysM^{Cre};Mcl1^{fl/fl}* mice. (C) Flow cytometric analysis of B220 staining and (D) quantification of peripheral blood B-cells. (E) IgA ELISA analysis from feces of *LysM^{Cre};Mcl1^{wt/wt}* and *LysM^{Cre};Mcl1^{fl/fl}* mice. (F) Representative immunofluorescence of B220 staining from WT tumor tissue and invasive adenocarcinoma tissue from *LysM^{Cre};Mcl1^{fl/fl}* mouse.

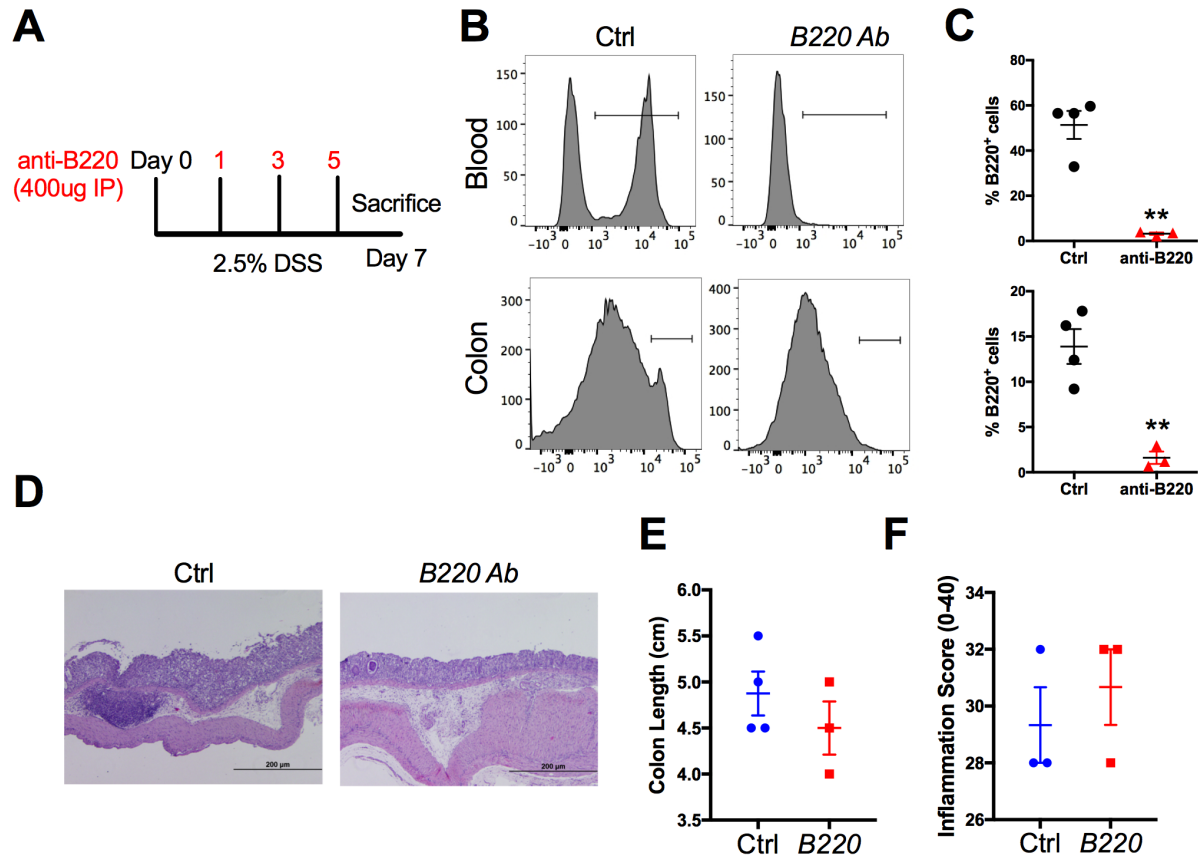


Figure S9. B-cell depletion does not exacerbate DSS colitis. (A) Schematic of 2.5% DSS treatment and anti-B220 injections (400ug/mouse I.P.) on days 1, 3, and 5. (B) Representative flow cytometric analysis of B220 staining in peripheral blood and colon tissue and (C) quantification B-cells of Ctrl and anti-B220 treated animals. (D) Representative H&E histologic analysis (E) colon length and (F) total inflammation score of treated mice. Statistical analysis performed by student's t test.

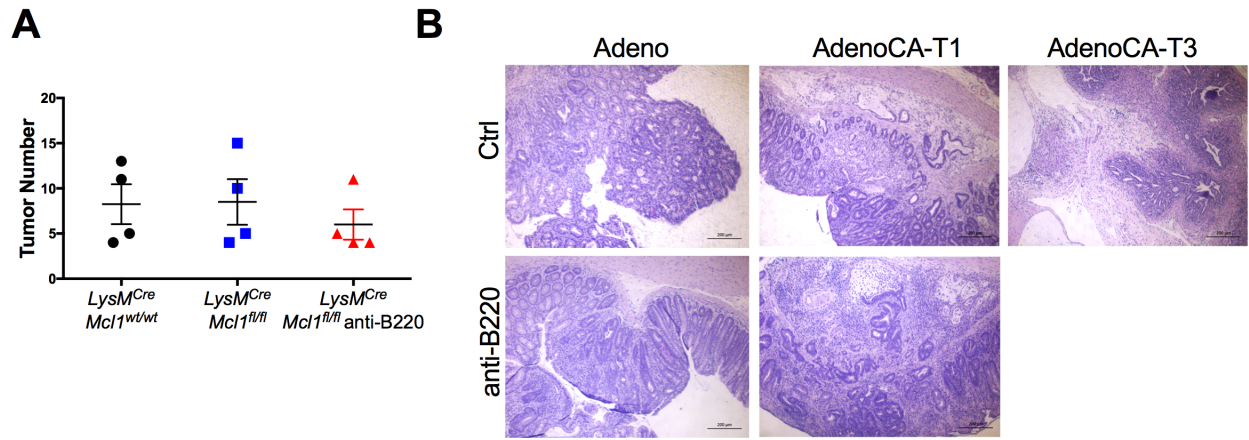


Figure S10. B-cell depletion reduces PMN-deficient tumor progression. (A) Tumor number and **(B)** representative histologic analysis indicated tumor stage from Ctrl and anti-B220 treated *LysM^{Cre}; Mcl1^{fl/fl}* mice. Statistical analysis was performed by one-way ANOVA followed by Tukey's multiple comparisons test.