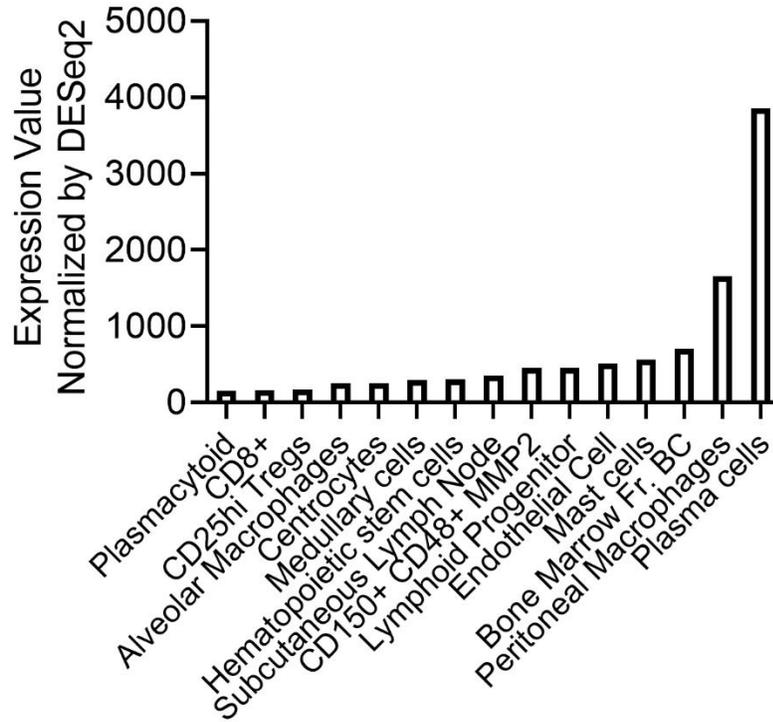


Figure S1. Gross images of colons extracted from AOM/DSS treated (A) wildtype and (B) Prx4 knockout mice.

A.



Population Full Name	Population Sorting Description
Splenic Plasmacytoid	sorted on CD45lo CD11b+
Splenic CD8+	sorted on CD45+ MHCII+ CD11c+ CD8+ CD4-
Splenic CD25hi Tregs	sorted on CD4+CD8-TCRbhiCD62LhiCD44loCD25hiDump-
Alveolar Macrophages	sorted on CD45+ CD11c+ SiglecF+
Splenic Germinal Center Centrocytes	sorted on CD19+B220+IgD-Fas+CD38-CXCR4lo CD86hi
Thymic Medullary Epithelial cells, MHCIIhi	sorted on CD45-Ly51loMHC-IIhiEPCAMhi
Bone Marrow 34- LTHSC/Bone Marrow 34- Long Term hematopoietic stem cells	sorted on Lin-Sca1+ckit+CD135-CD150+CD48-CD34-
Subcutaneous Lymph Node	sorted on CD45- CD31- PDPN- ITGA7+
Bone Marrow CD150+ CD48+ MMP2	
Bone Marrow Common Lymphoid Progenitor	sorted on LIN-CD93+CD117+IL7Ra+CD45R-
Subcutaneous Lymph Node Lymphatic	
Endothelial Cell	sorted on CD45- CD31+ PDPN+
Peritoneal Mast cells	
Bone Marrow Fr. BC (Pro-B)	sorted on CD93+IgM-CD19+CD43+HSA+
Peritoneal Macrophages	sorted on F4/80+ICAM2+CD5-CD19-CD43-
Splenic Plasma cells	6 week old C57BL/6J BLIMP1-GFP mice sorted on GFP ^{hi} CD138+ MHCIIIlo (dump: NK1.1- TCRb- Gr1- CD11b-)

Figure S2. (A) Bioinformatics analysis of RNA sequencing dataset using Immgen shows high expression of Prx4 in peritoneal macrophages and splenic plasma cells of 6 week old C57BL/6J mice.

A.

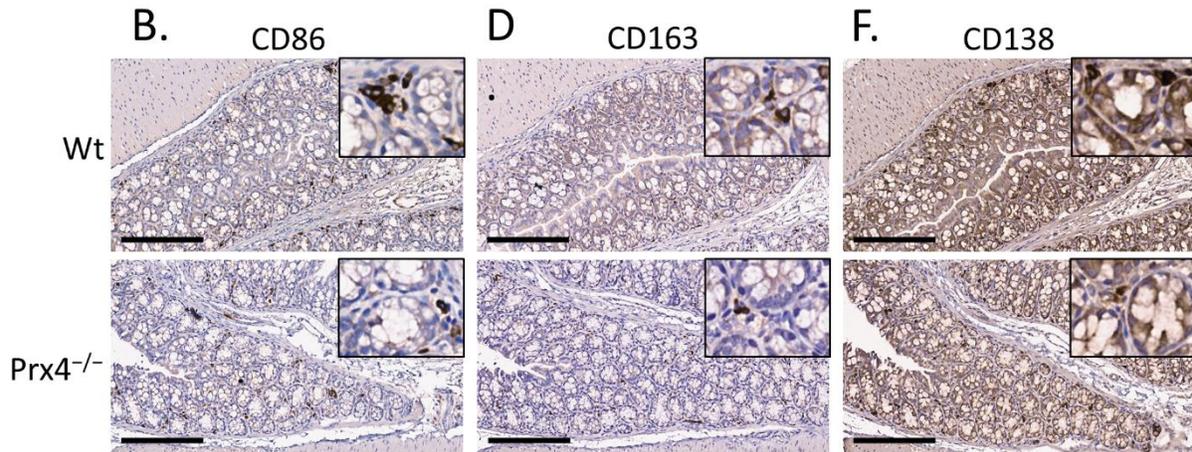
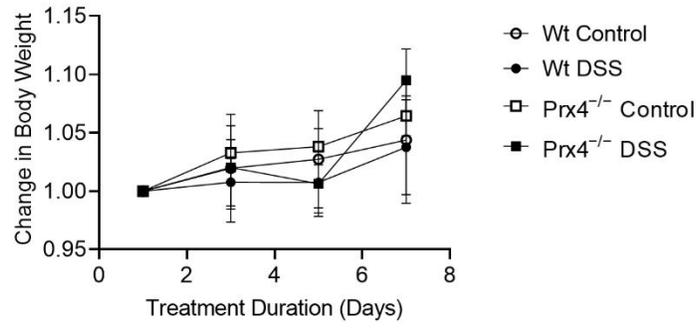
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
A	Reference																			Reference
B			6Ckine		BLC		C10		C5/C5a		CCL28	Chemerin	CTACK		CXCL16					
C			Eotaxin	Fractalkine		IL-16	IP-10		I-TAC		JE	KC		LIX						
D			MCP-2	MCP-5		MDC	MIG		MIP-1 α/β		MIP-1 γ	MIP-2		RANTES						
E			SDF-1	Adipsin		Gp130	HSP60		Control (-)											
F	Reference																			

B.

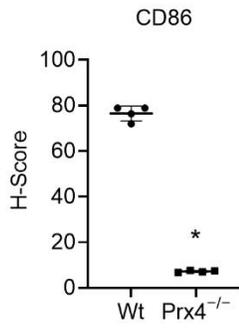
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
A	Reference	Acrcp30		Amphiregulin		Angpt1	Angpt2	Angpt3	BAFF	C1q R1	CCL2	CCL3/CCL4	CCL5	Reference										
B		CCL6	CCL11	CCL12	CCL17	CCL19	CCL20	CCL21	CCL22	CD14	CD40													
C		CD160	Chemerin	Chitinase 3-like 1	CD142	C5/C5a	Complement Factor D	CRP	CX3CL1	CXCL1	CXCL2													
D	CXCL9	CXCL10	CXCL11	CXCL13	CXCL16	Cystatin C	DKK-1	CD26	EGF	Endoglin	Endostatin	Fetuin A												
E	FGF acidic	FGF-21	Flt-3 Ligand	Gas 6	G-CSF	GDF-15	GM-CSF	HGF	ICAM-1/CD54	IFN- γ	IGFBP-1	IGFBP-2												
F	IGFBP-3	IGFBP-5	IGFBP-6	IL-1 α /IL-1F1	IL-1 β /IL-1F2	IL-1ra/IL-1F3	IL-2	IL-3	IL-4	IL-5	IL-6	IL-7												
G	IL-10	IL-11	IL-12 p40	IL-13	IL-15	IL-17A	IL-22	IL-23	IL-27 p28	IL-28A/B	IL-33	LDL R												
H	Leptin	LIF	Lipocalin-2	LIX	M-CSF	MMP-2	MMP-3	MMP-9	Myeloperoxidase	Osteopontin	TNFRSF11B	PD-ECGF												
I	PDGF-BB	Pentraxin 2	Pentraxin 3	Periostin	Pref-1	Proliferin	PCSK9	RAGE	RBP4	Reg3G	Resistin													
J	Reference	E-Selectin	P-Selectin	Serpin E1	Serpin F1	Thrombopoietin	TIM-1	TNF- α	VCAM-1	VEGF	WISP-1	Control (-)												

Figure S3. Layout of Proteome profiler mouse chemokine (A) and cytokine (B) arrays adapted from manufacturer's datasheet.

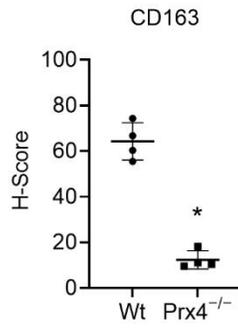
A.



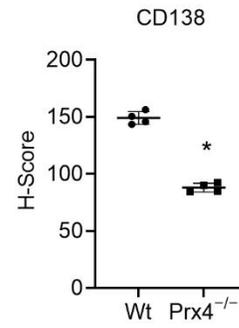
C.



E.



G.



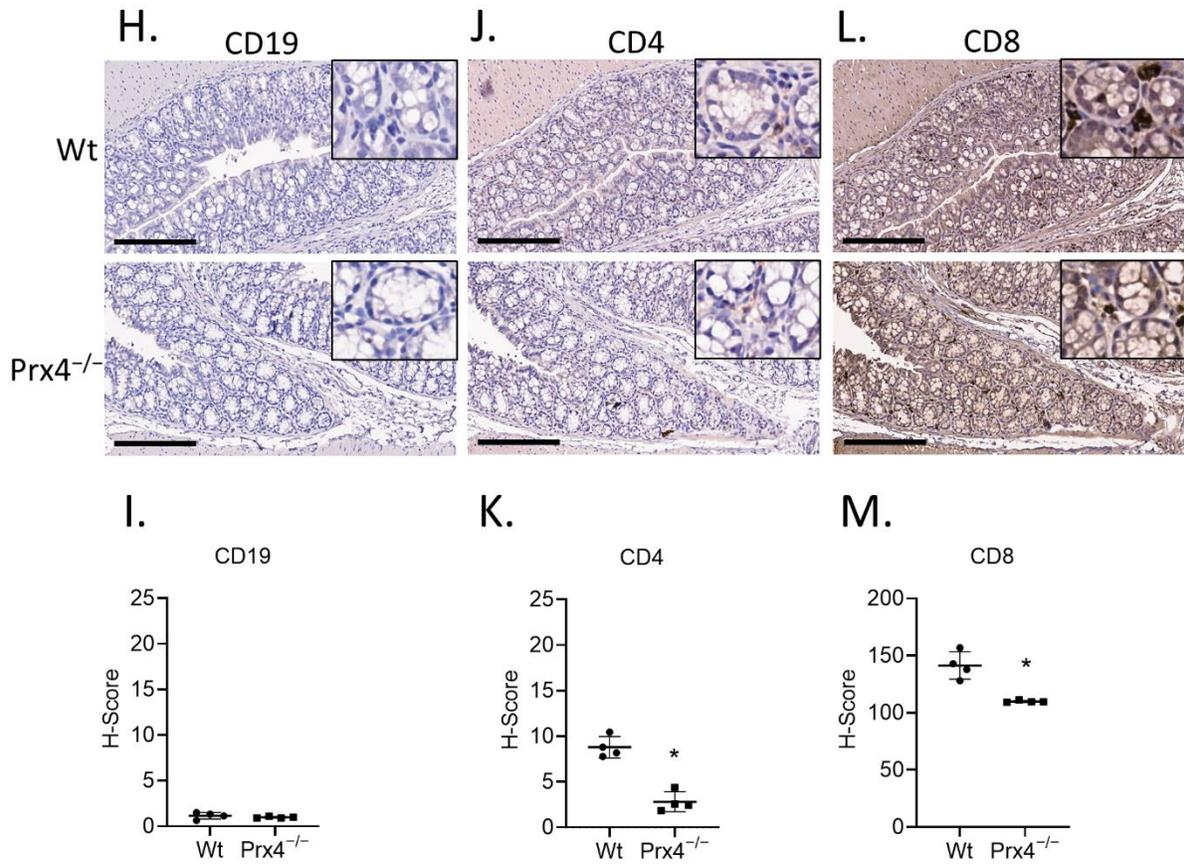


Figure S4. Prx4 knockout colons have lower immune cell infiltration compared to wildtype after DSS treatment. (A) Change to initial body weight of DSS-treated or untreated (control) wildtype and Prx4 knockout mice. Decreased macrophage infiltration in Prx4 knockout colon as indicated by staining of M1 macrophage marker CD86 (B and C) and M2 macrophage marker CD163 (D and E). (F and G) IHC staining of CD138 indicates lower presence of plasma cells in Prx4 knockout colon. (H and I) Comparable naïve B cells infiltration as indicated by staining of CD19. (J and K) Lower levels of CD4⁺ staining was detected in Prx4 knockout compared to Wt. (L and M) IHC staining of CD8 shows decreased recruitment of cytotoxic T cells in Prx4KO group. Compared with Wt group, * $p < 0.05$ (Student's t-test). Bar = 200 μm