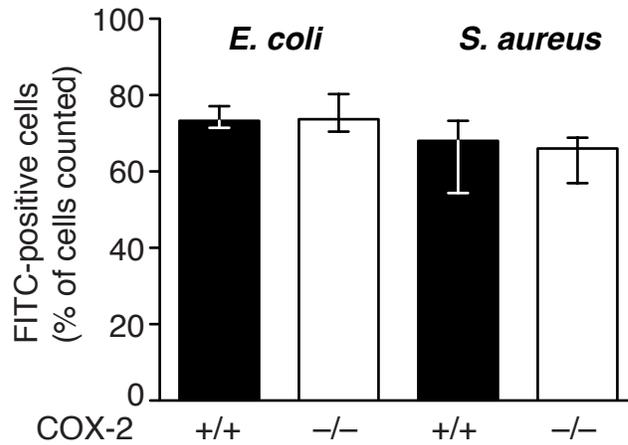
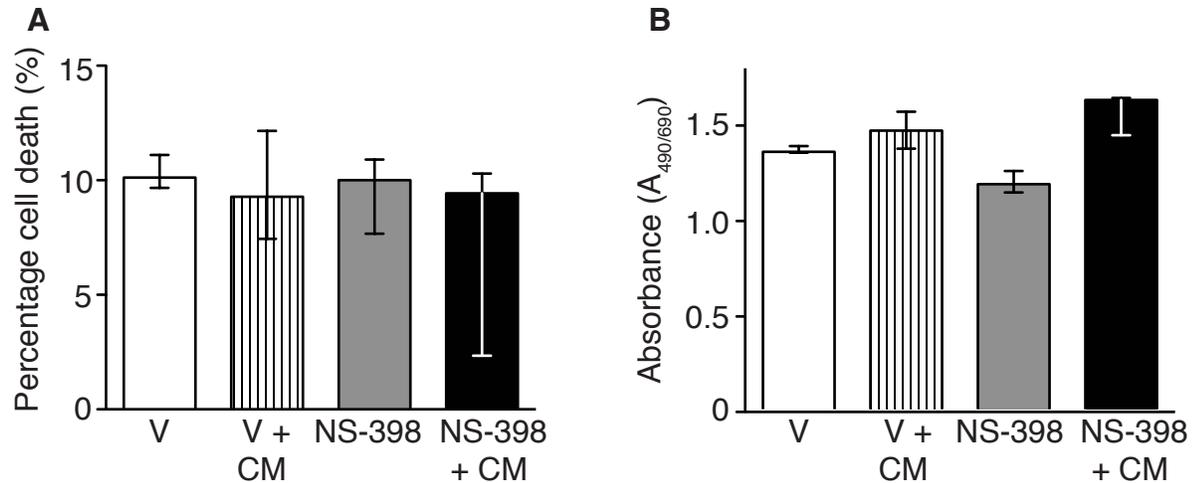


Supplemental Figure 1. COX-2 deficient mice have increased colonic inflammation following peritonitis-induced polymicrobial sepsis. COX-2^{+/+} and COX-2^{-/-} mice underwent CLP with a 19-g needle (1 hole). Colons were harvested 48 h following CLP. Representative H&E staining and immunostaining for CD45 in COX-2^{+/+} (top) and COX-2^{-/-} (bottom) mice following sham surgery (left) and CLP (right). Arrow indicates inflammatory infiltrate and arrowheads indicate cells staining positive for CD45 in colonic villi of COX-2^{-/-} mice following CLP. Scale bar is 100 μm. Magnification 100x.



Supplemental Figure 2. COX-2 deficiency does not impair bacterial phagocytosis by peritoneal neutrophils. FITC-labeled *E. coli* or *S. aureus* was injected into the peritoneum of COX-2^{+/+} (n=4-5 per group) and COX-2^{-/-} mice (n=4-5 per group) in two independent experiments. Neutrophils were isolated after 24 h and phagocytosis assessed by flow cytometry. There was no difference in phagocytosis of either *E. coli* or *S. aureus* between COX-2^{+/+} and COX-2^{-/-} mice. Data represent median \pm IQR from two independent experiments.



Supplemental Figure 3. Selective inhibition of COX-2 does not lead to decreased cell viability in cytomix-stimulated intestinal epithelial cells. C2BBE1 cells were treated with vehicle or NS-398 and stimulated with cytomix (CM: IFN- γ 1000 U/ml, TNF- α 10 ng/ml, IL-1 β 1 ng/ml) in collagen-coated transwells. **(A)** Following 48 h, cells were incubated with 0.4% trypan blue, lysed with 1% SDS, and absorbance measured at 590 nm. Results were normalized to a positive control (KCN). **(B)** The amount of LDH released into the basolateral media was measured via a commercial *in vitro* toxicology assay kit (TOX7, Sigma). Data represent median \pm IQR for at least two independent experiments performed in triplicate.

Supplemental Table I. Fredenburgh et al.

Supplemental Table I. Circulating cytokine levels in COX-2^{+/+} and COX-2^{-/-} mice following CLP.

		Time after CLP		
	Cytokine	sham (n=6)	12 h (n=4)	24 h (n=4)
COX-2^{+/+}	IFN- γ	ND	11.6 (7.8, 11.6)	9.2 (3.3, 14.2)
	IL-6	56 (11.7, 193)	2417 (2402, 4803) †	1316 (661, 3304) †
	KC	98 (62, 151)	13841 (186, 36101) †	43133 (15878, 109249) †
	IL-18	174 (146, 306)	278 (145, 333)	50 (46, 96) †
	IL-1 β	3.1 (3.1, 60)	3.1 (1.6, 3.1)	3.1 (3.1, 3.1)
	IL-10	1.6 (1.3, 6.3)	68 (34, 234) †	12 (4.8, 25.2)
	IL-12p40	3.4 (0.4, 14)	107 (18, 190) †	48 (15, 60)
	MIP2 (CXCL2)	ND	659 (537, 826) †	99.7 (72, 336) †
	TNF- α	ND	8.4 (3.1, 14.7)	7.3 (3.3, 15) †
		Cytokine	sham (n=6)	12 h (n=6)
COX-2^{-/-}	IFN- γ	ND	23.1 (8.5, 33.9) †	33.8 (21.8, 187.9) * †
	IL-6	86 (11, 326)	4588 (1375, 9460) †	8170 (4931, 531774) * †
	KC	129 (108, 247)	20854 (424, 50227) †	21703 (11094, 23399) †
	IL-18	231 (141, 356)	143 (67, 297)	143 (131, 253)
	IL-1 β	ND	4 (3.1, 5.1)	42 (3.1, 77)
	IL-10	1.6 (1.4, 10.5)	276 (103, 333) †	78 (64, 7196) * †
	IL-12p40	3.4 (1.9, 16.8)	874 (437, 1487) * †	1184 (196, 3474) * †
	MIP2 (CXCL2)	ND	1262 (486, 7300) †	1146 (655, 34042) * †
	TNF- α	ND	54 (41, 106) * †	44.4 (35, 215) * †

* p < 0.05 vs. COX-2^{+/+} CLP by the Mann-Whitney test

† p < 0.05 vs. sham by the Mann-Whitney test

ND – not detected

Data are presented as median (IQR)