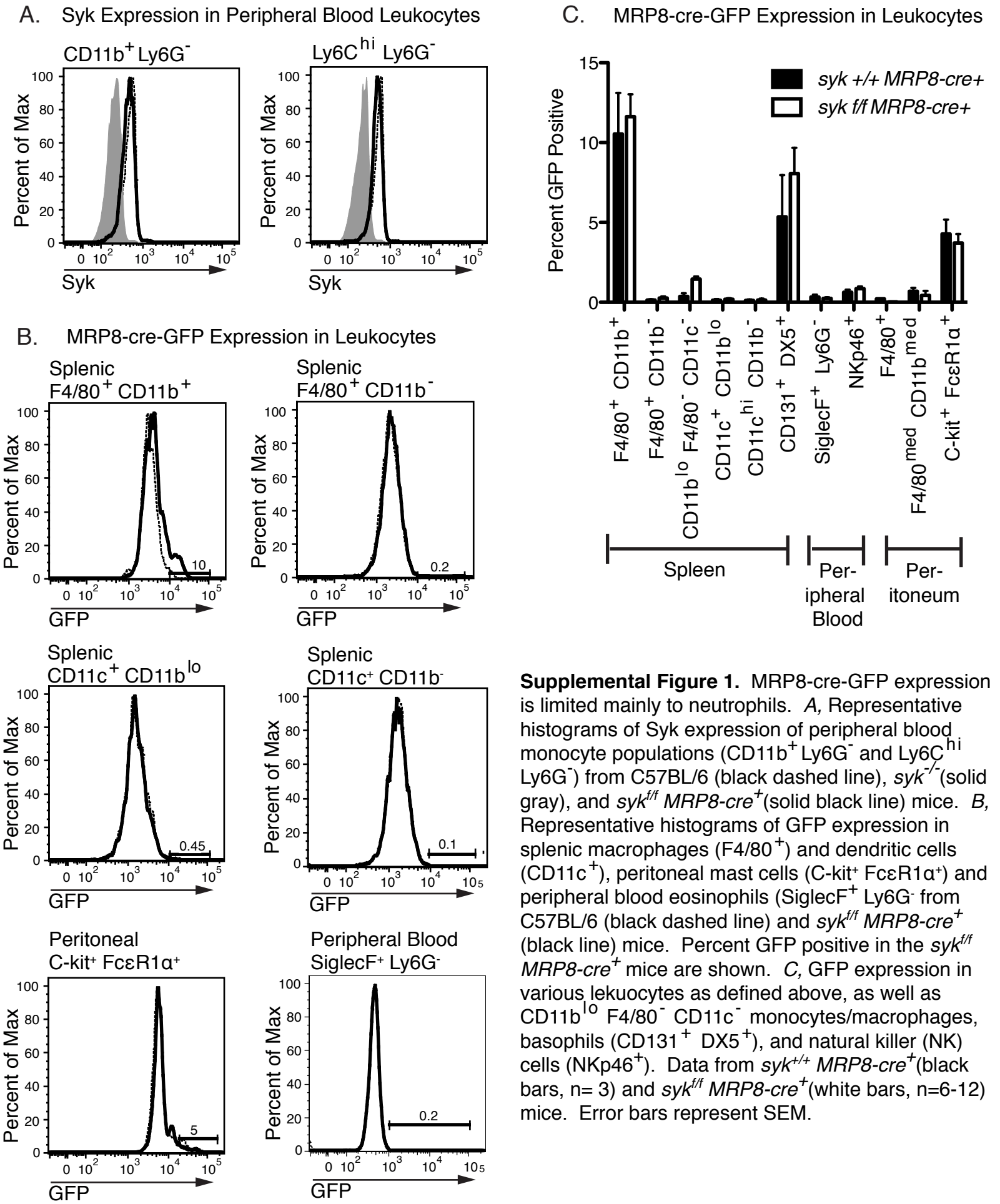
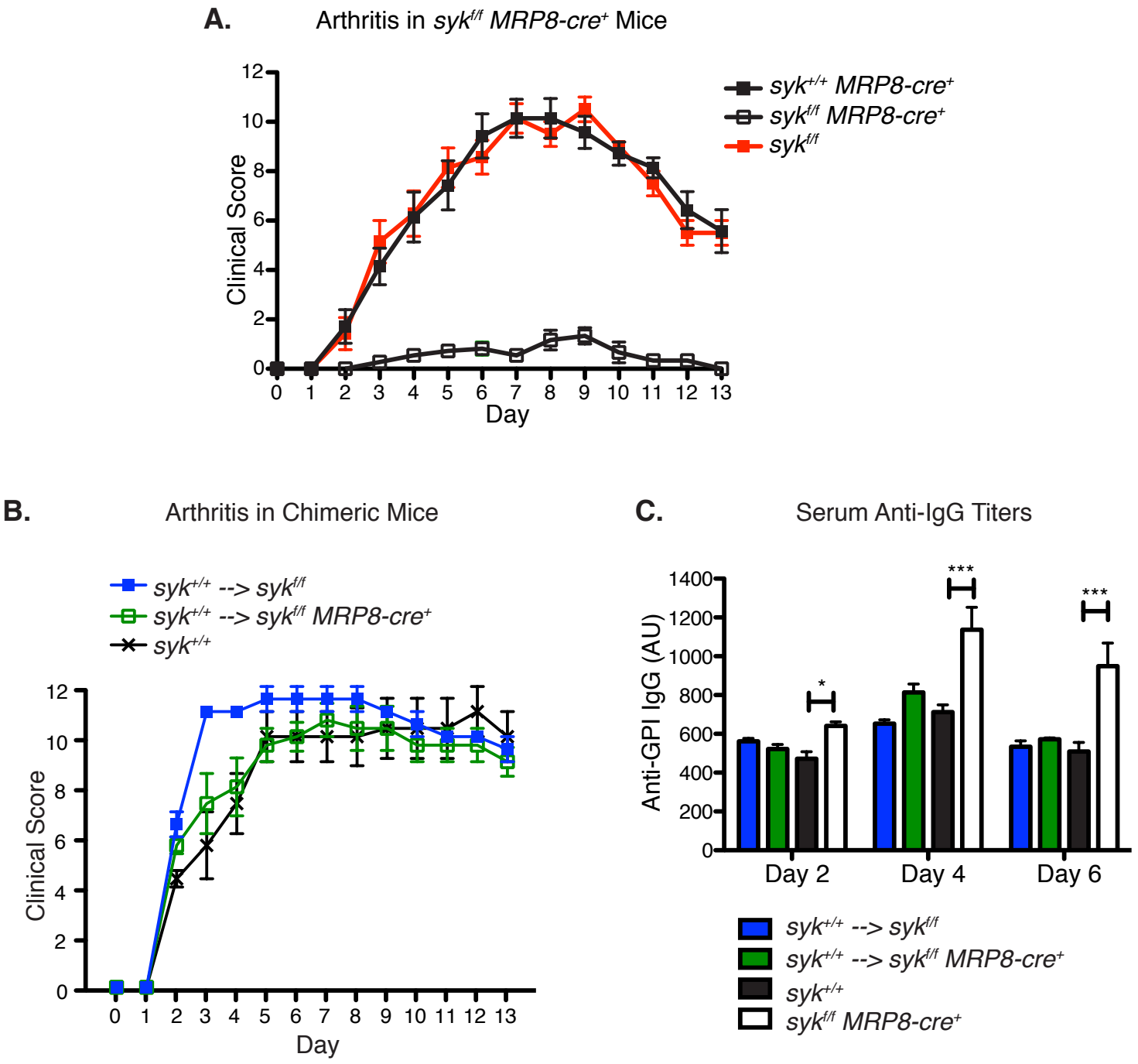


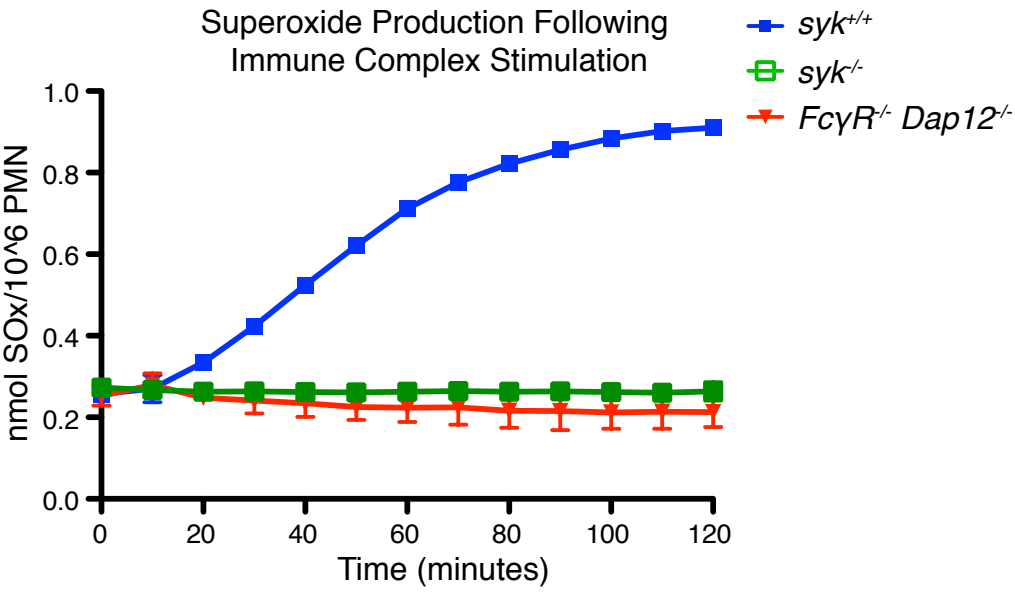
Supplemental Figure 1. MRP8-cre-GFP expression is limited mainly to neutrophils. *A,* Representative histograms of Syk expression of peripheral blood monocyte populations ($CD11b^+$ $Ly6G^-$ and $Ly6C^{hi}$ $Ly6G^-$) from C57BL/6 (black dashed line), *syk*$^{-/-}$(solid gray), and *syk*$^{f/f}$ *MRP8-cre*$^+$(solid black line) mice. *B,* Representative histograms of GFP expression in splenic macrophages ($F4/80^+$) and dendritic cells ($CD11c^+$), peritoneal mast cells (C-kit$^+$ FcεR1α$^+$) and peripheral blood eosinophils ($SiglecF^+$ $Ly6G^-$ from C57BL/6 (black dashed line) and *syk*$^{f/f}$ *MRP8-cre*$^+$ (black line) mice. Percent GFP positive in the *syk*$^{f/f}$ *MRP8-cre*$^+$ mice are shown. *C,* GFP expression in various lekuocytes as defined above, as well as $CD11b^{lo}$ $F4/80^-$ $CD11c^-$ monocytes/macrophages, basophils ($CD131^+$ $DX5^+$), and natural killer (NK) cells ($NKp46^+$). Data from *syk*$^{+/+}$ *MRP8-cre*$^+$(black bars, n= 3) and *syk*$^{f/f}$ *MRP8-cre*$^+$(white bars, n=6-12) mice. Error bars represent SEM.

Supplemental Figure 1



Supplemental Figure 2. Conditional deletion of Syk in neutrophils protects mice from K/BxN serum-induced arthritis. *A,* Clinical score was recorded at the indicated times following K/BxN serum transfer in *syk$^{f/f}$*, *syk$^{+/+}$ MRP8-cre^{+}*, and *syk$^{f/f}$ MRP8-cre^{+}* mice (n=4). Use of these genotypes controls for potential effects of the *syk$^{f/f}$* mutation – showing that *Syk$^{f/f}$* mice respond normally to K/BxN serum. Representative plots from 2 independent experiments. *B, C, syk$^{f/f}$ MRP8-cre^{+}* recipients were lethally irradiated and reconstituted with congenically marked (CD45.1) wild type bone marrow to control for the contribution of radioresistant cells to the phenotype of *syk$^{f/f}$ MRP8-cre^{+}* mice. *B,* Clinical score and *C,* anti-GPI IgG serum titers were recorded at the indicated times following K/BxN serum transfer in *syk$^{+/+}$ --> syk$^{f/f}$* (n=2) and *syk$^{+/+}$ --> syk$^{f/f}$ MRP8-cre^{+}* (n=3) chimeric mice, and non-irradiated *syk$^{+/+}$* and *syk$^{f/f}$ MRP8-cre^{+}* mice (n=3). Error bars represent ±SEM. *=p<0.05, *** = p<.001, analyzed by two-way ANOVA.

Supplemental Figure 2



Supplemental Figure 3. Syk-deficient neutrophils show impaired superoxide production in response to immune complex stimulation *in vitro*. Bone marrow-derived neutrophils from the indicated mice were plated with immune complexes and superoxide (SOx) production was monitored as described (VanZiffle and Lowell, Blood, 144:4871 (2009). *FcγR*$^{-/-}$ *Dap12*$^{-/-}$ cells, lacking all activating FcγRs, served as negative controls.

Supplemental Figure 3