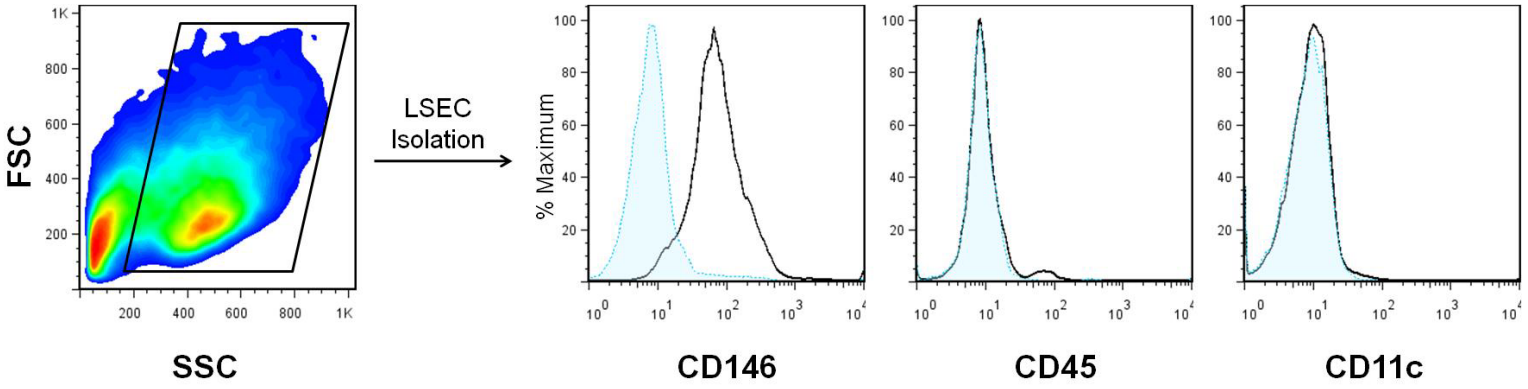
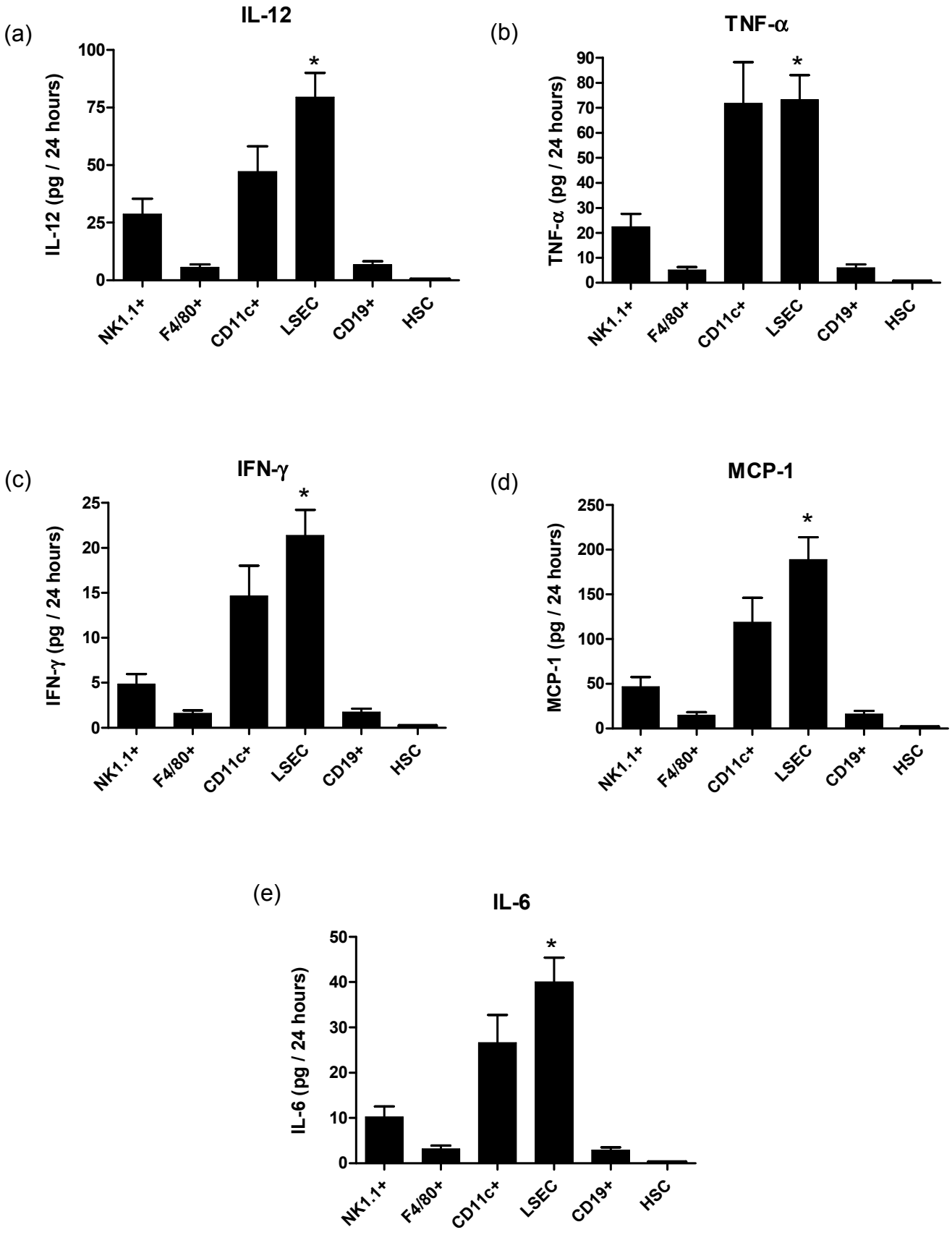
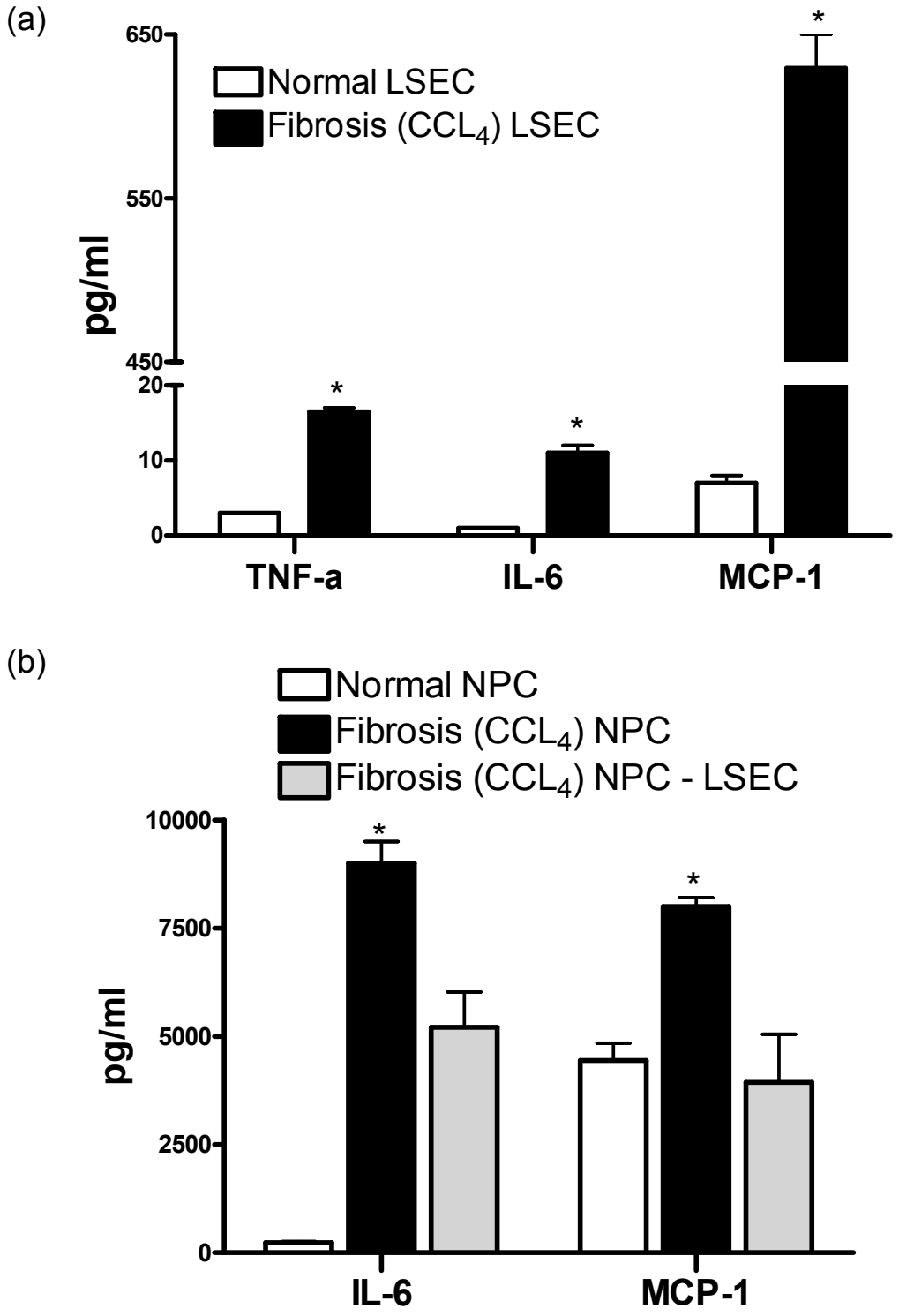
Supplemental Figure 1. LSEC isolation using CD146+ immunomagnetic beads and high affinity columns yields a highly pure population. LSEC were isolated from fibrotic liver by labeling NPC with $CD45^+$ immunomagnetic beads and passage through depletion columns followed by labeling of the negative fraction with $CD146^+$ immunomagnetic beads and twice passaging through LS columns. LSEC were positive for CD146 expression on flow cytometry but did not express CD45, a pan-leukocytes marker which is expressed on APC including kupffer cells and macrophages, or CD11c, a pan DC marker. Shaded histograms represent isotype controls. Similar purities were obtained for isolation of LSEC from non-fibrotic liver.



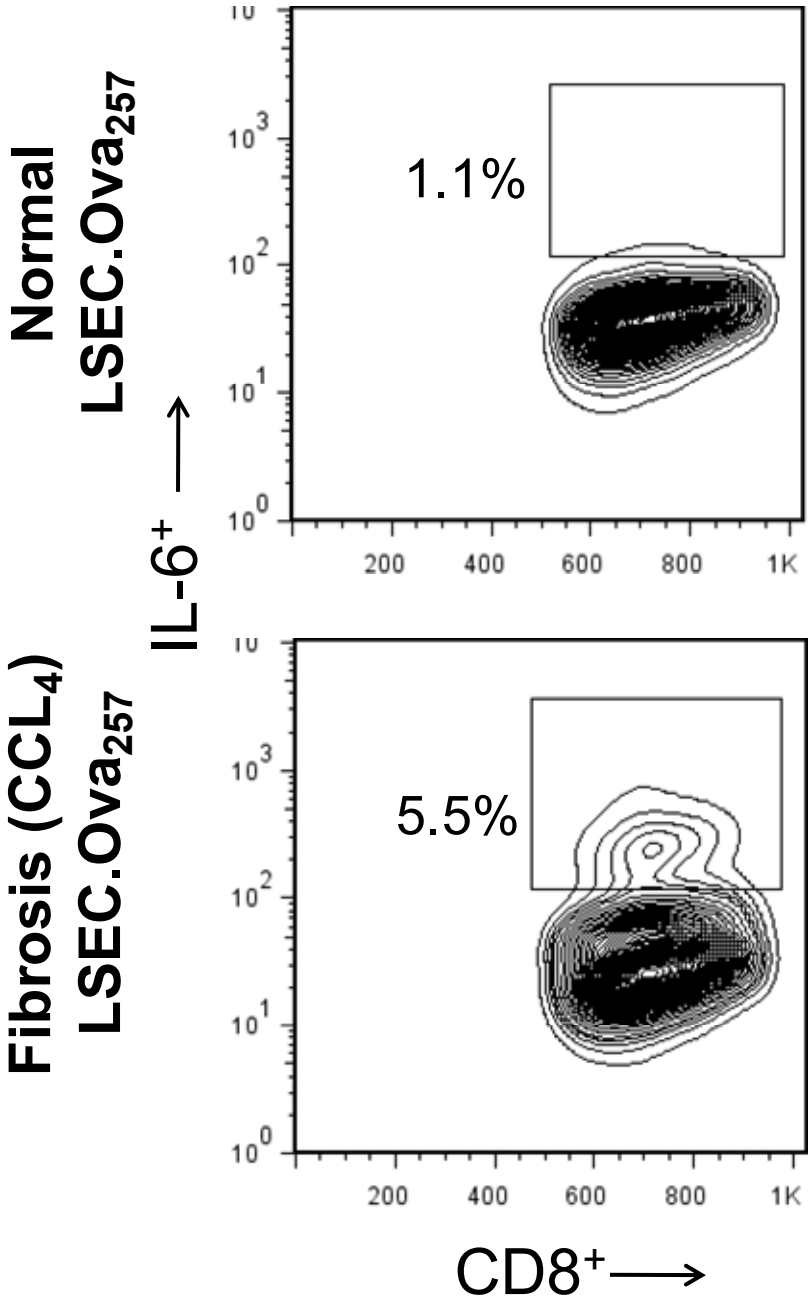
Supplemental Figure 2. LSEC Contribute to the Inflammatory Milieu in Hepatic Fibrosis. Total liver populations of NK1.1$^+$, F4/80$^+$, CD11c$^+$, CD146$^+$, and CD19$^+$ cells were purified from the livers of mice with hepatic fibrosis by FACS. HSC were isolated by density centrifugation. Cells were then plated at equal densities and 24 hour primary culture supernatants were assayed for (a) IL-12, (b) TNF-α, (c) IFN-γ, (d) MCP-1, and (e) IL-6 using a cytometric bead array. Results are presented as cytokines per mouse liver per 24 hours (*$p<0.05$ for comparison of LSEC to NK1.1$^+$, F4/80$^+$, CD19$^+$ cells, and HSC).



Supplemental Figure 3. In CCL_4 Induced Hepatic Fibrosis, LSEC are Pro-Inflammatory. (a) LSEC from normal liver and CCL_4 induced fibrotic liver were cultured for 24h immediately after isolation. Cell culture supernatant was tested for production of inflammatory mediators. **(b)** Bulk NPC from normal liver and CCL_4 induced fibrotic liver were cultured in parallel with NPC from CCL_4 induced fibrotic liver depleted of LSEC in vitro (*p<0.05).



Supplemental Figure 4. LSEC from CCL_4 Induced Fibrotic Liver Produce Enhanced T Cell Activation. LSEC.Ova_{257} from normal or CCL_4 induced fibrotic liver were co-incubated with OT-I T cells for 96 hours. $CD8^+$ T cells were then evaluated for inflammatory mediator production by intracellular cytokine analysis.



Supplemental Figure 5. *F*-LSEC Induce Enhanced T cell Proliferation in vivo. LSEC from both normal and fibrotic liver were loaded with $Ova_{323-339}$ and used, in various dilutions, to stimulate OT-II T cells *in vitro*. Proliferation was determined using a beta counter (*p<0.05).