Supplemental Figure 1 – This figure accompanies data for figure #1. Working Memory Correct (WMC) and Repeat Reference Memory (RRM) errors by trial for control saline treated, control IFN $\alpha$  NAb treated, HIVE saline treated, and HIVE IFN $\alpha$  NAb treated mice. HIVE mice that received IFN $\alpha$  NAb made less WMC (p=0.0017) and less RRM (p=0.013) errors as memory load increased during trials compared to HIVE mice that received no treatment or control antibodies. HIVE mice with IFN $\alpha$  NAb were able to maintain performance similar to control mice without treatment as memory load increased in WMC and RRM errors. HIVE mice without treatment made significantly more WMC (p=0.016) and RRM (p=0.0002) errors as the memory load increased compared to control and HIVE IFN $\alpha$  NAb mice.

Supplemental Figure 2 – This figure accompanies data for figure #3. Real Time RT-PCR analysis of IFN $\alpha$ 4 and interferon stimulated gene product 15 (ISG15) mRNA in uninfected control saline, uninfected control Ab, uninfected IFN $\alpha$  NAb, HIVE saline, HIVE control Ab, and HIVE IFN $\alpha$  NAb treated mice (A, B). All three treatments of HIV infected mice expressed higher levels of IFN $\alpha$ 4 compared to all control mouse groups, but there was no significant difference between the three HIV groups. HIV infected mice treated with IFN $\alpha$  NAb produced significantly less ISG15 compared to other HIV infected mice (p=0.0216)(B).