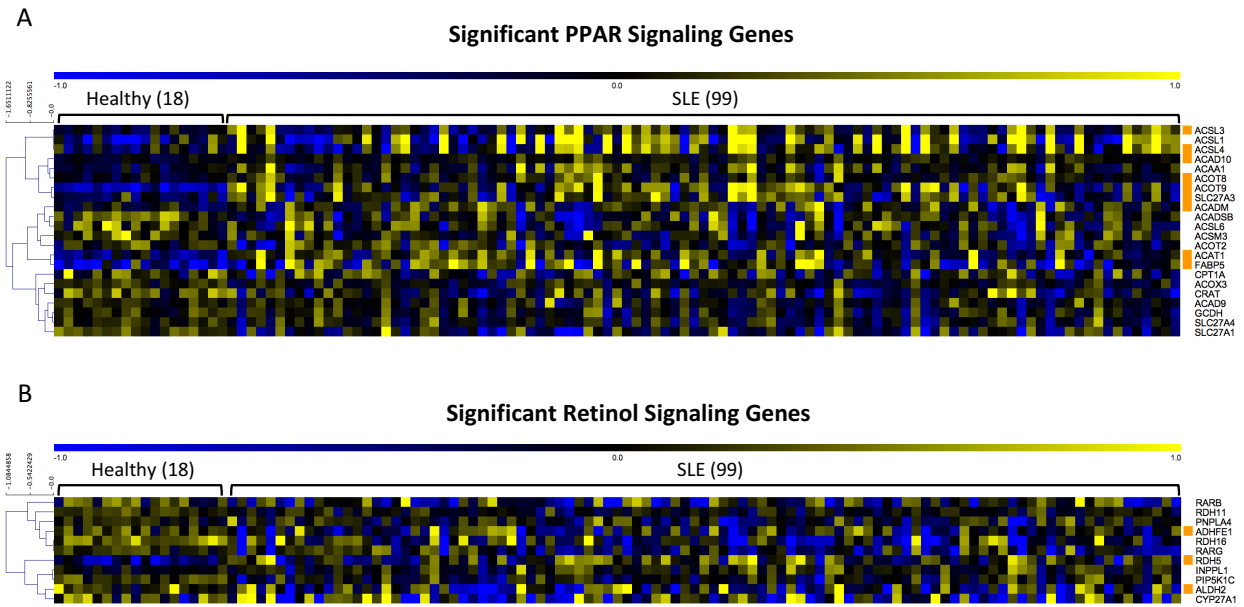


Supplemental Figure 1 Estrogen-dependent and independent functions in ERαKO mice. (A) 10 days after estrogen pellet implantation, WT and ERαKO mice have increased concentration of 17β-estradiol in serum. Data shown as Mean ± SEM of 3 mice per group. p-values were <0.05 (T-test). (B) qRT-PCR was conducted on cDNA from spleen, kidney, and uterus for expression of *Pgr* and *Ltf*. Data shown as Mean ± SEM of 3 mice per group. p-values were * <0.05, **<0.01 (T-test). (C) Splenocytes from WT and ERαKO mice were treated with 1ng EGF or 10⁻⁹M E2 for 30 minutes. qRT-PCR was conducted on cDNA from the splenocytes for *Ltf* expression. Data shown as Mean ± SEM of 3 mice per group. p-values were <0.05 (T-test)



Supplemental Figure 2 Altered expression of PPAR and retinol signaling genes in publicly available data-sets. RNAseq data was obtained from NCBI Gene Expression Omnibus (GEO), accession number GSE72509. Data was generated from whole blood of 18 healthy controls and 99 SLE patients. Data was analyzed using mEV software, significance determined by T-test ($p < 0.05$). Orange gene labels indicate genes which match those found to be significantly changed in our cohort (Figure 10).