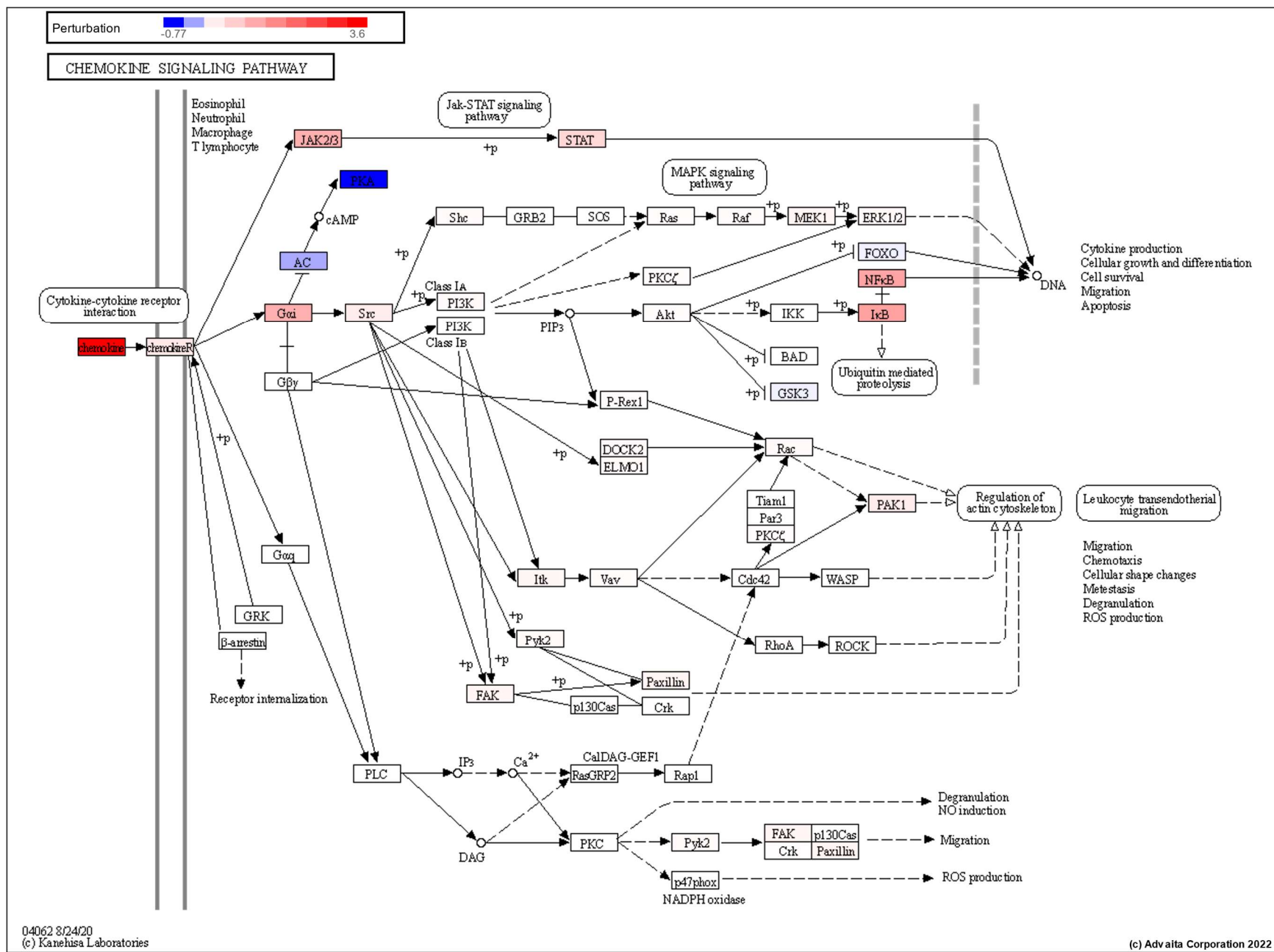
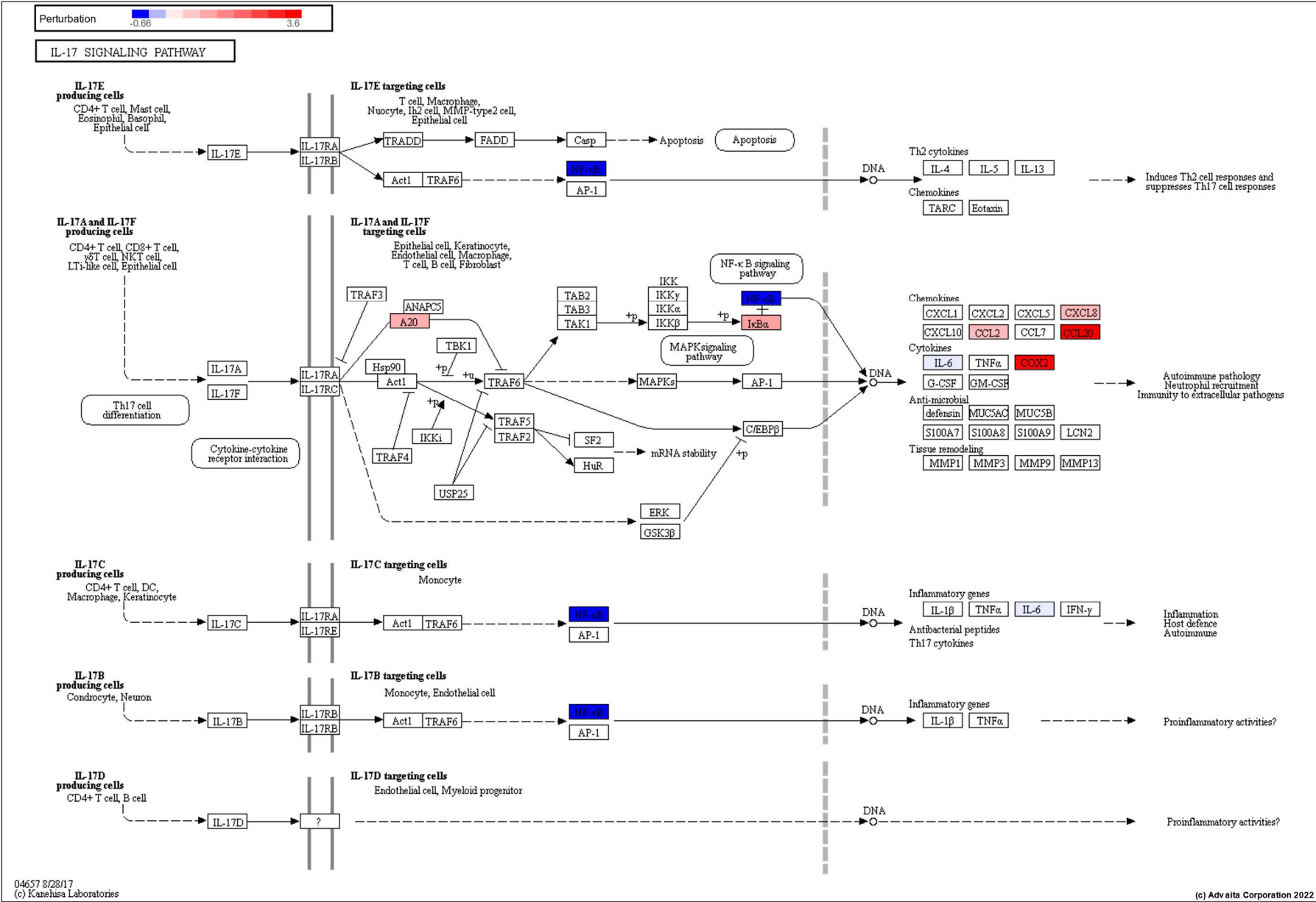


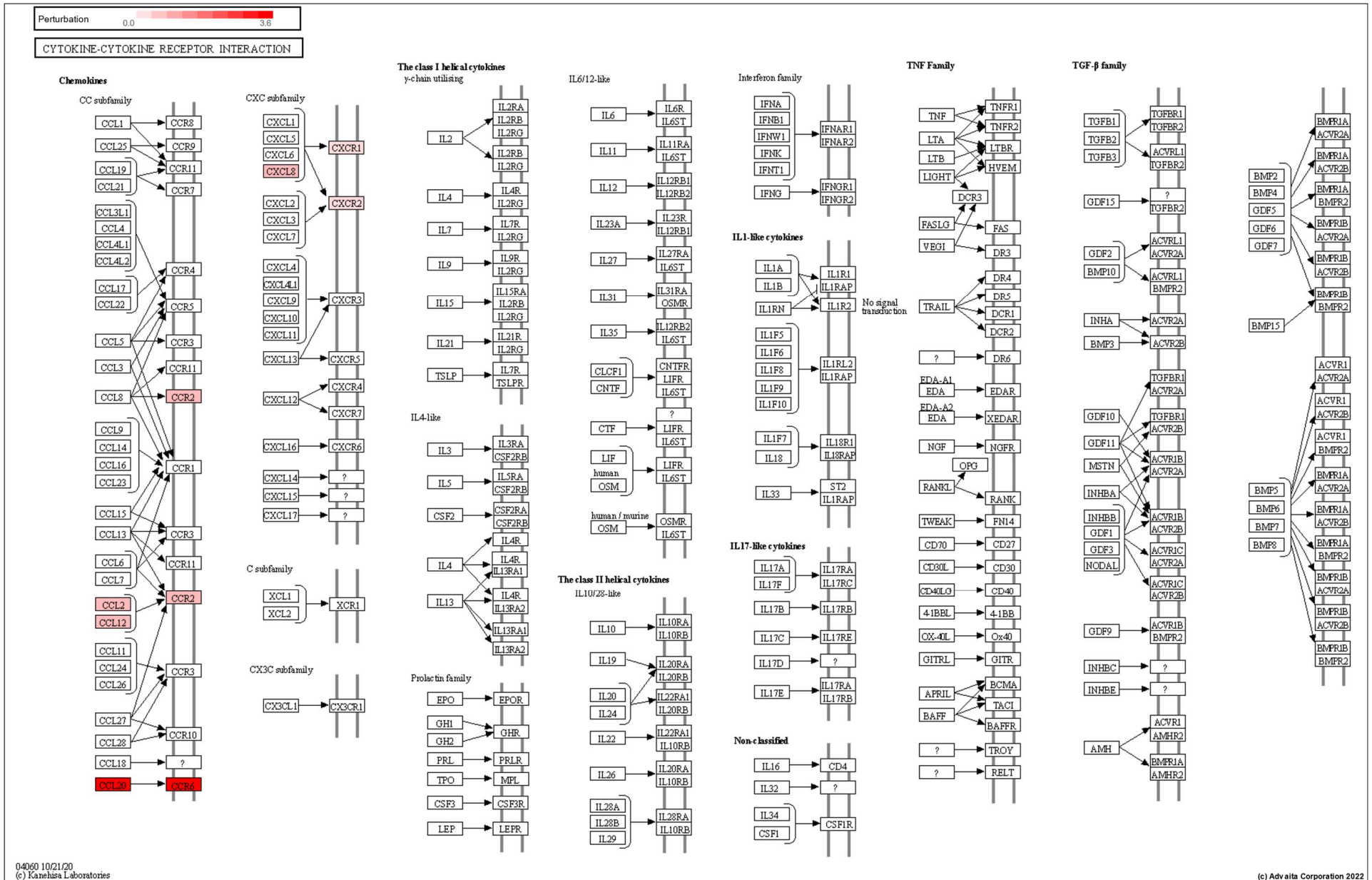
A



B



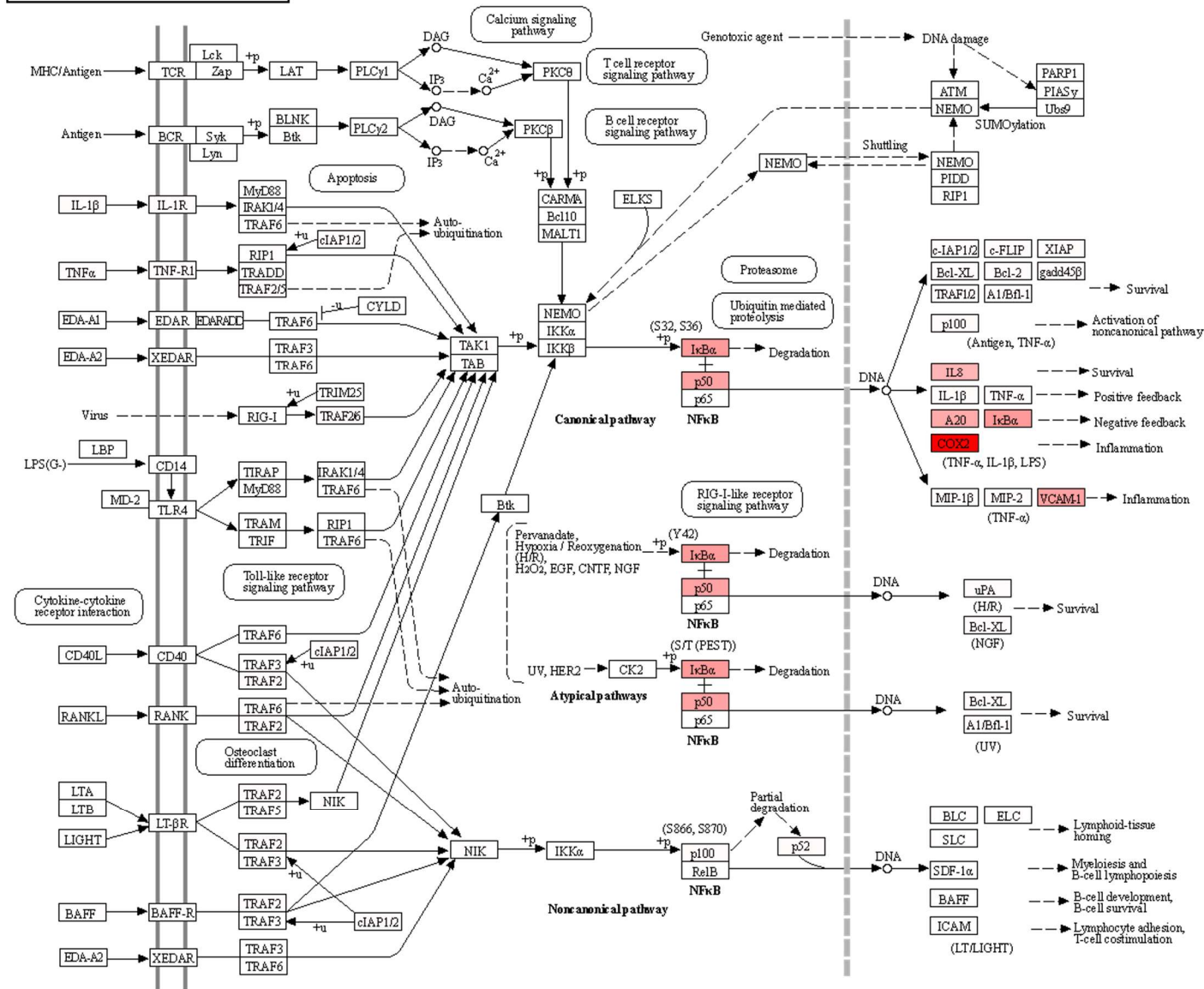
C



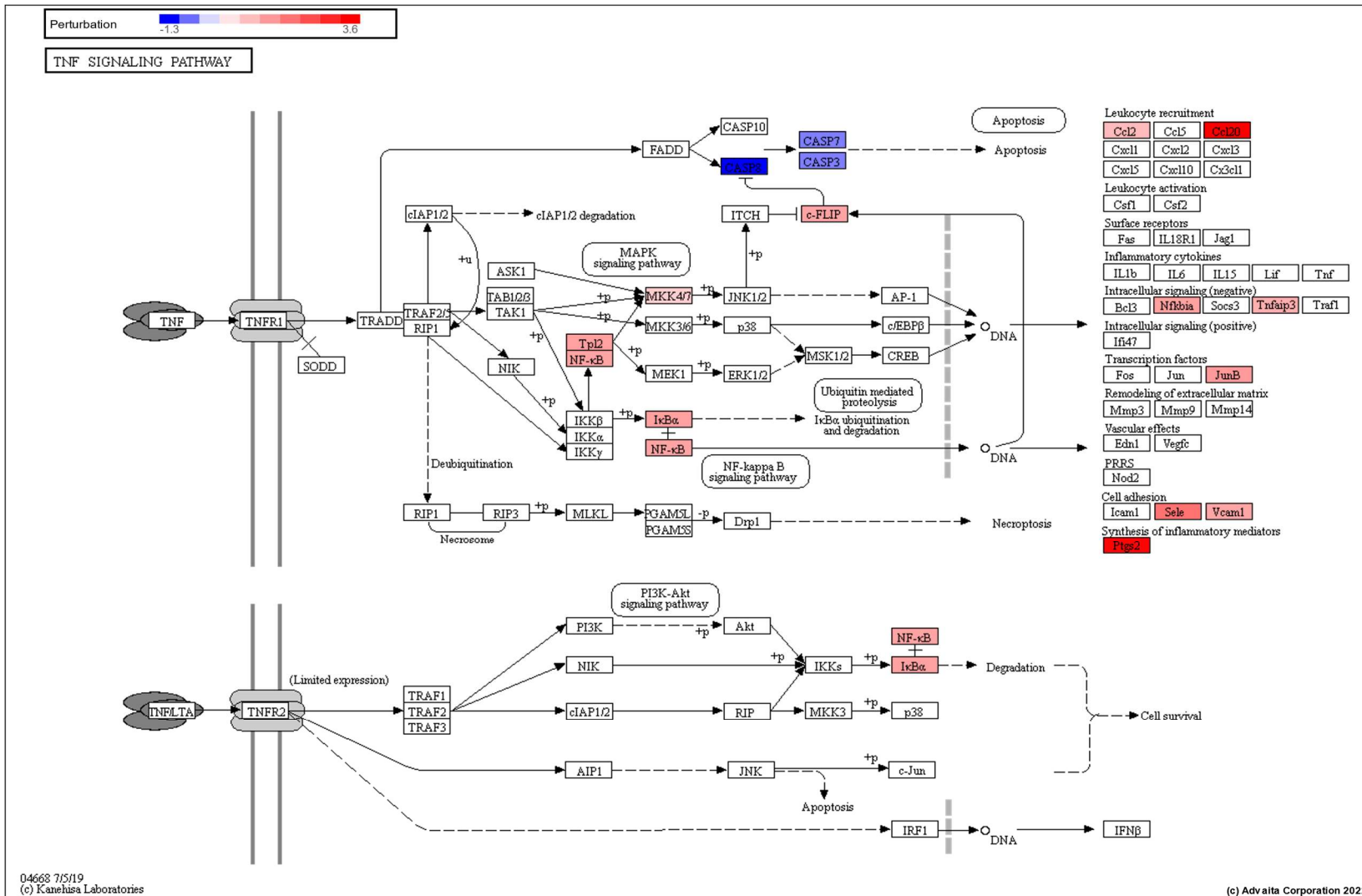
D

Perturbation 0.0 3.6

# NF-KAPPA B SIGNALING PATHWAY



E



**Figure S4.** Cytokine signaling pathways. Cytokine signaling pathways in NPSC affected by NHS include (A) chemokine signaling, (B) IL-17 signaling, (C) cytokine-cytokine receptor interactions, (D) NF-κB signaling, and (E) TNF signaling pathways. Pathway perturbations are represented. Red highlighted genes are projected to be significantly upregulated while blue highlighted genes are projected to be significantly downregulated. Pathway analysis figures were created with Advaita iPathwayGuide.