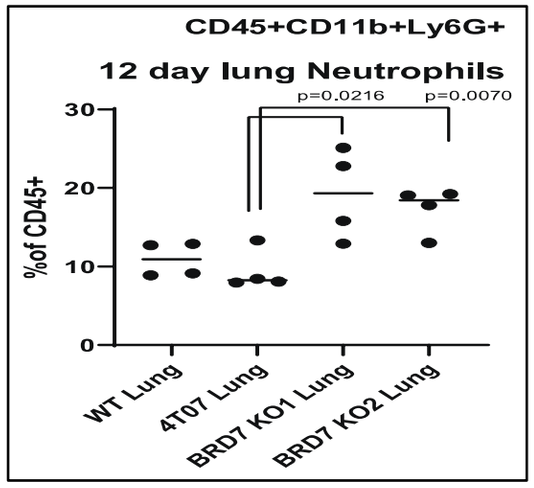
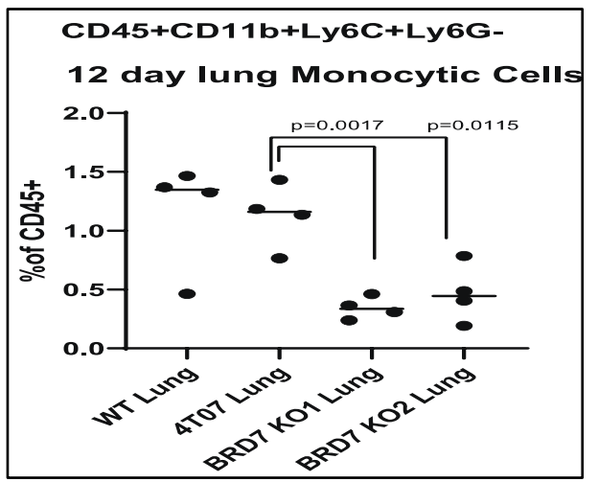
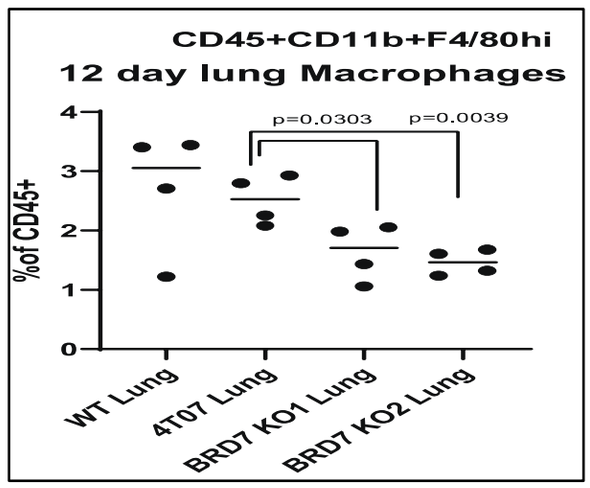
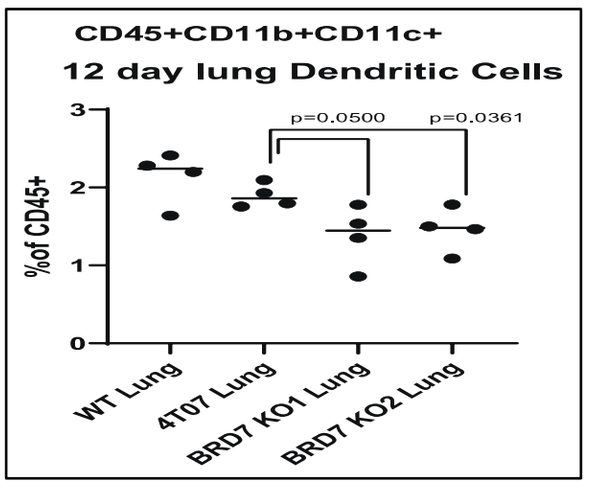
A

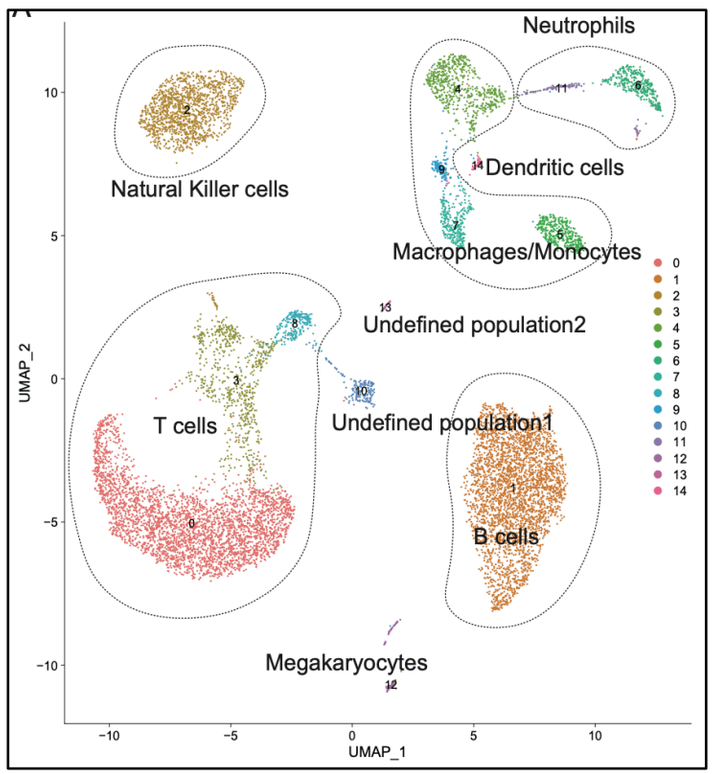


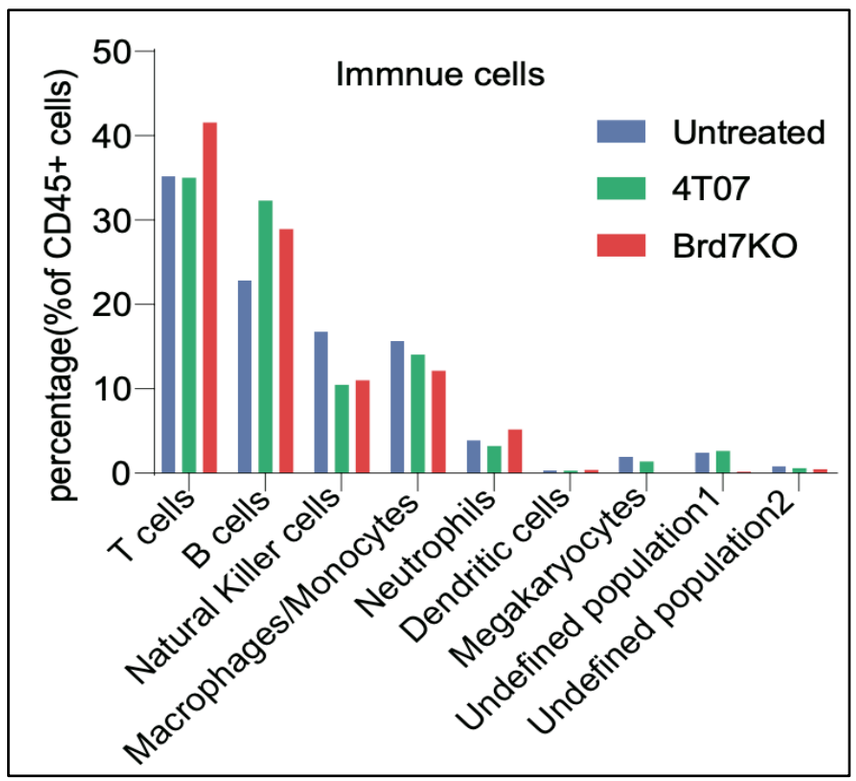


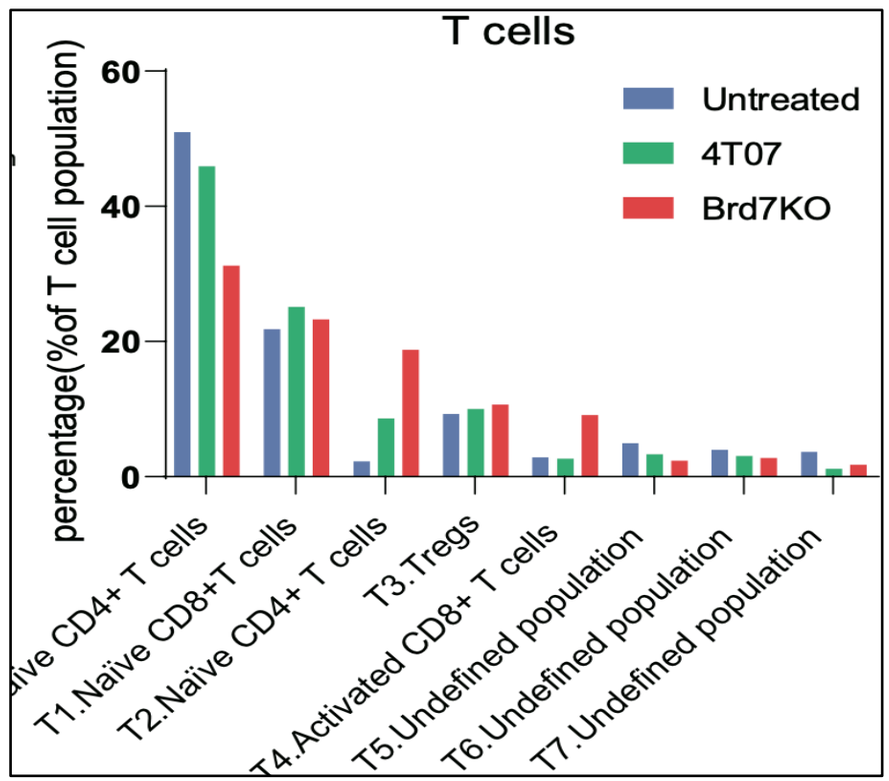




B







C

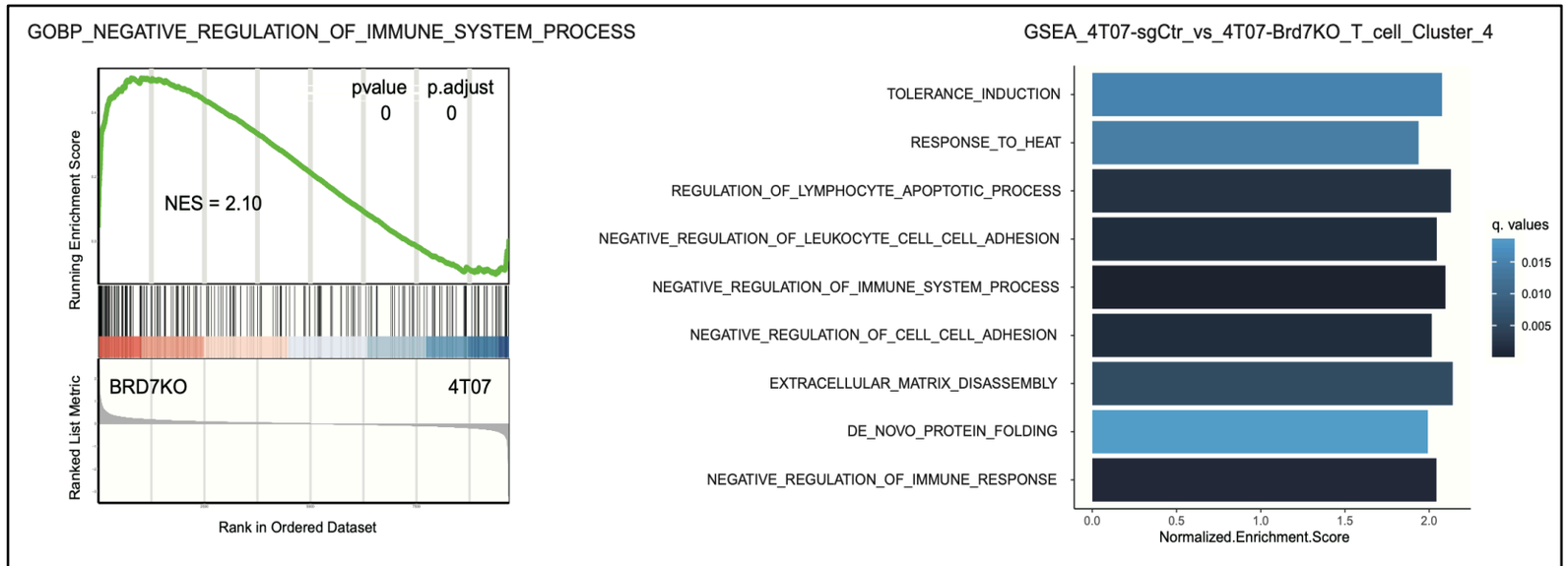
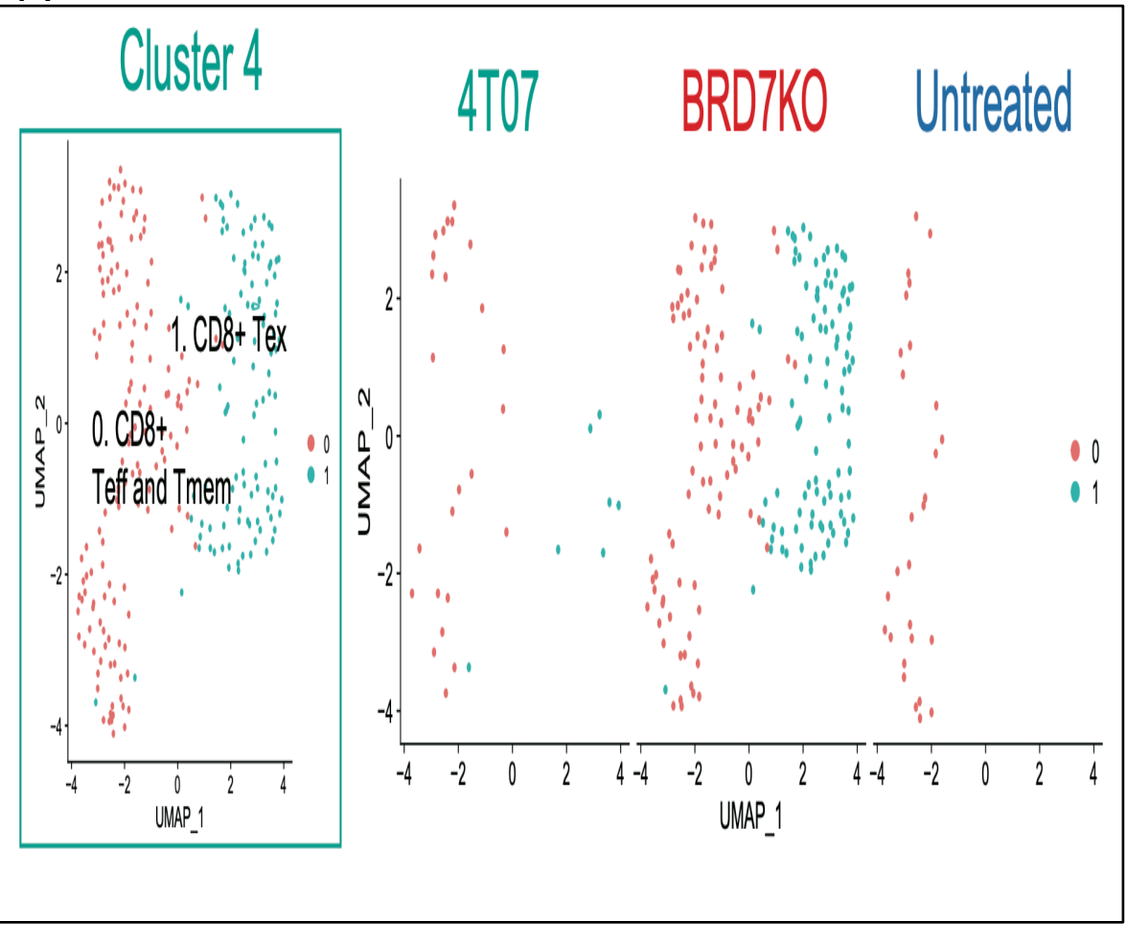
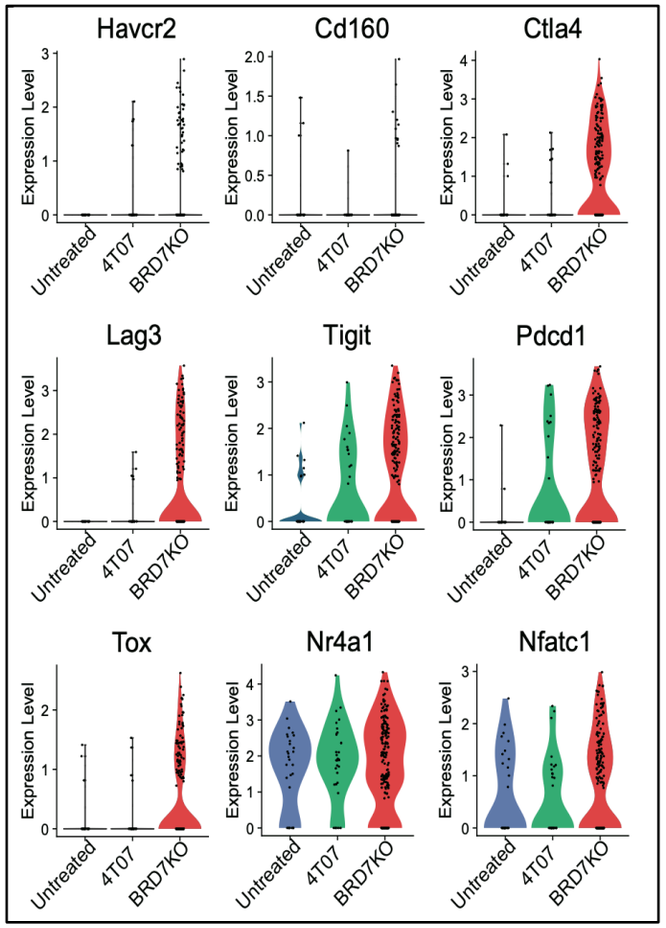
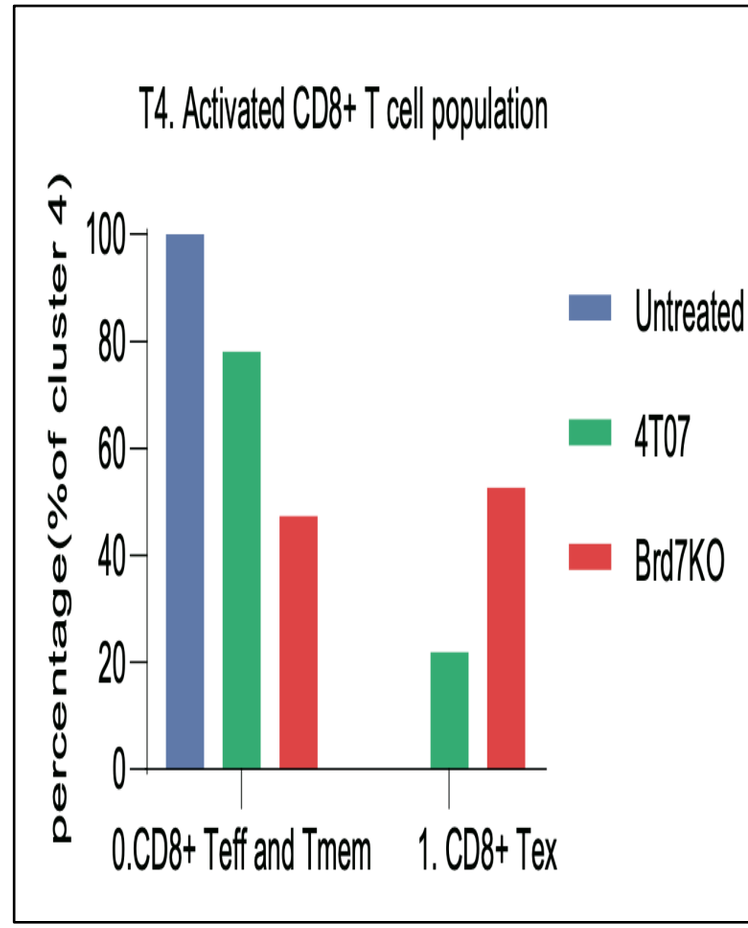


Figure 1. (A) FACS analysis revealed that loss of BRD7 led to upregulation of neutrophil infiltration and downregulation of macrophage, dendritic cells and monocytic cells infiltration in the lung. (B) scRNAseq demonstrated that loss of BRD7 led to upregulation of the neutrophil and the CD8+ exhausted T cells infiltration in the lung. (C) GSEA of the scRNAseq data found that loss of BRD7 led to the significant enrichment of the negative regulation of immune system response.

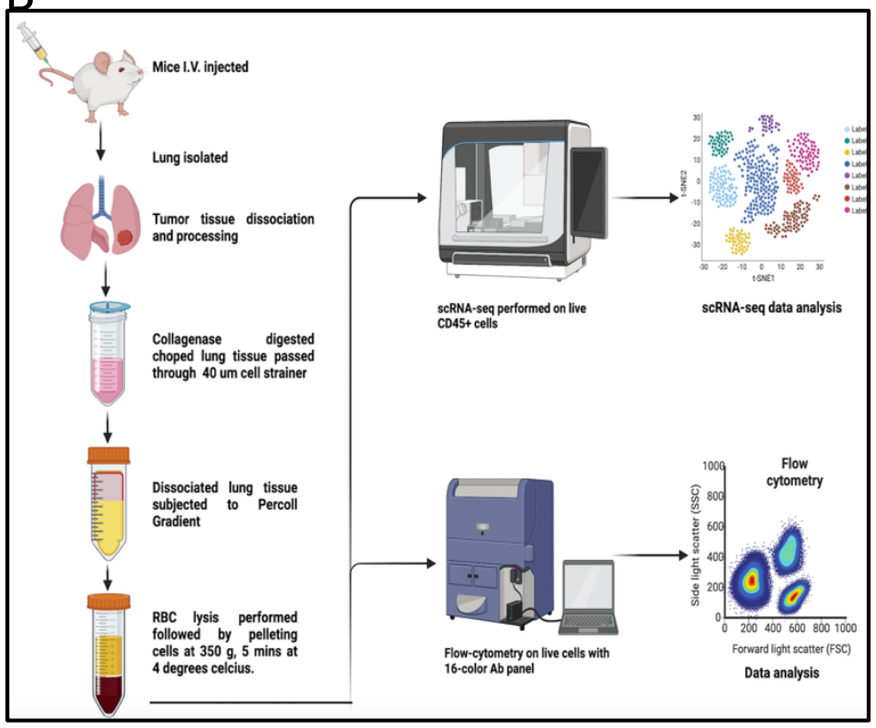
A



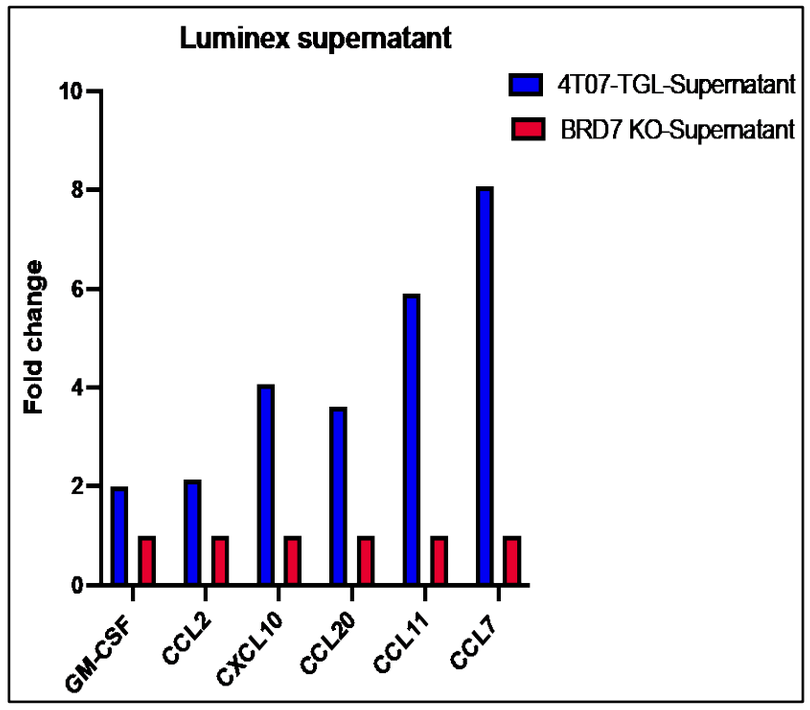




B



C



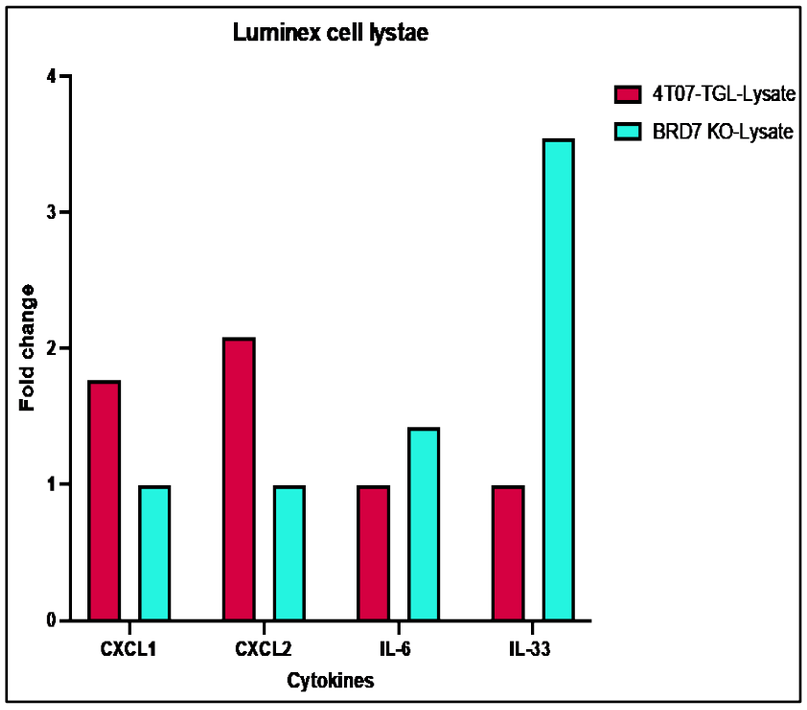


Figure 2. (A) scRNAseq data revealed to us that loss of BRD7 led to the upregulation of the activated CD8+ exhausted T cells which was demonstrated by the upregulation of the exhausted T cell markers like CTLA4, LAG3,TIGIT, TOX and PDCD1. (B) Schematic representation of the experimental design for the scRNAseq and FACS experiments. (C) Luminex cytokine multiplex assay revealed to us that loss of BRD7 led to the downregulation of the CCL7, CCL11, CXCL10 and CCL20 cytokines in the supernatant and of the CXCL2 cytokines in the cell lysate while leading to the upregulation of the IL6 and IL33 cytokines in the cell lysate.

GRAPHICAL ABSTRACT