



**Supplementary Figure 2. Controls for flow cytometry and ion channel antibodies.** (A) Representative flow cytometry histograms showing KCa3.1, Kv1.3, Orai1, Stim1, and TRPM7 expression in unstained cells (green), FMO staining (red) and full panel staining (black) in healthy donor PBMCs. Cells were gated based on the following: live cells, lymphocytes, CD8<sup>+</sup> cells and then on ion channel expression. (B) HNC tumor slides were stained with DAPI (blue) along with 6 ug/uL Orai1 ± Orai1 peptide (1:10) followed by secondary antibody (violet). (C) Left: HNC tumor slides were stained with DAPI (blue) along with 23.8 ug/uL Stim1 ± Stim1 peptide (1:10) followed by secondary antibody (violet). Right: Activated CD3<sup>+</sup> T cells were stained with 23.8 ug/uL Stim1 antibody ± Stim1 specific peptide (1:10) and analyzed via flow cytometry. The histogram shows the fluorescence of the Stim1 antibody + peptide (orange), Stim1 antibody alone (blue), and unstained (red).