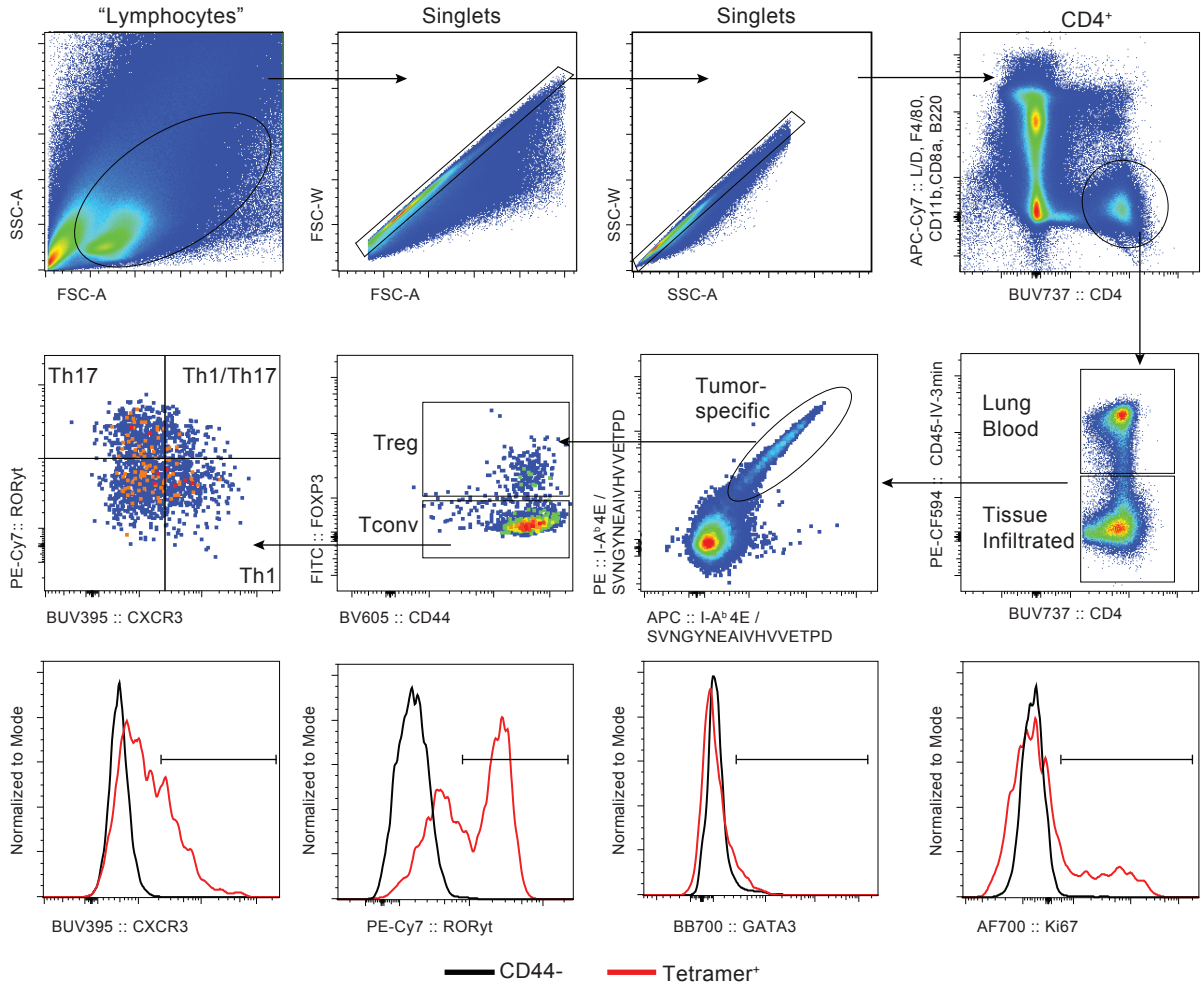
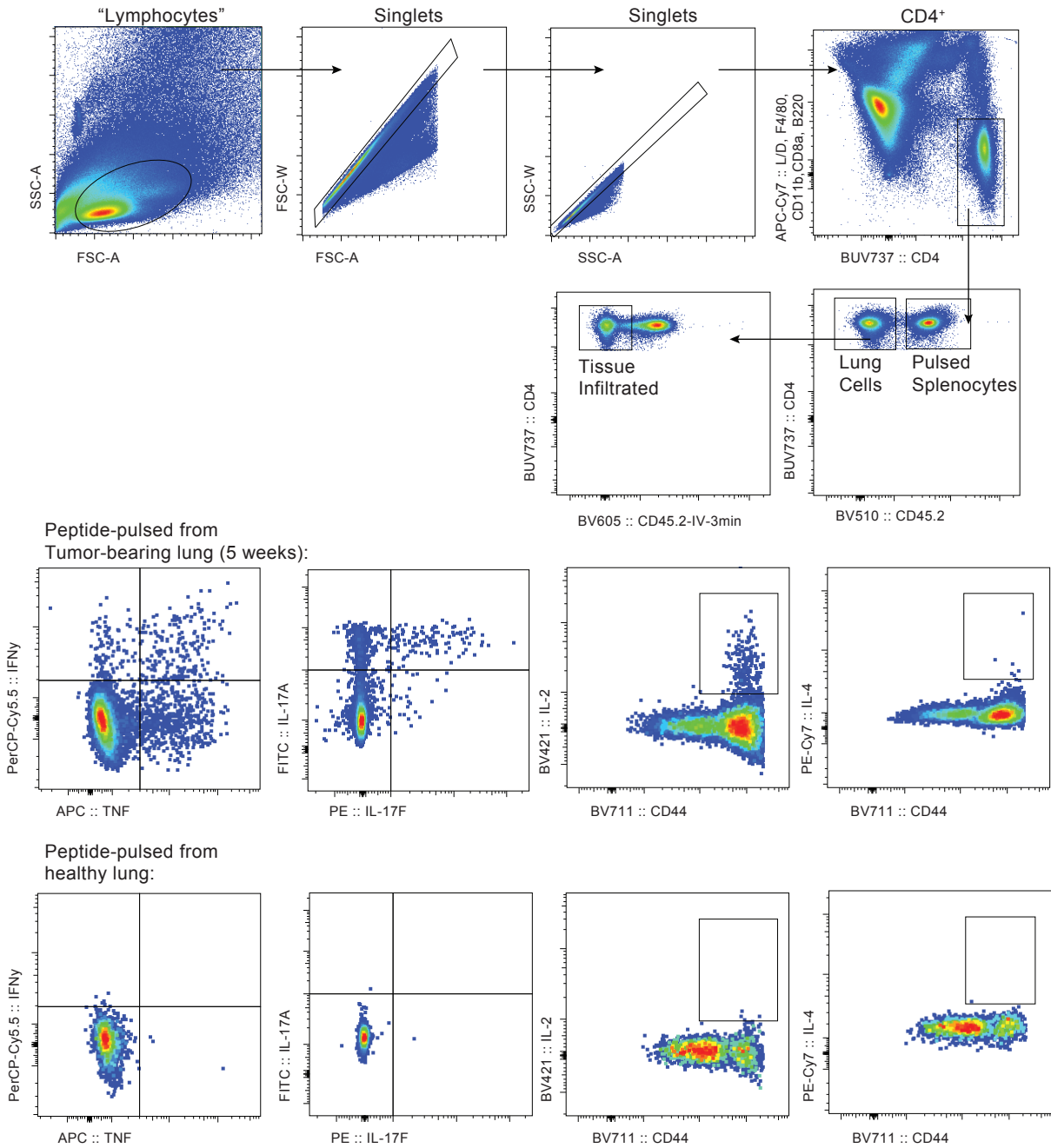


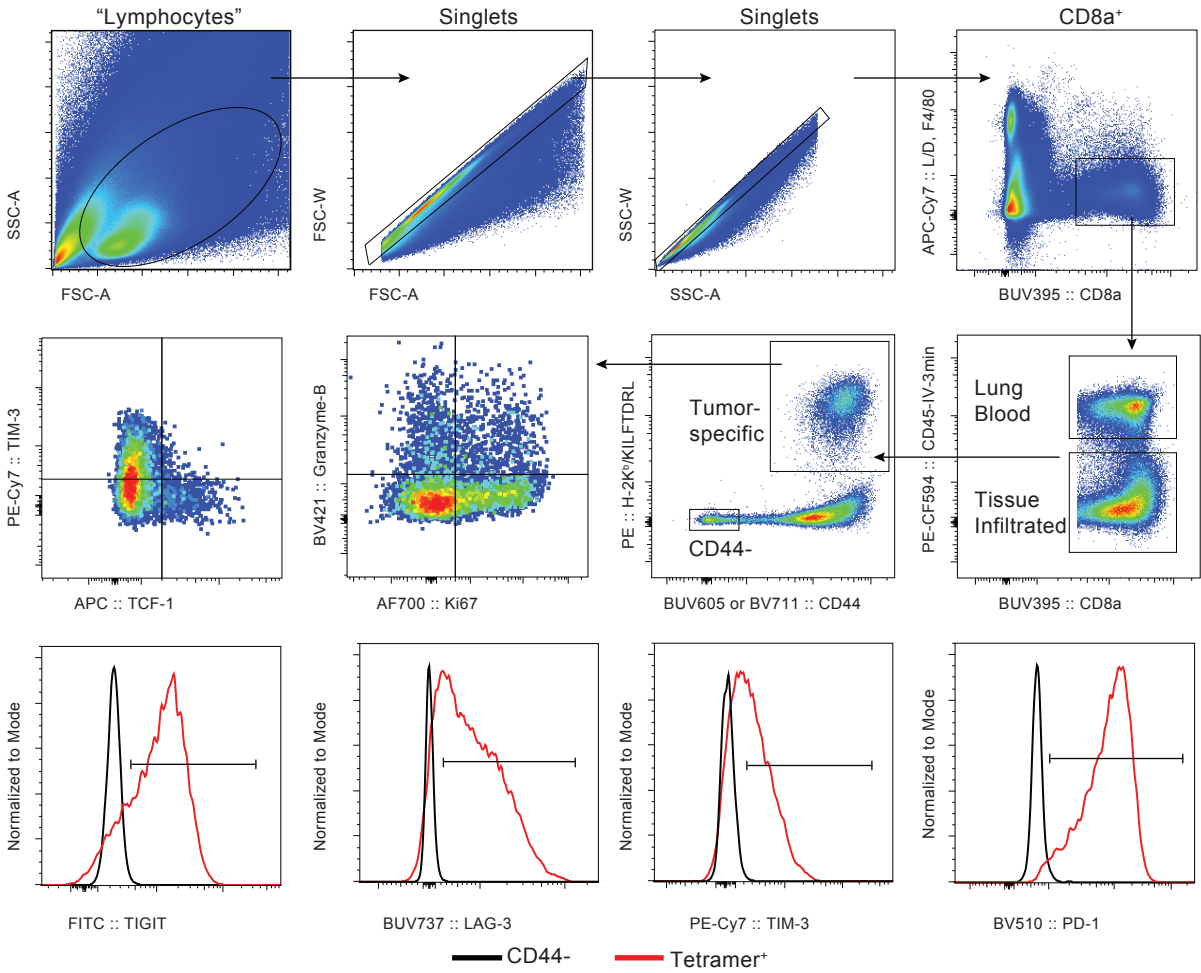
Supplementary Figure 1



Supplementary Figure 2

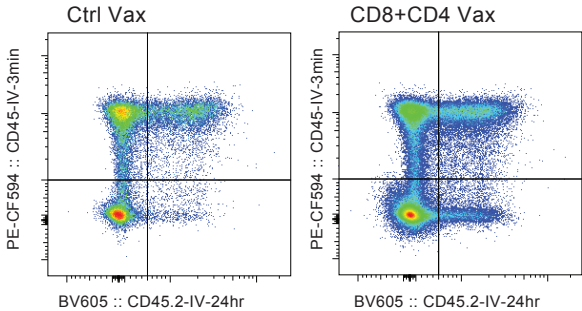


Supplementary Figure 3

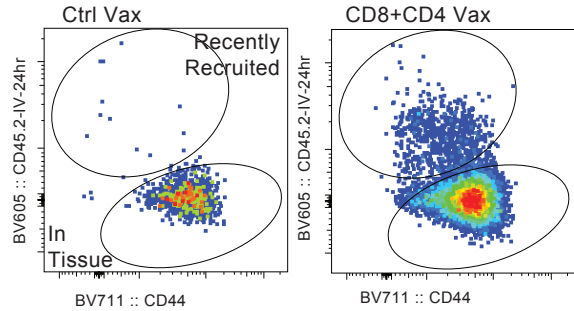


For Figure 5 and Extended Data Figures 10 and 11:

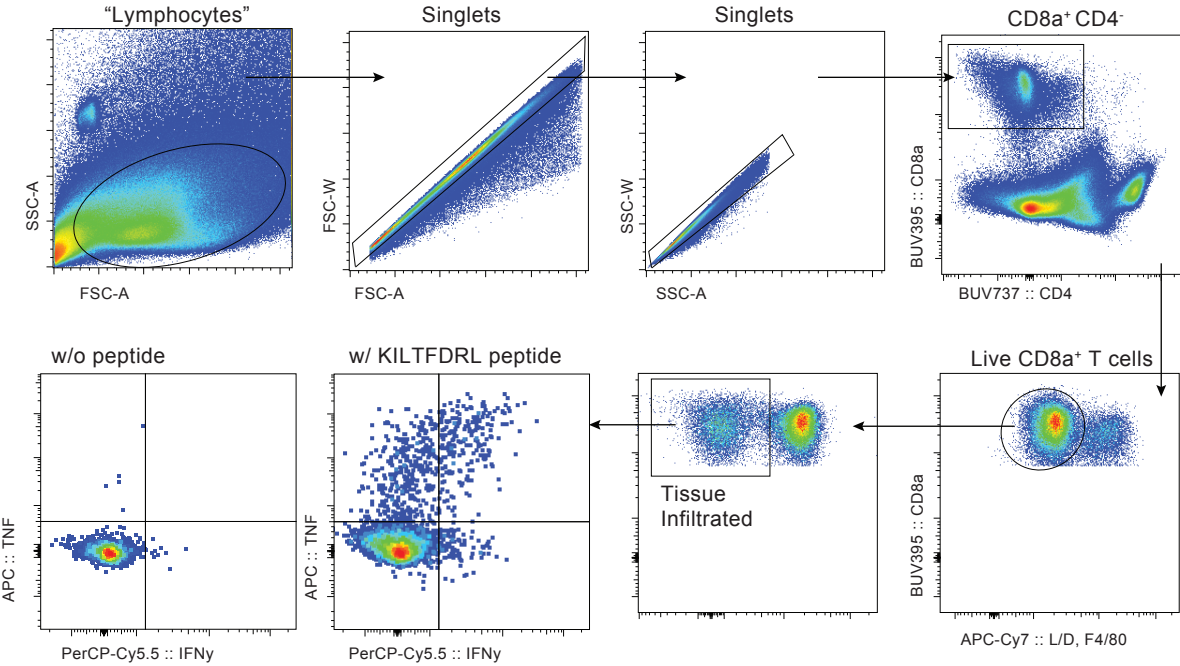
Gated up to CD8a⁺ population as above:



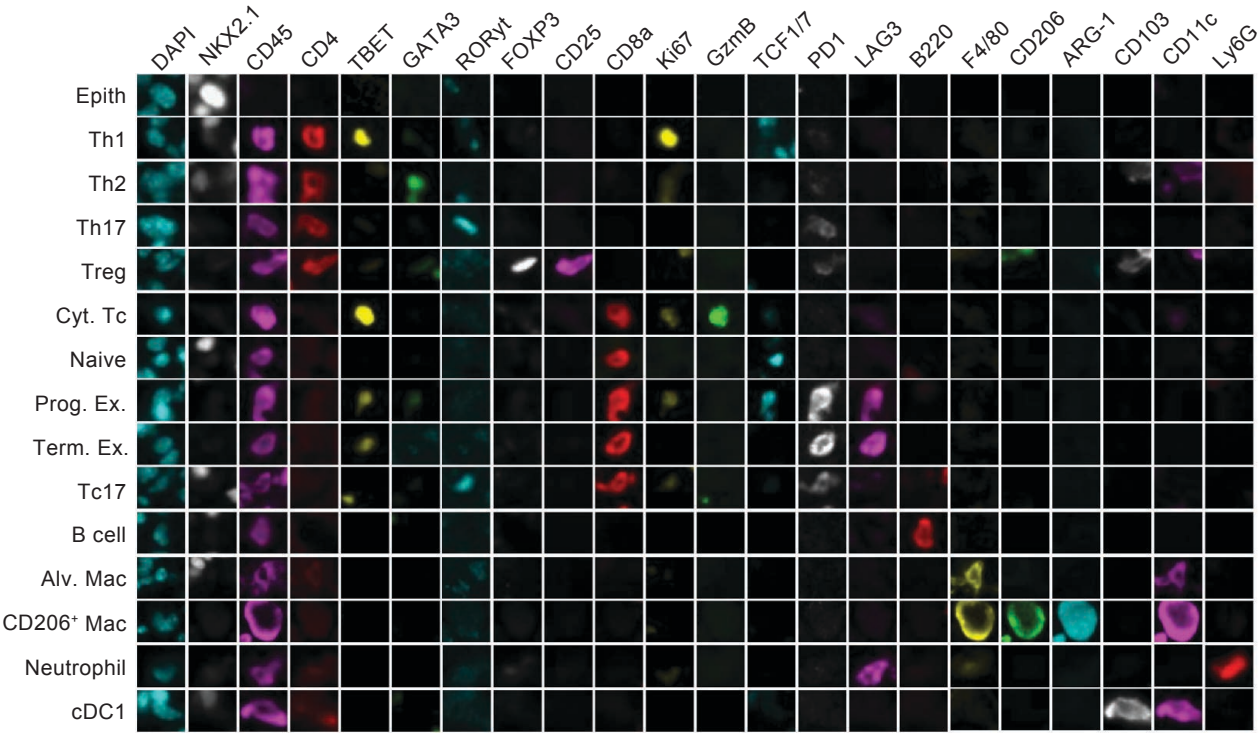
Gated up to Tumor-specific population as above:



Supplementary Figure 4



Supplementary Figure 5



Population Name	Marker Description	Population Name	Marker Description
Leukocytes	CD45 ⁺	Neutrophils	Ly-6G ⁺
T cells	CD3e ⁺	cDC1	CD103 ⁺ , CD11c ⁺ , F4/80 ⁻ , NKX2.1 ⁻
CD4 ⁺ T cell	CD4 ⁺	Macrophage	F4/80 ⁺
Treg	CD4 ⁺ , FOXP3 ⁺	Alveolar Macrophage	F4/80 ⁺ , CD11c ⁺
Tconv	CD4 ⁺ , FOXP3 ⁻	CD206+ Macrophage	F4/80 ⁺ , CD206 ⁺
Cycling Treg	CD4 ⁺ , FOXP3 ⁺ , Ki67 ⁺	B cells	B220 ⁺
Cycling Tconv	CD4 ⁺ , FOXP3 ⁻ , Ki67 ⁺	Cytotoxic NK cells	CD161 ⁺ , Granzyme-B ⁺
Th1	CD4 ⁺ , FOXP3 ⁻ , TBET ⁺	Cancer / Epithelial cell	NKX2.1
Th17	CD4 ⁺ , FOXP3 ⁻ , RORyt ⁺	mRpl18 ⁺ cancer cell	eGFP ⁺ , NKX2.1 ⁺
Th2	CD4 ⁺ , FOXP3 ⁻ , GATA3 ⁺	mRpl18+mItgb1 cancer cell	mCherry ⁺ , NKX2.1 ⁺
CD8 ⁺ T cell	CD8 ⁺		
Cytotoxic CD8 ⁺ T cell	CD8 ⁺ , Granzyme-B ⁺		
Progenitor CD8 ⁺ T cell	CD8 ⁺ , TCF-1 ⁺		
Term. diff CD8 ⁺ T cell	CD8 ⁺ , TCF-1 ⁻ , TIM-3 ⁺		
Cycling CD8 ⁺ T cell	CD8 ⁺ , Ki67 ⁺		
Exhausted CD8 ⁺ T cell	CD8 ⁺ , PD-1 ⁺ , TIM-3 ⁺		