SUPPLEMENTAL MATERIAL

Supplementary Table 1: Flow cytometry reagents

Live dead/ Dextramer/Antibody	Panel	Dye/Fluorochrome	Clone	Function	Vendor
Zombie Viability dye	1 & 2	NIR	n/a	Dead cells exclusion	Biolegend
Dextramer®	1	PE	n/a	Identify antigen-specific T cells	Immudex
Surface Antibodies					
CD3	1 & 2	AF700	17A2	Define lineage	Biolegend
CD4	1 & 2	PerCP-Cy™5.5	RM4-5		BD
CD8	1 & 2	BV510	53-6.7		Biolegend
CD44	1 & 2	AF488	IM7	CD8/CD4 naïve and memory subsets	
CD62L	1 & 2	BV570	MEL-14		
PD-1	1 & 2	BV421	29F.1A12	Activation/Exhaustion Marker	
KLRG1	1	BV785	2F1/KLRG1	Short-lived effector (SLECs) and Memory pre-cursor (MPECs) markers	
CD127	1	PE-Cy5	A7R34		
Tim3	1 & 2	BV605	RMT3-23	Exhaustion marker	
Intracellular Antibodies					
IFNg	2	BV711	XMG1.2	Cytokine response	Biolegend
TNFa	2	AF647	MP6-XT22		
IL-2	2	PE-Dazzle-594	JES6-5H4		
Transcription Factors					
TCF1	1	AF647	C63D9	Stem-like T cell marker	Cell signalling
Ki67	1	Per-CP	16A8	T-cell proliferation marker	Biolegend

Supplementary Figure 1: Gating strategy for Panel 1, *ex vivo* analysis of CD8+ T cell phenotypes

Splenocytes were identified following application of a time gate (SCH versus time) and exclusion of doublets (FSC-H versus FSC-A) on a SSC-A versus FSC-A dot plot. Viable CD3+ cells were characterized as CD4+ or CD8+ T cells. CD8+CD44+ Dextramer®+ T cells were identified and further characterized with PD-1 vs TCF1 (stem-like T-cells), PD1 versus Tim3 (exhaustion), KLRG1 versus CD127 (short-lived effector cells & memory pre-cursor effector cells) and CD44 versus CD62L (memory subsets). In addition, proliferating CD8+ cells were quantified using transcription factor Ki67. Analysis was conducted on FlowJo Software.

Supplementary Figure 2. Gating strategy for Panel 2, Intracellular Cytokine Staining

Splenocytes were identified following application of a time gate (SCH versus time) and exclusion of doublets (FSC-H versus FSC-A) on an SSC-A versus FSC-A dot plot. Viable CD3+ cells were characterized as CD4+ or CD8+ T cells. CD8+ T cells expressing intracellular cytokines IFNγ, IL-2 and TNFα were quantified.