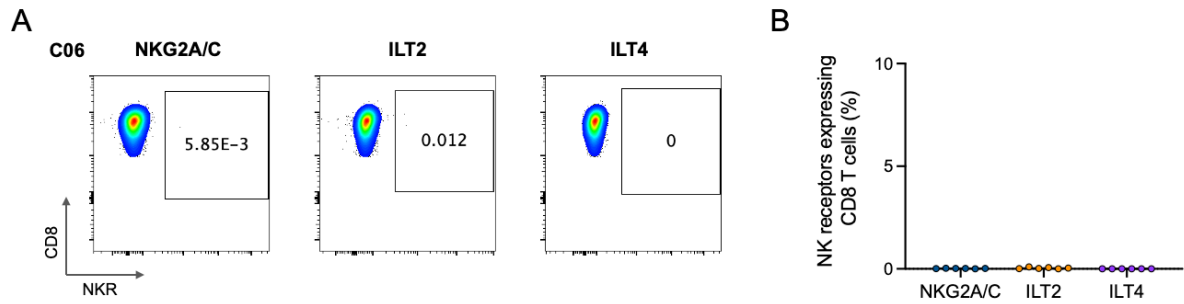


**Supplementary Figures and Tables:**

**Table S1. HLA typing of two healthy donors.**

HLA type	Donor 1	Donor 2
HLA-A	A01:01/04N; A24:02	A25:01; A68:01
HLA-B	B44:05; B52:01	B44:02
HLA-C	Cw02:02; Cw12:02	Cw05:01/03; Cw07:04/11
HLA-E	01:01; 01:03	01:01; 01:03

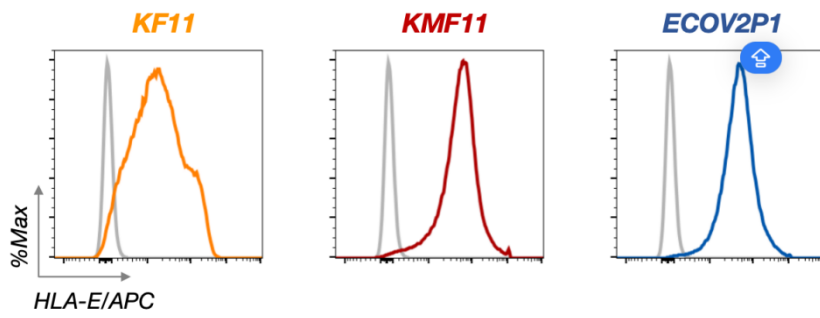
Figure S1



**Fig. S1. Identification of VL9 specificity and expression of NKG2A/C, ILT2 and ILT4 of all the T cell clones generated.**

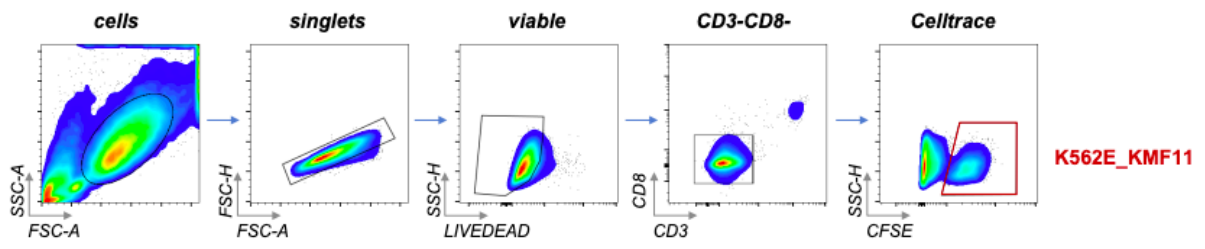
**A,** Representative flow cytometry plots demonstrating the low level or lack of NK receptors (NKG2A/C, ILT2 and ILT4) staining on a T cell clone C06.

**B,** NKG2A/C, ILT2, and ILT4 expression demonstrated minimal expression of these receptors on all 6 clones, including clones C02, C06, C07, C10, C26, C27.

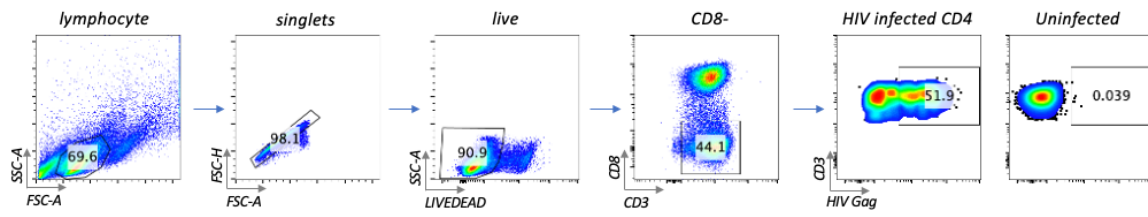


**Fig S2. Generation of HLA-E SCT transduced K562 cells as antigen presenting cells**

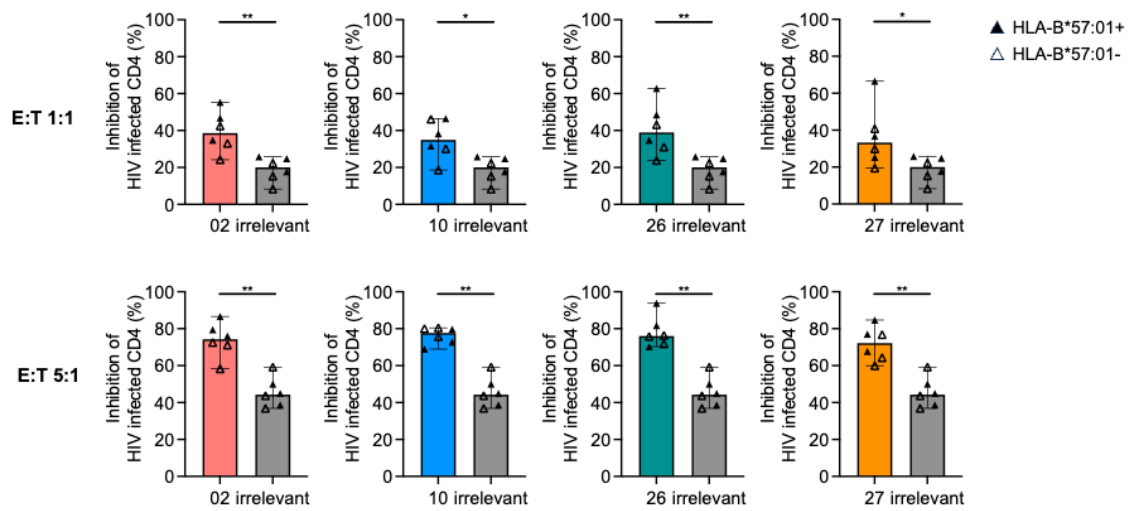
The flow charts represent the stable expression HLA-E in K562 cells transduced with SCTs containing the peptides KF11, KMF11 and ECOV2P1.



**Fig. S3. Gating strategy of coculture assays with K562E target cells**



**Fig. S4. Gating strategy of HIV-infected CD4 T cells in a viral suppression assay**



**Fig. S5. Antiviral effect of KMF11-HLA-E-specific TCR CD8 T cell transductants against HIV-infected primary CD4 T cells in a viral suppression assay.**

The inhibitory effect of KMF11-specific TCR transductants on HIV-infected CD4 T cells was assessed at E:T ratios of 1:1 and 5:1, shown in another two independent experiments. Data are represented as the median with a 95% Confidence Interval (CI) (n=6 donors). Statistical significance between KMF11 TCR transductants and irrelevant TCR controls was determined using the Mann Whitney test (\*p < 0.05, \*\*p < 0.01). Solid triangle indicates HLA-B\*57:01+ CD4 T cell donors, open triangle indicates HLA-B\*57:01- CD4 T cell donors.