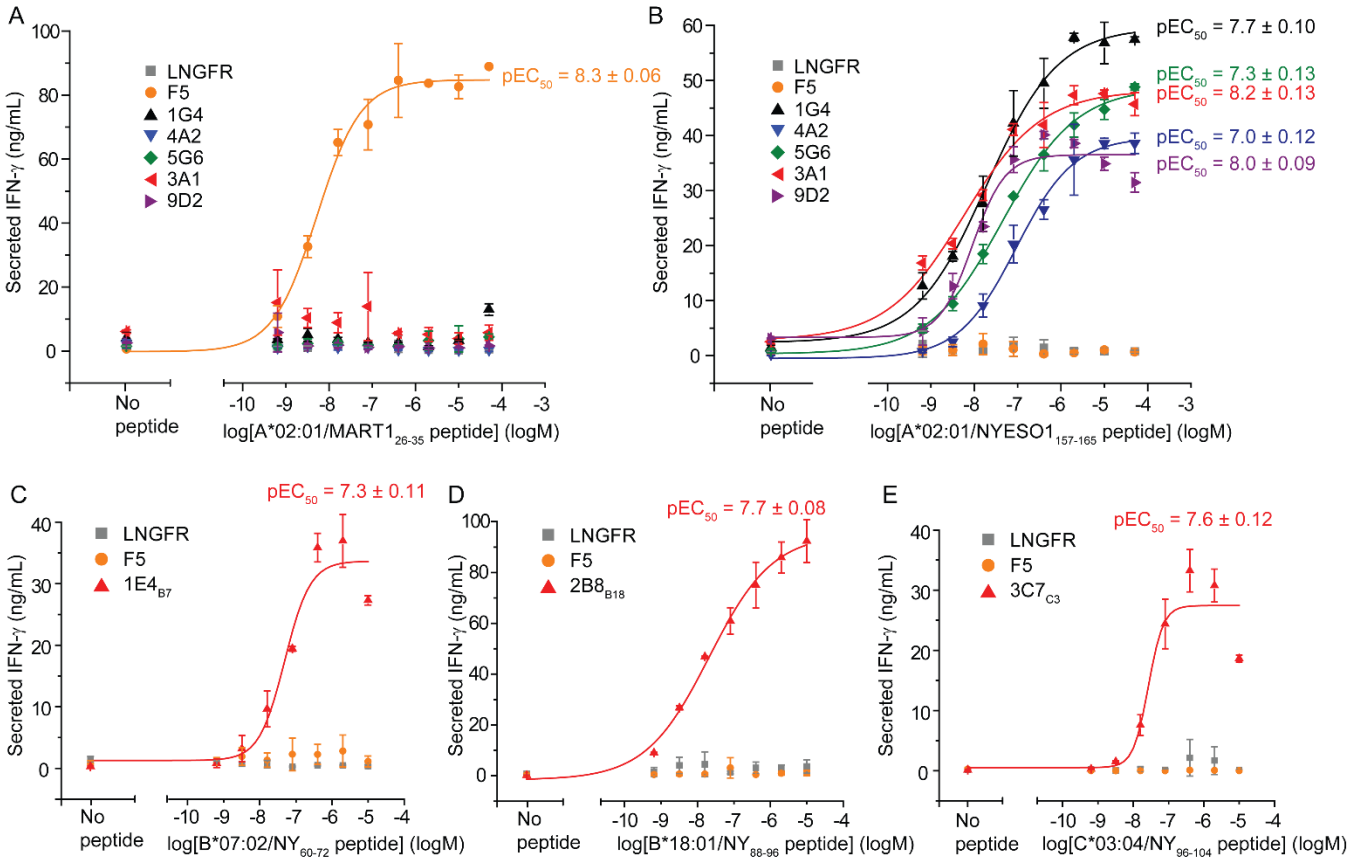
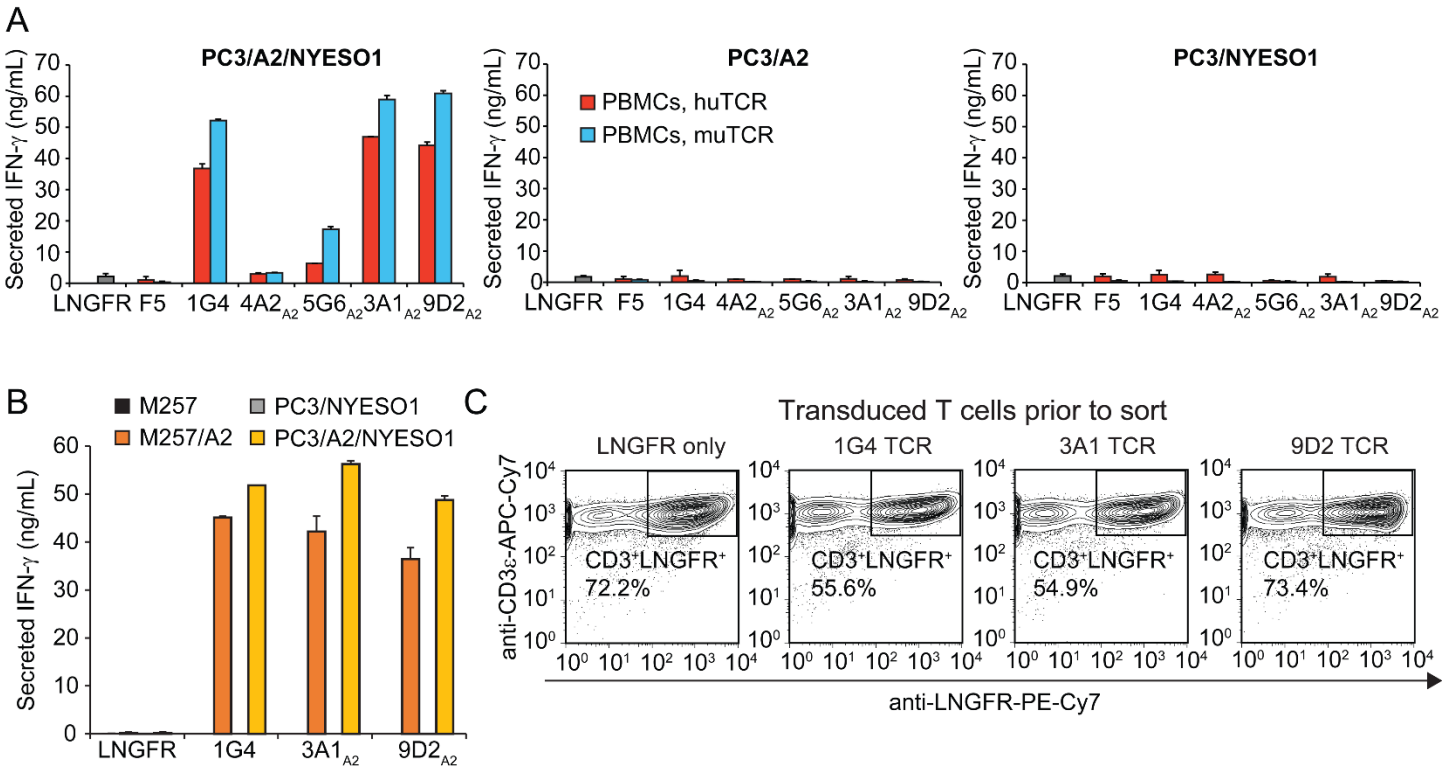
Supplemental Figures



Supplemental Figure S1.
Determination of EC50 for NY-ESO-1-specific TCRs.
(A and B) ELISA measuring secretion of IFN-γ from TCR-transduced PBMCs following 48 hours coincubation with K562 engineered to express HLA-A*02:01 and pulsed with varied concentrations of **(A)** $MART_{26-35}$ or **(B)** $NY_{157-165}$ peptide. **(C-E)** ELISA measuring secretion of IFN-γ from TCR-transduced PBMCs following 48 hours coincubation with K562 engineered to express **(C)** HLA-B*07:02, **(D)** HLA-B*18:01, or **(E)** HLA-C*03:04 and pulsed with varied concentrations of indicated peptides. Means ± SD for two technical replicates are shown. EC_{50} values and associated errors determined by non-linear curve fitting are indicated.



Supplemental Figure S2.
Establishment of xenograft tumor line and function of input T cells for *in vivo* experiment.
(A) ELISA measuring secretion of IFN-γ from TCR-transduced PBMCs following 48 hours coincubation with derivatives of the PC-3 prostate cancer cell line engineered to express (left) HLA-A*02:01 and NY-ESO-1 full protein, (middle) HLA-A*02:01 alone, or (right) NY-ESO-1 full protein alone. Means ± SD for two technical replicates are shown. **(B)** ELISA comparing secretion of IFN-γ from TCR-transduced PBMCs following 48 hours coincubation with indicated M257 or PC-3 target cells. On the 4th day post-transduction, TCR-transduced PBMCs were sorted for CD3$^+$/LNGFR$^+$ and then expanded for 13 additional days prior to the co-culture/ELISA assay and the *in vivo* experiment. Means ± SD for a representative experiment with two technical replicates is shown. **(C)** Flow cytometry contour plots comparing the transduction (LNGFR$^+$) levels of TCR-transduced PBMCs used for the *in vivo* experiment.