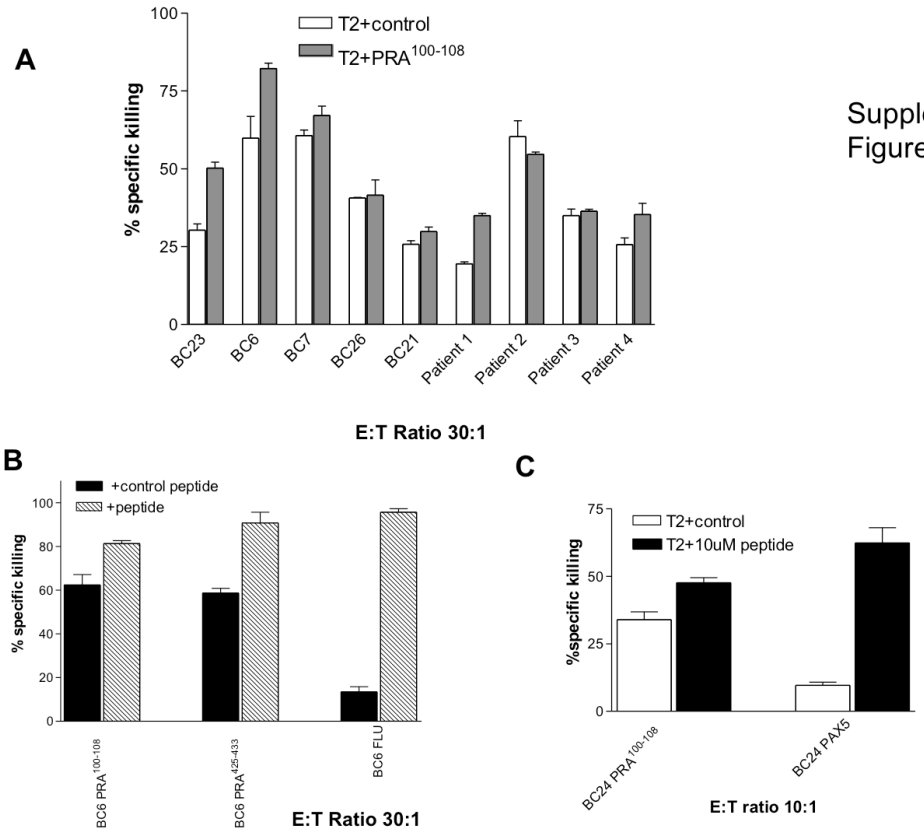
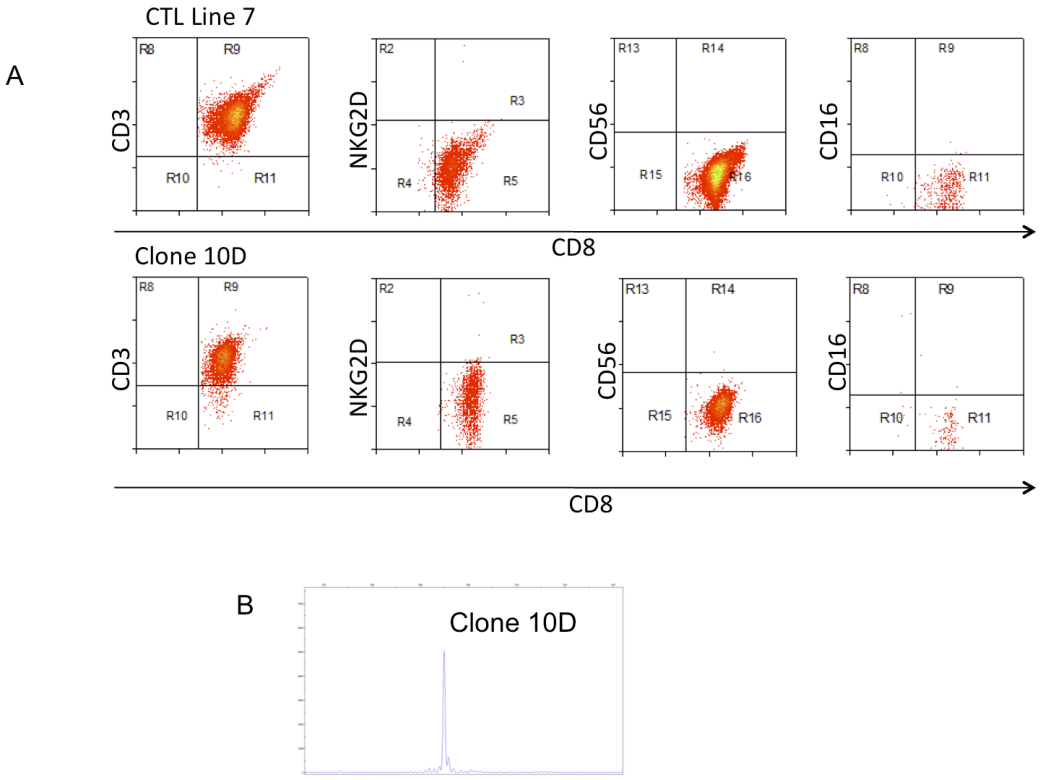
Supplementary figures and legends

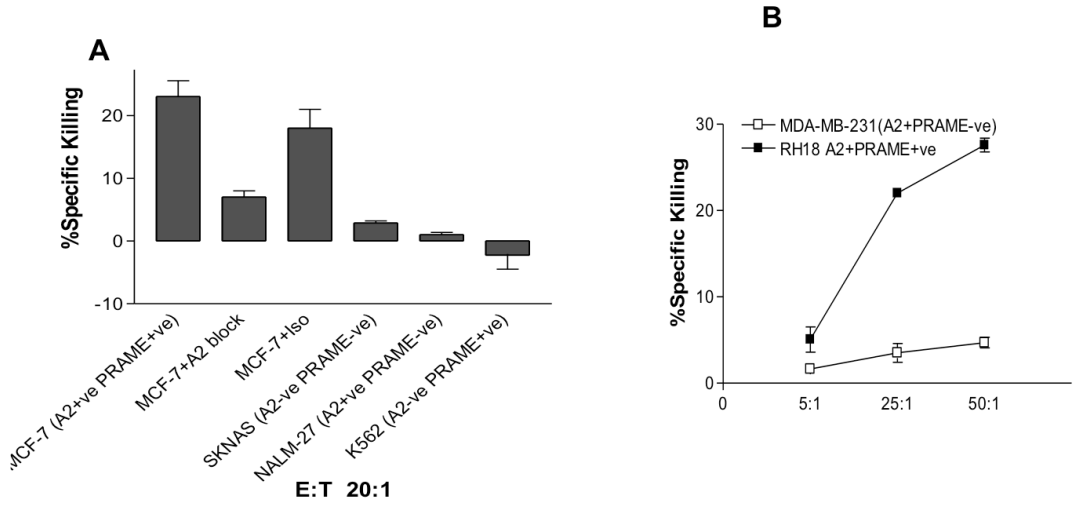


Supplementary Figure 1.

Supplementary Figure 1. A) Representative CTL line activity from 5 separate normal HLA-A0201 positive blood donors (BC denotes donor identity) and 4 separate HLA-A0201 positive patients undergoing treatment for malignant melanoma. CTL lines were co-cultured with T2 cells pulsed with the indicated peptides. **B)** Relative killing of two representative T cell lines against 2 separate PRAME peptides compared with immundominant Flu Matrix paptide; all lines derived from the same donor (BC6). Killing of T2 cells pulsed with the stimulating peptide is compared with killing of T2 pulsed with an irrelevant HLA-A0201 binding peptide. **C)** Relative killing of a $PRA^{100-108}$ CTL line compared with killing by a CTL line from the same donor against a PAX5 epitope. Error bars denote mean +/- SEM. All chromium assays performed over 4 hours.

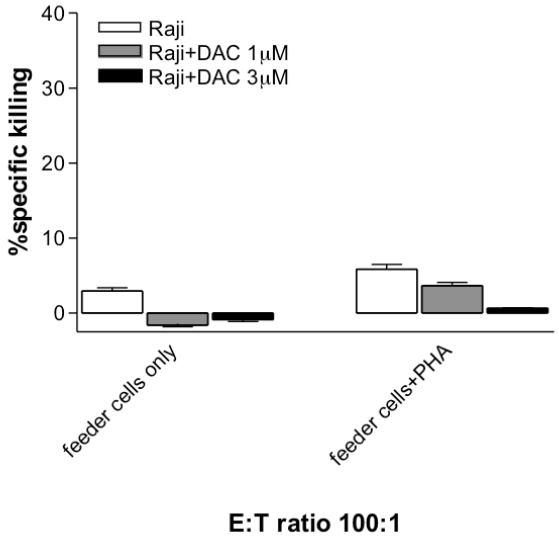


Supplementary Figure 2. A. Flow cytometric analysis of CTL Line 7 and Clone 10D. Both cell lines stain homogeneously positively for CD8 and CD3 and are negative for NK cell markers and CD16. B. Single V-beta TCR specificity of clone 10D determined by TCR spectrotyping.



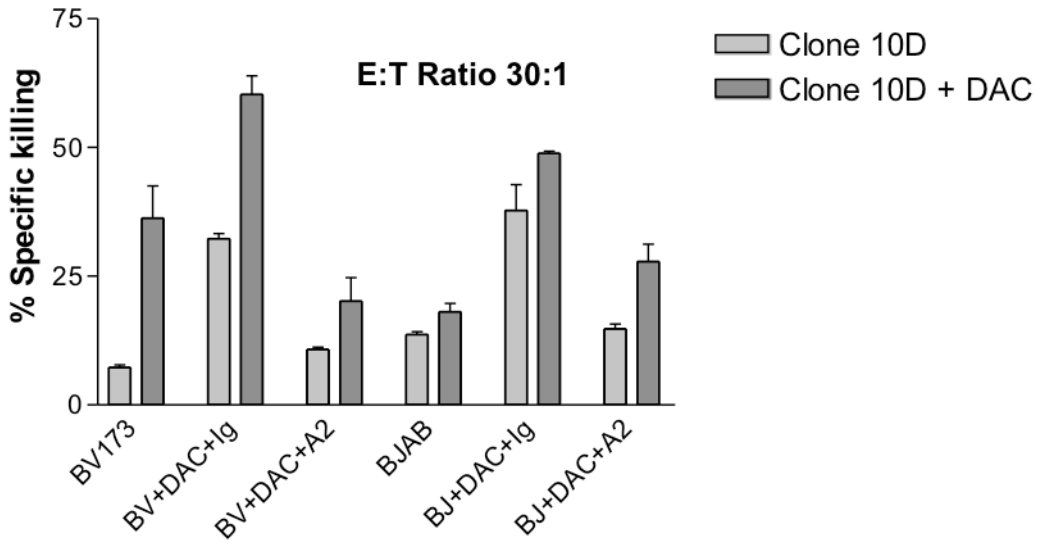
Supplementary Figure 3.

Supplementary Figure 3. Cytotoxicity assays assessing specific killing activity of $PRA^{100-108}$ clone 10D against cancer cell lines. The HLA-A0201 and PRAME expression status for each line is indicated in **A)**. The dose dependency of killing of HLA-A0201 and PRAME positive RH18 cells is shown in **B)**. SKNAS and NALM27 have such low levels of *PRAME* expression (Table 1) that they can be considered PRAME negative. Chromium assays were performed over 4 hours.



Supplementary Figure 4

Supplementary Figure 4. 4 hour cytotoxicity assay to determine the killing of Raji cells treated or not with DAC by allogeneic feeder cells that were used in CTL clone maintenance. Allogeneic feeder cells were treated or not with PHA.



Supplementary Figure 5. 4 hour cytotoxicity assay assessing killing activity of $PRA^{100-108}$ clone 10D. Target cells and/or $PRA^{100-108}$ specific CTL clone 10D were pretreated with DAC for 72 hours. Class I denotes pretreatment of target cells with a pan-class-I blocking antibody whereas Ig denotes its isotype control.