

Supplementary Figure 1. Distribution of $V\delta 2^{(+)}$ T cell subsets in peripheral blood is unaffected by Age, Gender, or Country of birth. $V\delta 2^{(+)}$ T cell subsets expressed as a percentage of total $V\delta 2^{(+)}$ T cells according to (A) Age (Years), (B) Gender (Male/Female), and (C) Human Development Index of country of birth (HDI). HDI is a United Nations summary statistic accounting for life expectancy, income and education of a country in terms of human development. $V\delta 2^{(+)}$ T cell subsets are defined as; $\gamma\delta^{(28+)} [CD28^{(+)CD27^{(+)CD16^{(-)}}}$; $\gamma\delta^{(28-)} [CD28^{(-)CD27^{(+)CD16^{(-)}}}$; $\gamma\delta^{(16-)} [CD28^{(-)CD27^{(-)CD16^{(-)}}}$, and; $\gamma\delta^{(16+)} [CD28^{(-)CD27^{(-)CD16^{(+)}}}$. Multiple comparison testing using one-way analysis of variance (ANOVA) with Tukey's post-test used in (A-D), ns is not significant.

Supplementary Figure 2. CD57 and PD-1 expression on $V\delta 2^{(+)}$ T cell subsets. (A) Representative plots from peripheral blood of a healthy individual showing CD57 expression in $V\delta 2^{(+)}$ subsets. Percentages of gated cells are indicated. Summary graph (n=4) shows mean percentage of CD57⁽⁺⁾ cells within each indicated $V\delta 2^{(+)}$ T cell subset. Error bars are s.d. (B) Representative plots from peripheral blood of a healthy individual showing PD-1 expression in $V\delta 2^{(+)}$ T cell subset. Percentages of gated cells are indicated. Summary graph (n=4) shows mean percentage of PD-1⁽⁺⁾ cells within each indicated $V\delta 2$ -subset. Error bars are s.d. $V\delta 2^{(+)}$ T cell subsets are defined as; $\gamma\delta^{(28+)} [CD28^{(+)CD27^{(+)CD16^{(-)}}}$; $\gamma\delta^{(28-)} [CD28^{(-)CD27^{(+)CD16^{(-)}}}$; $\gamma\delta^{(16-)} [CD28^{(-)CD27^{(-)CD16^{(-)}}}$, and; $\gamma\delta^{(16+)} [CD28^{(-)CD27^{(-)CD16^{(+)}}}$.

Supplementary Figure 3. $V\delta 2^{(+)}$ T cell subsets express IFN γ and TNF α . (A) Intracellular staining for IFN γ and TNF α in gated $V\delta 2^{(+)}$ subsets following 4h stimulation of PBMCs *ex vivo* with either IL-2 (100U/mL), zoledronate (20 μ M) + IL-2 (100U/mL), HMB-PP (1nM) + IL-2 (100U/mL), or PMA (50ng/mL) + Ionomycin (1 μ g/mL). (B) Stimulation conditions as described in A but for a 24h period. (C) Summary graph (n=3) for 4h stimulation with PMA/Ionomycin (as in A) showing mean percentage of TNF $\alpha^{(+)}$ IFN $\gamma^{(+)}$ $V\delta 2^{(+)}$ T cells in each subset. Error bars are s.d. Multiple comparison testing using one-way analysis of variance (ANOVA) with Tukey's post-test used in summary graph, * $P < .05$, ** $P < .01$ and *** $P < .001$. $V\delta 2^{(+)}$ T cell subsets are defined as; $\gamma\delta^{(28+)} [CD28^{(+)CD27^{(+)CD16^{(-)}}}$; $\gamma\delta^{(28-)} [CD28^{(-)CD27^{(+)CD16^{(-)}}}$; $\gamma\delta^{(16-)} [CD28^{(-)CD27^{(-)CD16^{(-)}}}$, and; $\gamma\delta^{(16+)} [CD28^{(-)CD27^{(-)CD16^{(+)}}}$. Percentages of gated cells are indicated for each quadrant.

Supplementary Figure 4. CD56 expression in $V\delta 2^{(+)}$ T cell subsets. (A) Representative plots from peripheral blood of a healthy individual showing CD56 expression against size (FSC) in $V\delta 2^{(+)}$ T cell subsets compared to CD3⁽⁻⁾ lymphocytes (largely NK cells). Percentages of gated cells are indicated. (B) CD56 Mean fluorescence intensity (MFI) is shown for $V\delta 2^{(+)}$ subsets (n=5). $V\delta 2^{(+)}$ T cell subsets are defined as; $\gamma\delta^{(28+)} [CD28^{(+)CD27^{(+)CD16^{(-)}}}$; $\gamma\delta^{(28-)} [CD28^{(-)CD27^{(+)CD16^{(-)}}}$; $\gamma\delta^{(16-)} [CD28^{(-)CD27^{(-)CD16^{(-)}}}$, and; $\gamma\delta^{(16+)} [CD28^{(-)CD27^{(-)CD16^{(+)}}}$. Multiple comparison testing using one-way analysis of variance (ANOVA) with Tukey's post-test used in (B), * $P < .05$, ** $P < .01$.

Supplementary Figure 5. V δ 2-profiles do not correlate with gender, developmental index of country of birth, or with a limited assessment of ethnicity. Distribution of V δ 2-profiles (#1-#6) displayed according to (A) Gender (Male/Female) (B) Human Development Index of country of birth (HDI), and (C) Ethnicity (White (European), Asian (Indian) and others). HDI is a United Nations summary statistic accounting for life expectancy, income and education of a country in terms of human development. HDI is divided into Low (0.3-0.499), medium (0.5-0.799) high (0.8-0.899) and very high (0.9-0.999) depending on level of a country's development. Multiple comparison testing using one-way analysis of variance (ANOVA) with Tukey's post-test (A-C), ns is not significant.

Supplementary Figure 6. V δ 2-profiles remain stable after stimulation *in vitro*. Plots of V δ 2⁽⁺⁾ T cells from three individuals with V δ 2-profiles (#1, #3 and #6) during 12-day HMB-PP (1nM) + IL-2 (100U/mL) stimulation *in vitro* (plots shown at t=0, and then on day-3, day-7 and day-12). V δ 2⁽⁺⁾ T cell subsets are defined as; $\gamma\delta^{(28+)}$ [CD28⁽⁺⁾CD27⁽⁺⁾CD16⁽⁻⁾]; $\gamma\delta^{(28-)}$ [CD28⁽⁻⁾CD27⁽⁺⁾CD16⁽⁻⁾]; $\gamma\delta^{(16-)}$ [CD28⁽⁻⁾CD27⁽⁻⁾CD16⁽⁻⁾], and; $\gamma\delta^{(16+)}$ [CD28⁽⁻⁾CD27⁽⁻⁾CD16⁽⁺⁾]. Percentages are indicated for each gate.

Supplementary Figure 7. Phenotypic analysis of sorted V δ 2⁽⁺⁾ T cell subsets after 3-day co-culture with CD14⁽⁺⁾ monocytes (1:5 V δ 2:monocyte ratio) and activation with HMB-PP (1nM) + IL-2 (100U/mL). (A) Left column shows initial V δ 2-profile pre-sort (profile #3). Middle column shows post-sort re-runs of the four V δ 2⁽⁺⁾ T cell subsets. Right column shows re-analysis of V δ 2⁽⁺⁾ T cell subsets after 3-day co-culture/activation as described above. (B) Summary graph from two experiments (n=2) indicating starting V δ 2⁽⁺⁾ T cell subset (along horizontal axis), and phenotype of cells after 3-day co-culture/activation (shaded bars). Mean values with error bars (s.d.) are shown.

Supplementary Figure 8. IL-17A-producing V δ 2⁽⁺⁾ T cells reside within the CCR6⁽⁺⁾ fraction of the $\gamma\delta^{(28+)}$ subset. Plots from two different healthy individuals showing expression of IL-17A and IFN γ in CCR6⁽⁺⁾ and CCR6⁽⁻⁾ V δ 2⁽⁺⁾ T cell subsets after 4h stimulation with PMA (50ng/mL) and Ionomycin (1 μ g/mL). V δ 2⁽⁺⁾ T cell subsets are defined as; $\gamma\delta^{(28+)}$ [CD28⁽⁺⁾CD27⁽⁺⁾CD16⁽⁻⁾]; $\gamma\delta^{(28-)}$ [CD28⁽⁻⁾CD27⁽⁺⁾CD16⁽⁻⁾]; $\gamma\delta^{(16-)}$ [CD28⁽⁻⁾CD27⁽⁻⁾CD16⁽⁻⁾], and; $\gamma\delta^{(16+)}$ [CD28⁽⁻⁾CD27⁽⁻⁾CD16⁽⁺⁾]. Percentages of gated cells are indicated.