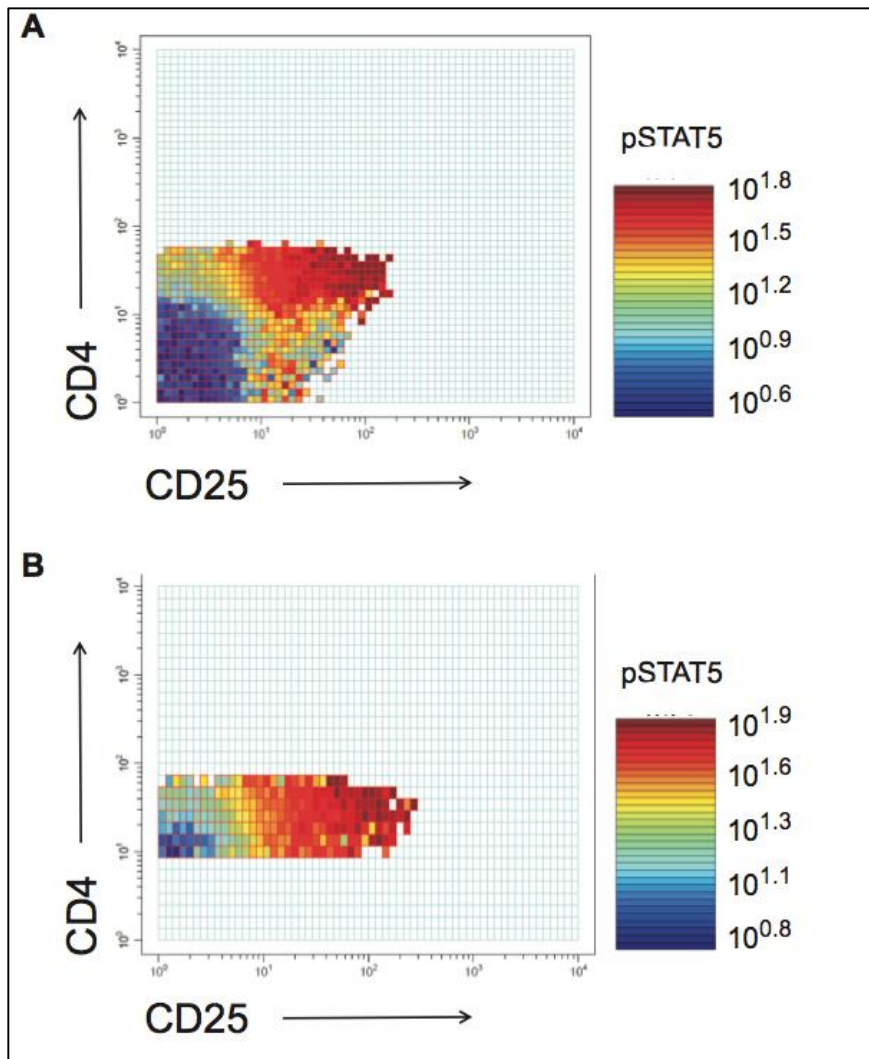


Additional file provided with this submission

Additional file 1: Table S1. Concentrations of remaining studied cell subsets in all three age groups of healthy subjects analysed by flow cytometry (*P < 0.05; **P < 0.01; ***P < 0.001; ****P < 0.0001).

| | children ^A | | | adolescents ^B | | | adults ^C | | |
|--|-----------------------|---------------|--|--------------------------|---------------------------------|--|---------------------|---------------------------------------|--|
| | N | mean ± SD | | N | mean ± SD | | N | mean ± SD | |
| Th (x10 ⁹ mL ⁻¹) | 20 | 0.90 ± 0.63 | | 20 | 0.61 ± 0.19 | | 20 | 0.76 ± 0.20 | |
| Tc (x10 ⁹ mL ⁻¹) | 20 | 0.57 ± 0.42 | | 20 | 0.36 ± 0.16 | | 20 | 0.42 ± 0.23 | |
| DNT (x10 ⁹ mL ⁻¹) | 20 | 0.15 ± 0.10 | | 20 | 0.08 ± 0.04 | | 20 | 0.05 ± 0.04 ^{AC***} | |
| HLA-DR (x10 ⁹ mL ⁻¹) | 19 | 0.25 ± 0.32 | | 20 | 0.17 ± 0.12 | | 20 | 0.25 ± 0.14 | |
| Th1 (x10 ⁹ mL ⁻¹) | 20 | 0.088 ± 0.054 | | 20 | 0.100 ± 0.055 | | 20 | 0.147 ± 0.052 ^{AC**,BC*} | |
| Th2 (x10 ⁹ mL ⁻¹) | 20 | 0.029 ± 0.034 | | 20 | 0.022 ± 0.012 | | 20 | 0.044 ± 0.028 ^{AC*,BC**} | |
| Th1Th17 (x10 ⁹ mL ⁻¹) | 20 | 0.024 ± 0.013 | | 20 | 0.055 ± 0.024 ^{AB***} | | 20 | 0.086 ± 0.049 ^{AC****} | |
| Th17 CD161 ⁺ (x10 ⁹ mL ⁻¹) | 20 | 0.009 ± 0.007 | | 20 | 0.007 ± 0.005 | | 20 | 0.015 ± 0.007 ^{AC*,BC**} | |
| Th17 CD161 ⁻ (x10 ⁹ mL ⁻¹) | 20 | 0.016 ± 0.019 | | 20 | 0.016 ± 0.009 | | 20 | 0.028 ± 0.014 ^{AC***,BC*} | |
| Th17 total (x10 ⁹ mL ⁻¹) | 20 | 0.025 ± 0.025 | | 20 | 0.024 ± 0.012 | | 20 | 0.042 ± 0.020 ^{AC***,BC**} | |
| aTreg (x10 ⁹ mL ⁻¹) | 20 | 0.010 ± 0.006 | | 20 | 0.012 ± 0.005 | | 20 | 0.022 ± 0.009 ^{AC****,BC**} | |
| rTreg (x10 ⁹ mL ⁻¹) | 20 | 0.044 ± 0.037 | | 20 | 0.010 ± 0.005 ^{AB*} | | 20 | 0.007 ± 0.005 ^{AC****} | |
| FoxP3 ⁺ non Treg (x10 ⁹ mL ⁻¹) | 20 | 0.024 ± 0.018 | | 20 | 0.019 ± 0.009 | | 20 | 0.024 ± 0.009 | |
| Treg total (x10 ⁹ mL ⁻¹) | 20 | 0.054 ± 0.040 | | 20 | 0.022 ± 0.007 | | 20 | 0.029 ± 0.011 | |
| Teff (x10 ⁹ mL ⁻¹) | 18 | 0.214 ± 0.127 | | 19 | 0.243 ± 0.091 | | 20 | 0.434 ± 0.148 ^{AC****,BC***} | |
| CD25-FoxP3 ⁺ (x10 ⁹ mL ⁻¹) | 20 | 0.039 ± 0.034 | | 20 | 0.006 ± 0.005 ^{AB****} | | 20 | 0.010 ± 0.010 ^{AC***} | |



Additional file 2: Figure S1. pSTAT5 after IL-2 stimulation in Th lymphocytes depends on levels of IL-2Ralpha. Whole blood samples were stimulated with IL-2, stained with anti-CD25 antibodies and prepared for the analysis of Th cell STAT5 signalling as described in materials and methods. Representative plots of gated lymphocytes (A) and CD4+ Th cells (B) from healthy donors are shown. The small boxes represent individual bins within the distribution of CD25 (IL-2Ralpha) and CD4. Within each bin, the geometric mean fluorescence intensity of the response channel (pSTAT5) was calculated for display using the ScatterSlice software: pSTAT5 for varying levels of IL-2Ralpha and CD4 as defined by the colour code shown on the right.