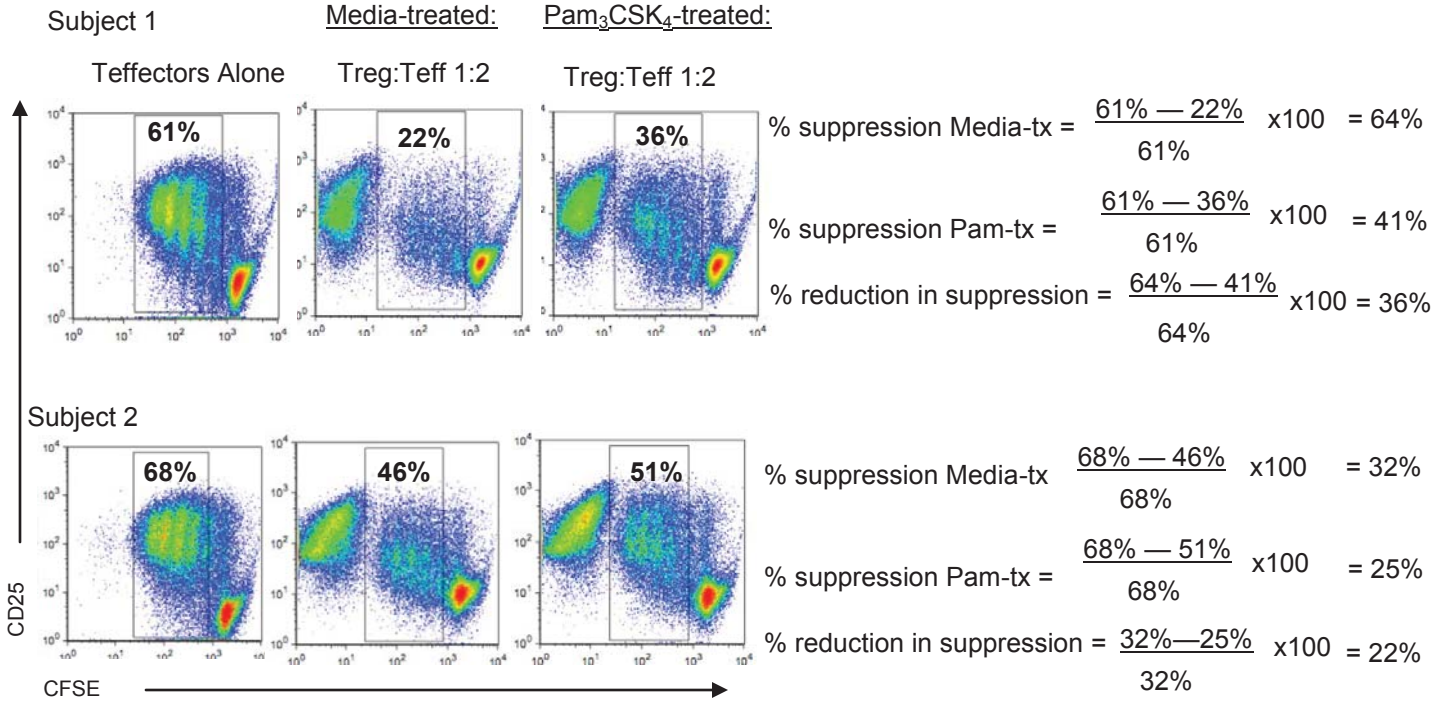
S1A.

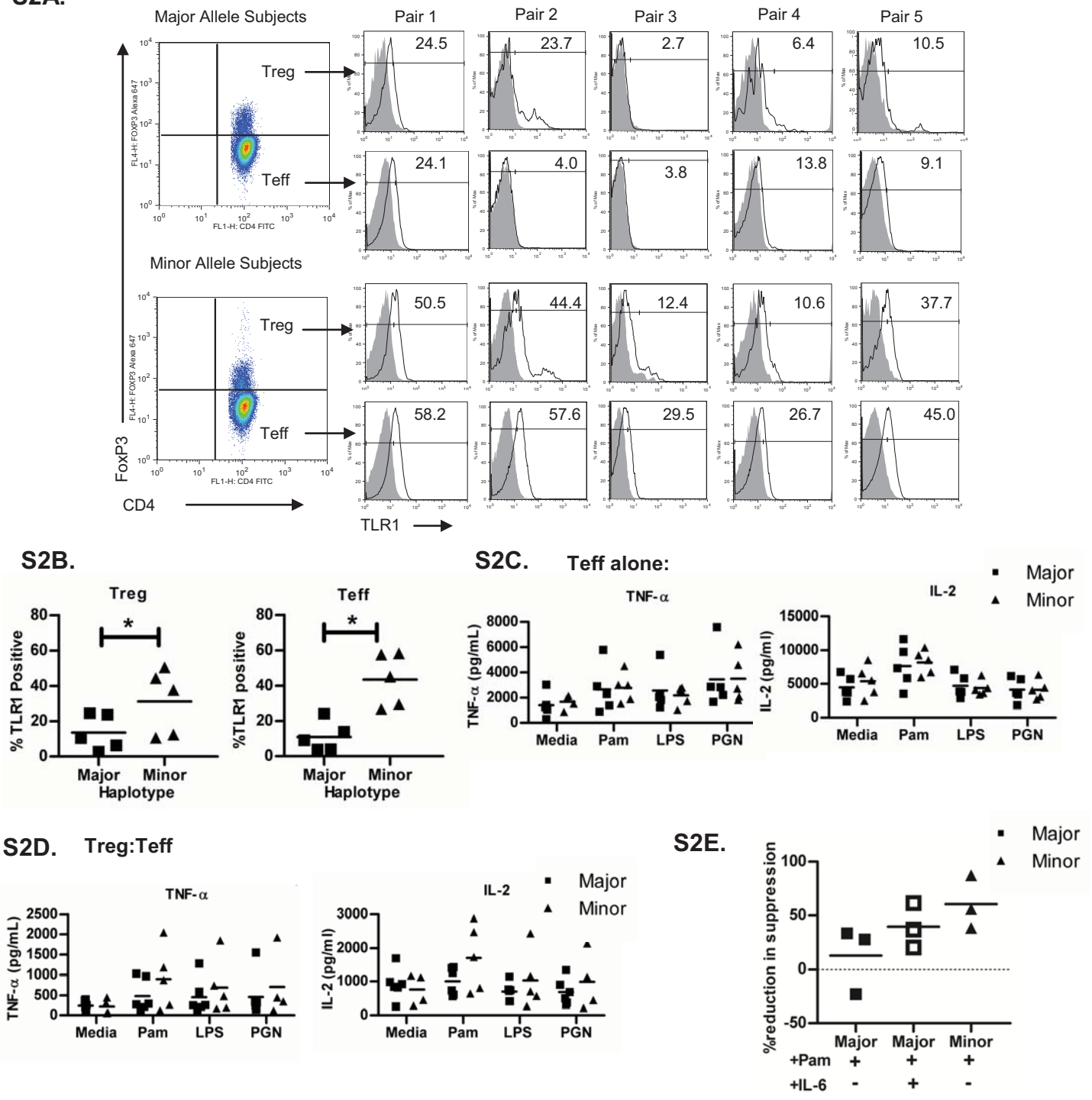
$$\% \text{ suppression} = \frac{\% \text{ proliferation Teff alone} - \% \text{ proliferation Treg:Teff}}{\% \text{ proliferation Teff alone}} \times 100$$

$$\% \text{ reduction in suppression} = \frac{\% \text{ suppression Media-treated} - \% \text{ suppression TLR-treated}}{\% \text{ suppression Media-treated}} \times 100$$

S1B.



Supplemental Figure 1A. Equations used to calculated percent suppression and percent reduction in suppression. **S1B.** Examples of real CFSE data used to calculate the % suppression and % reduction in suppression for two subjects. Data shown are previously gated on lymphocytes and CD4+ cells.



Supplemental Figure 2A. Gated CD4$^+$ lymphocytes were identified as FoxP3 positive or negative and analyzed for TLR1 staining. The proportion of TLR1-positive Tregs and Teff (mean percentage) represents the percentage of cells with fluorescence ≥95% of that seen with the isotype-control antibody. Pairwise flow cytometry data is shown for 10 subjects tested, 5 subjects per genotype. **S2B.** Summary of data in S2A showing subjects carrying two copies of the minor allele haplotype showed significantly increased surface expression of TLR1 in CD4$^+$FoxP3$^+$ and CD4$^+$FoxP3$^-$ populations with *p<0.05 by paired t test. **S2C, S2D.** Secretion of IL-2 and TNF-α do not differ by genotype. IL-2 and TNF-α were measured by multiplex immunoassay in 48 hour supernatants from Teff alone (C) and autologous co-cultures of Treg:Teff cultured at a ratio of 1:2 (D). Cultures were performed in the presence of anti-CD3/anti-CD28 beads ± TLR agonists. Data are from 10 subjects, 5 of each genotype. No differences were significant by paired t test. **S2E.** Addition of exogenous recombinant human IL-6 increases effector resistance in subjects of the major allele haplotype. Treg from a single major allele donor were co-cultured with Teff from either the major or minor allele haplotype in the presence of anti-CD3/anti-CD28 beads + Pam_3CSK_4 ± exogenous IL-6 (50ng/ml). Addition of exogenous IL-6 increased effector resistance partially abrogating the difference between genotypes.