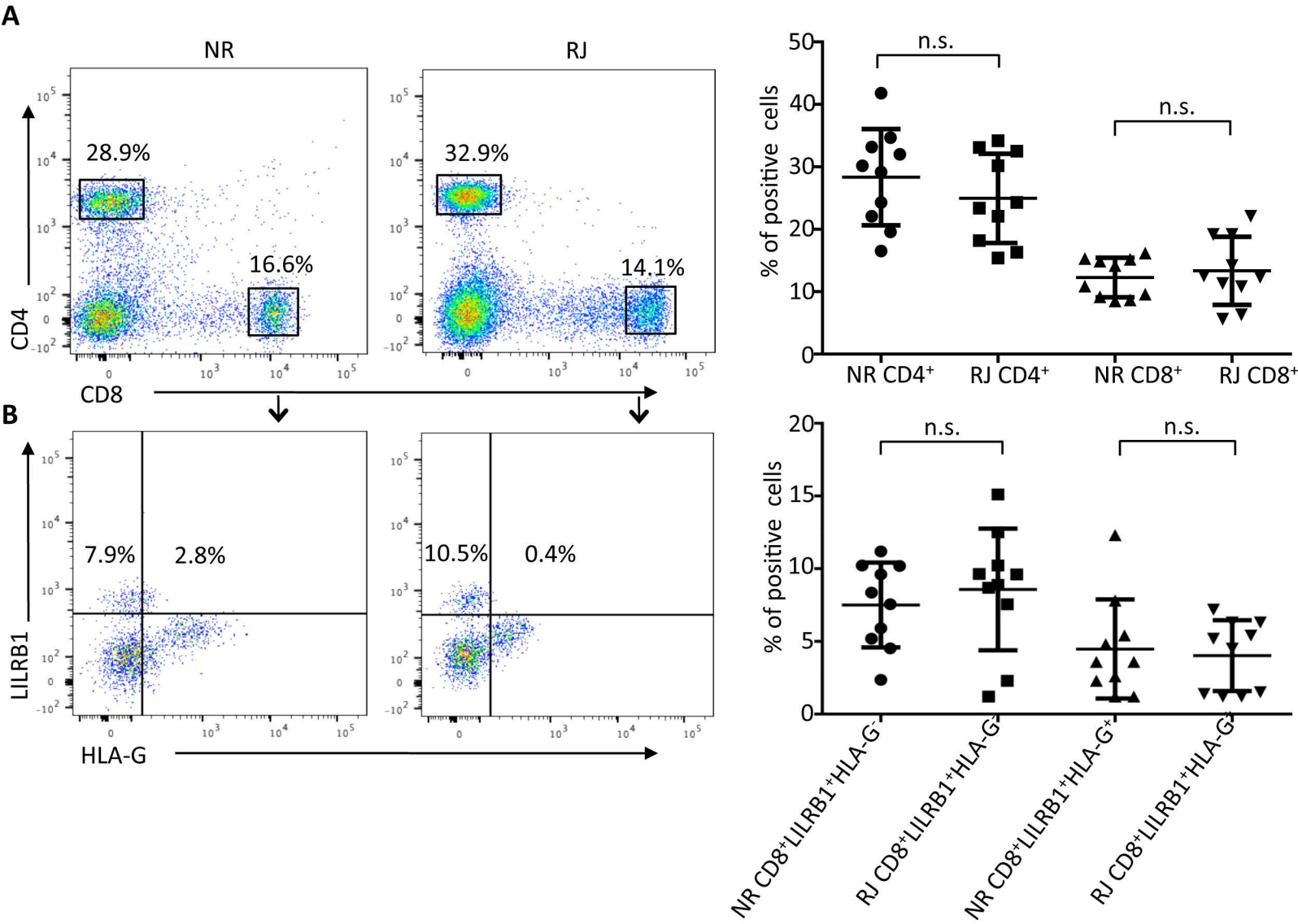
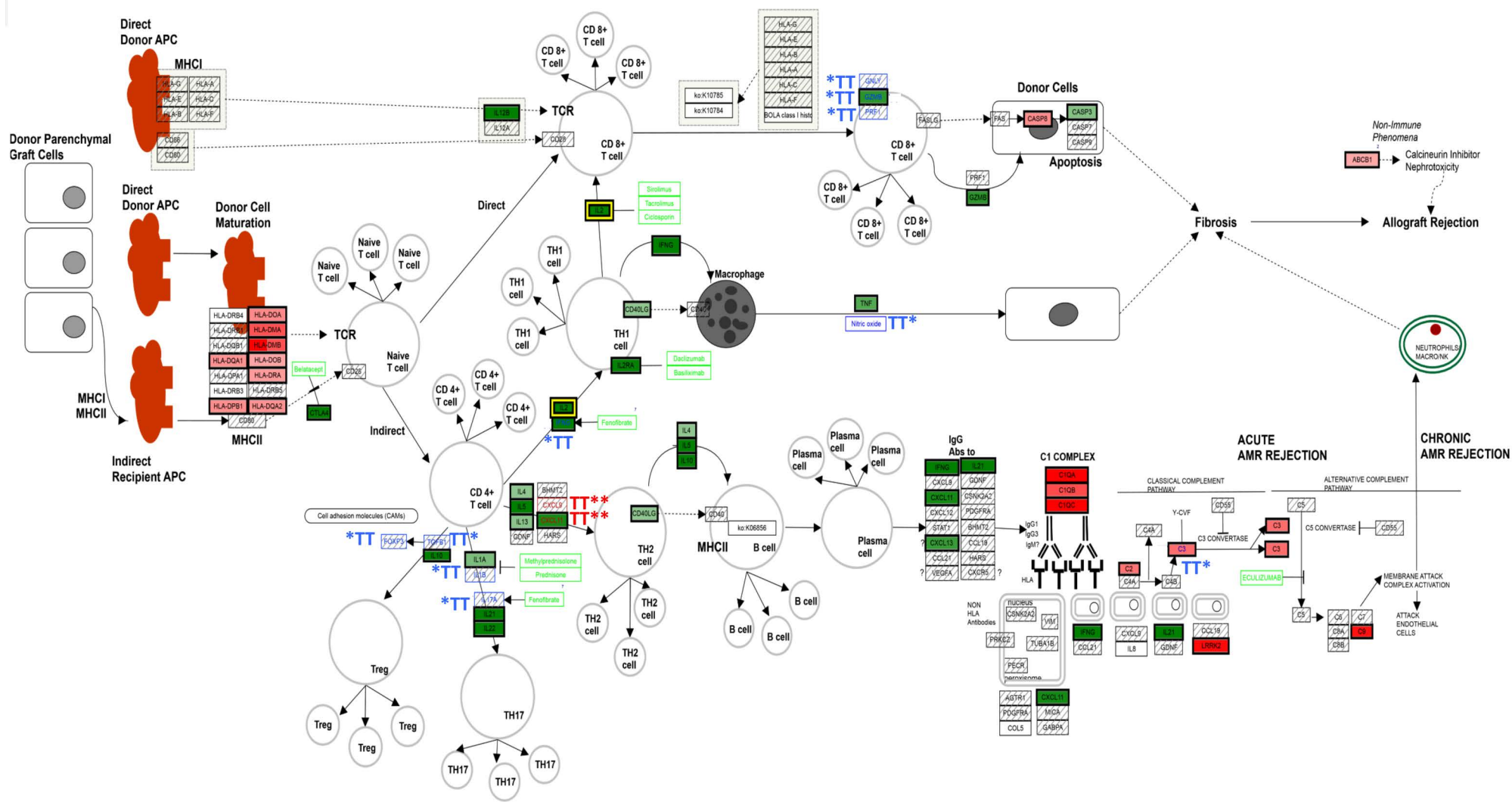


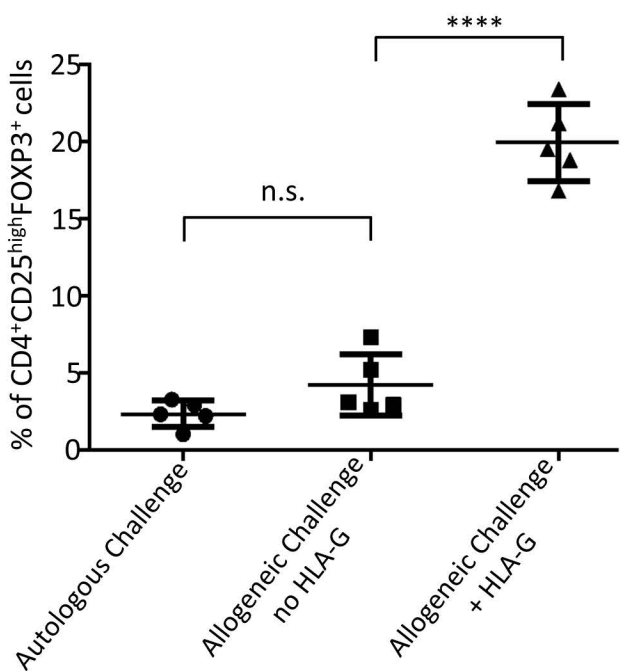
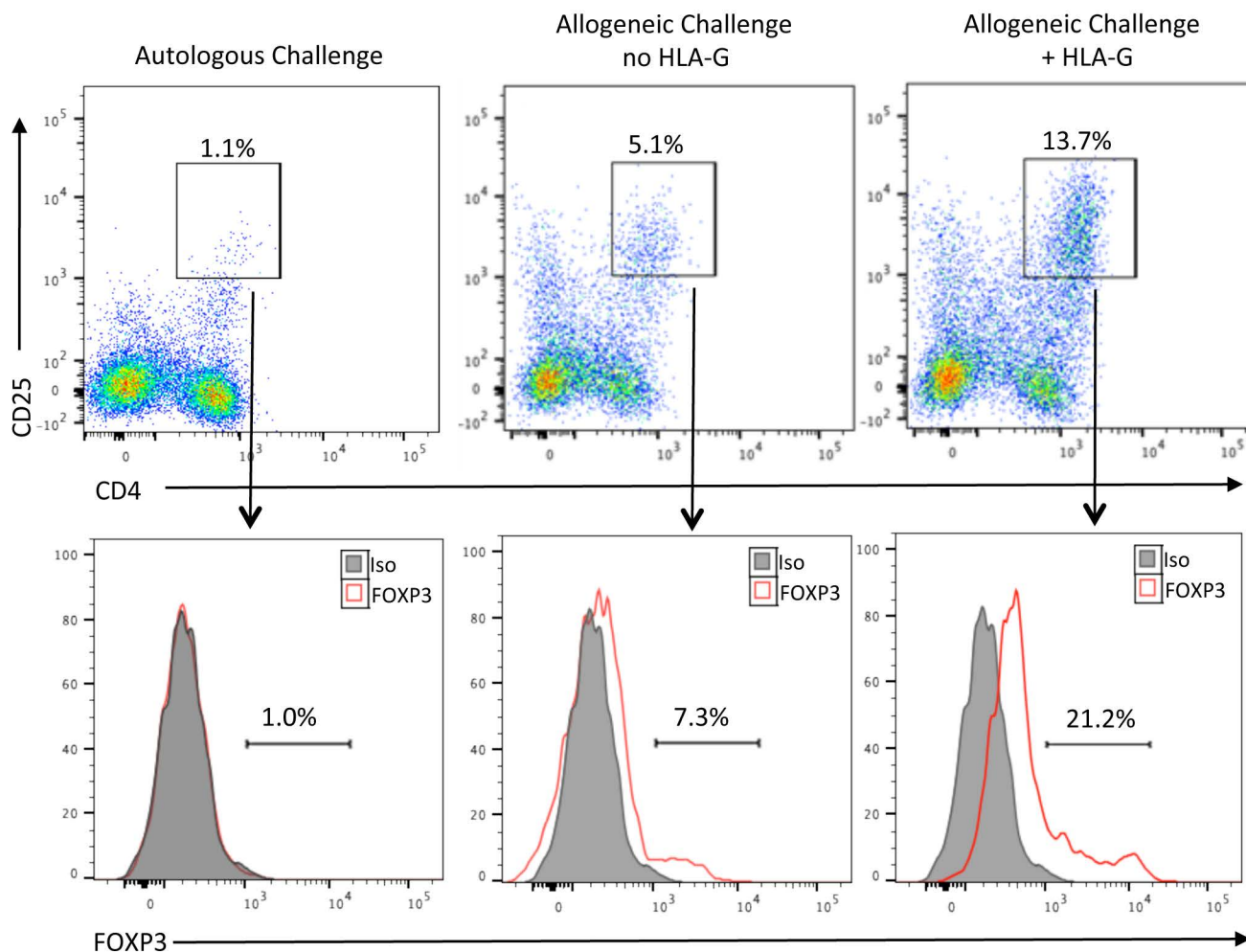
**Suppl. Figure S1.** HLA-G dimer expression in healthy volunteers (HV, n=7). Representative flow cytometry plots from HV, showing the gating strategy used to determine HLA-G expression on CD14<sup>+</sup> monocytes and CD4<sup>+</sup> and CD8<sup>+</sup> T cells. Histogram depicts HLA-G expression as blue line for monocytes, red line for CD8<sup>+</sup> T cells and green for the CD4. Filled histogram represents isotope control (Iso). Data shown as mean ± SD and analyzed by Student's *t* test.



**Suppl. Figure S2.** Percent of CD4<sup>+</sup> and CD8<sup>+</sup> T cells and LILRB1 expression remain unchanged between NR and RJ patients. A) Representative flow cytometry plots from NR and RJ patients (n=10 per group), gated on CD4<sup>+</sup> and CD8<sup>+</sup> T cells showing minimal difference in cell numbers between the groups. B) Representative flow cytometry plot gated on CD8<sup>+</sup>T cells analyzed for LILRB1 and HLA-G expression. Data shown as mean ± SD , and analyzed by Student's *t* test. n.s., not significant.

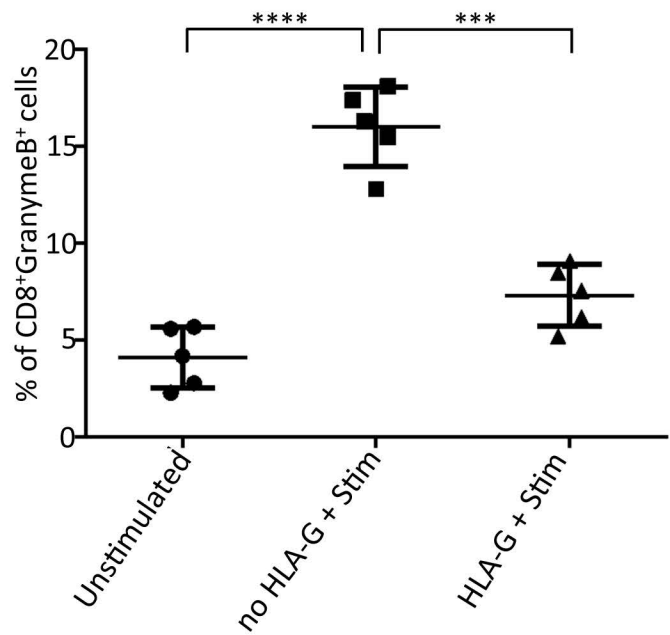
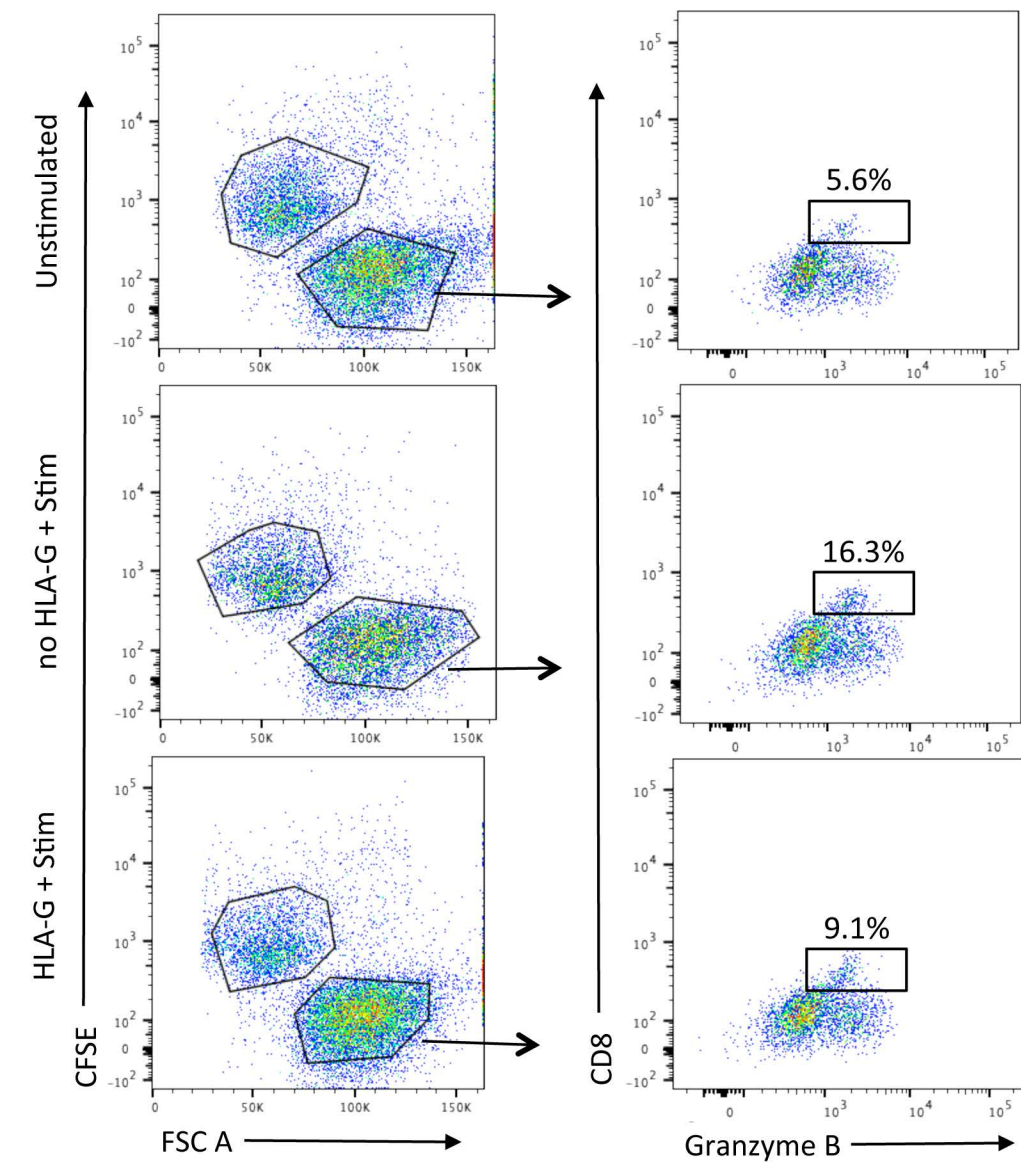


**Suppl. Figure S3.** Targets involved in allograft rejection signaling affected by HLA-G treatment. Using TAC 4.0, genes in the allograft rejection pathway showing differential expression due to HLA-G treatment were selected and represented as being upregulated (red) or downregulated (green) due to HLA-G treatment. \*TT: Indicated therapeutic target for decreased allograft rejection (GNLY, GZMB, PRF1, TNF, IFNG, FOXP3, TGFB1, IL1B, IL17A, C3); \*\*TT: Indicated therapeutic target to prolong allograft survival (CXCL9, CXCL11).



**Suppl. Figure S4.** HLA-G dimer increased the number of CD4<sup>+</sup>CD25<sup>high</sup>FOXP3<sup>+</sup> cells. Representative flow cytometry plot from indicated experimental groups, gated on CD4<sup>+</sup> CD25<sup>high</sup> cells (n=5 per group). Histogram depicts FOXP3 expression as the red line. Filled histogram represents isotype control (Iso). Data shown as mean ± SD and analyzed by Student's *t* test. \*\*\*\**p* < 0.0001. *n.s.*, not significant.





**Suppl. Figure S5.** Inhibition of cytotoxicity of CD8<sup>+</sup> T cells by HLA-G dimer is associated with reduced Granzyme B expression. Flow cytometry-based killing assay with representative plot gated on effector PBMCs based on their lack of CFSE staining and analyzed for Granzyme B expression on CD8<sup>+</sup> T cells (n=5 per group). Data shown as mean ± SD and analyzed by Students *t*-test. \*\*\**p* < 0.001, \*\*\*\**p* < 0.0001.