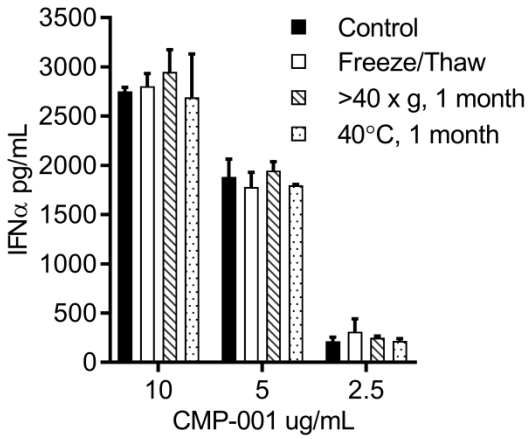
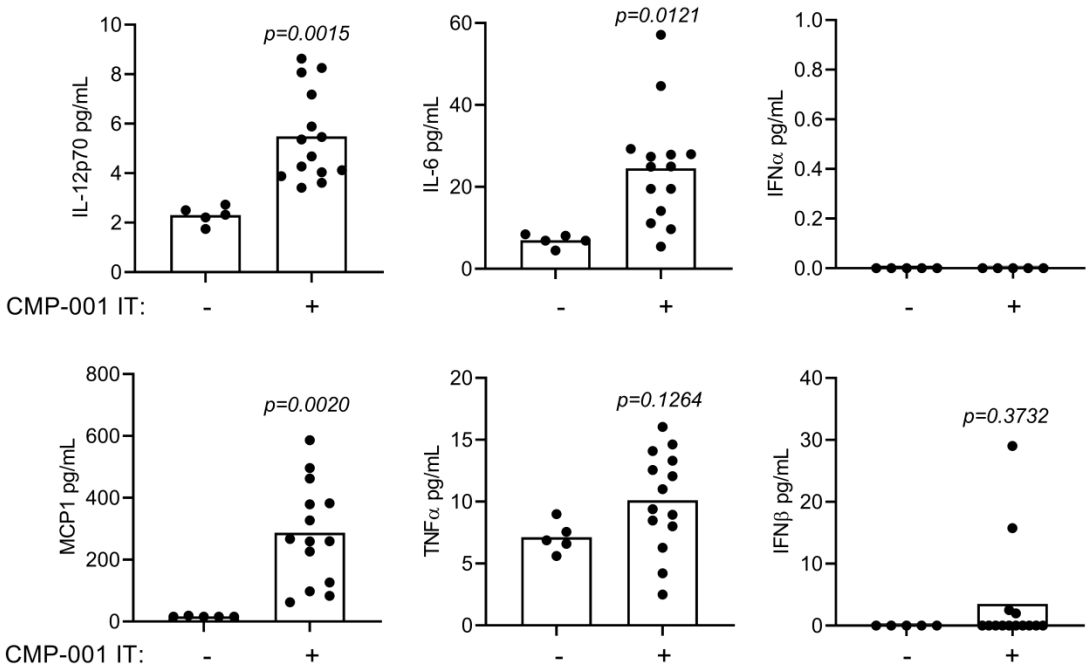
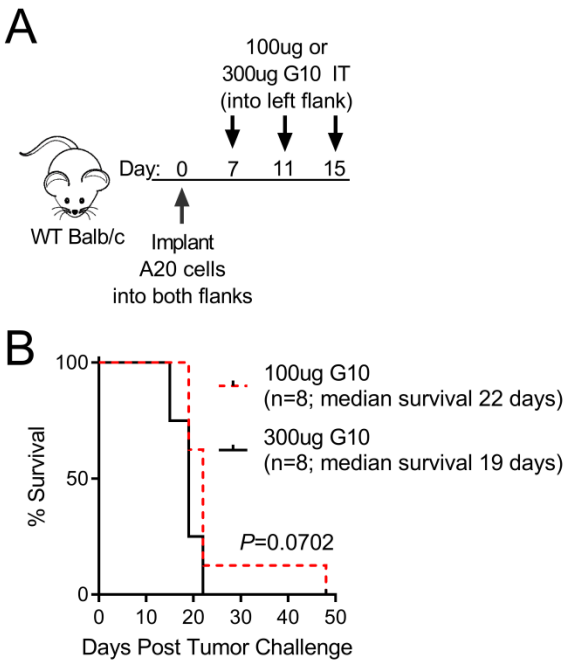


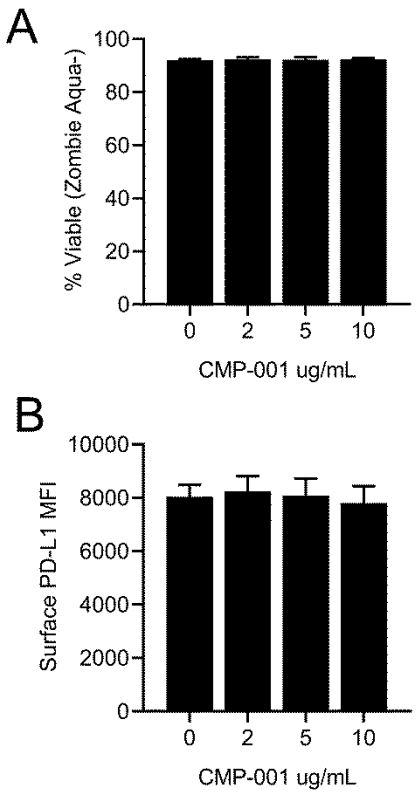
Supplemental Figure 1. CMP-001 retains full stimulatory capacity after harsh storage conditions. IFNα levels measured in cell culture supernatants from human PBMCs cultured for 48hrs with immune serum and stressed (Freeze/Thaw, >40 x g 1 month, 40°C 1 month) or unstressed (control) CMP-001. Data is representative of 2 replicate experiments; n=2 experimental replicates per group.



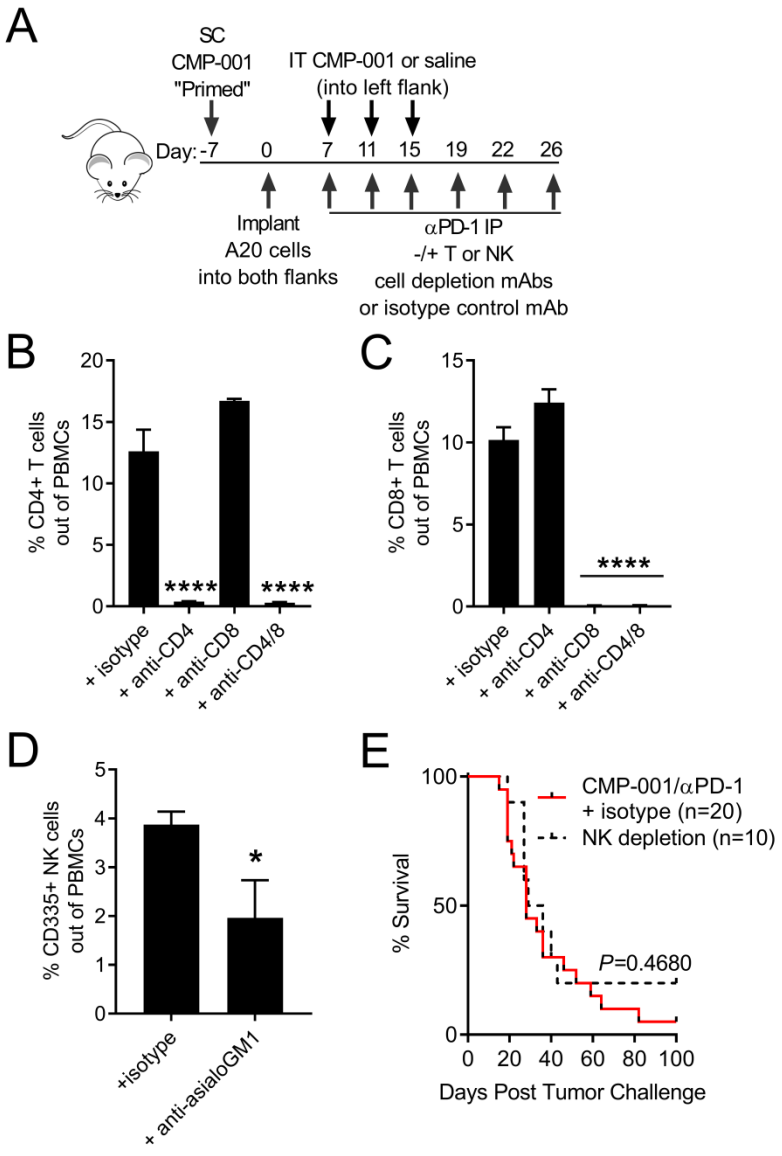
Supplemental Figure 2. IT administration of CMP-001 results in elevated serum cytokines in mice. Cytokines and chemokines were measured in murine serum collected 24 hours after IT administration of either saline (-) or CMP-001 (+) using a 7-Plex ProCartaPlex® Immunoassay. Data is from 2 experiments (n=5-14 mice per group) and was analyzed using an unpaired Student's t-test.



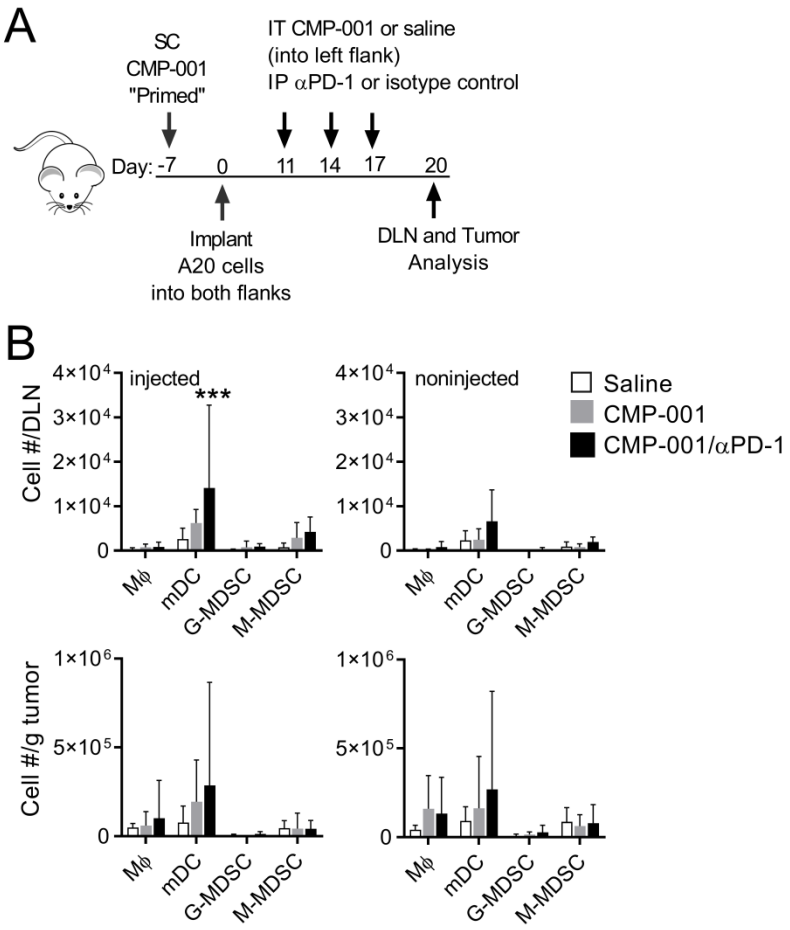
Supplemental Figure 3. Soluble G10 CpG ODN monotherapy dose testing. *A*, Schema of Balb/c mice implanted on both flanks with A20 B lymphoma tumor cells followed by IT therapy with either 100ug or 300ug of G10. *B*, Kaplan-Meier survival curves of mice treated with two different doses of G10 CpG ODN. Survival data were analyzed using the Log-rank (Mantel-Cox) test. Data is representative of 2 replicate experiments; n=8 mice per group).



Supplemental Figure 4. CMP-001 has little to no direct effect on A20 viability or PD-L1 expression. A20 viability detected as Zombie Aqua negative cells by flow cytometry (*A*) and surface expression levels of PD-L1 (*B*) after a 72hr *in vitro* co-culture with different amounts of CMP-001 (0, 2, 5 or 10 ug/mL) combined with immune serum (2% final). Data is representative of 2 replicate experiments (n=3 experimental replicates per group) and was analyzed by one-way ANOVA with Tukey's multiple comparisons test.



Supplemental Figure 5. Confirmation of T and NK cell depletion in A20 tumor-bearing mice and the effect of NK cell depletion on survival after therapy. *A,* Treatment schema of Balb/c mice primed and then implanted on both flanks with A20 B lymphoma cells, followed by unilateral IT CMP-001 and IP anti-PD-1 mAb, with T or NK cell depletion or without depletion (isotype). All depleting and isotype control antibodies were administered starting 2 days prior to the first IT/IP treatment and continued per treatment schedule. Average frequency of CD4+ and CD8+ T cells (*B-C*) or CD335+ NK cells (*D*) detected by flow cytometric analysis of peripheral blood mononuclear cells after antibody depletion (N=3 mice per group). *E*, Kaplan-Meier curves of A20-bearing mice treated with CMP-001 and anti-PD-1 with and without NK cell depletion (isotype). Data were analyzed by one-way ANOVA with Tukey's multiple comparisons test (*B-C*), unpaired Student's t-test (*D*) or the Log-rank (Mantel-Cox) test (*E*); *P<0.05, ****P<0.001. Data is from one experiment; n=10-20 mice per group.



Supplemental Figure 6. The effect of IT treatment with CMP-001 on myeloid cell infiltration into injected tumor-associated draining lymph nodes and A20 tumors. *A,* Treatment schema of Balb/c mice primed and then implanted on both flanks with A20 B lymphoma cells, followed by unilateral IT saline or CMP-001 and IP anti-PD-1 or isotype control. Both tumors (noninjected and injected) and their corresponding draining inguinal lymph node were harvested 9 days after the first IT treatment and analyzed by flow cytometry. *B,* The number of macrophages (MΦ), myeloid dendritic cells (mDC), granulocytic or monocytic myeloid-derived suppressor cells (G-MDSC and M-MDSC) present per draining lymph node or per gram of A20 tumor (noninjected or injected; data is from 2 replicate experiments; n=5-8 tumors or 5-12 draining lymph nodes per treatment group). Data were analyzed by two-way ANOVA with Dunnett's multiple comparisons test; ***P<0.001.