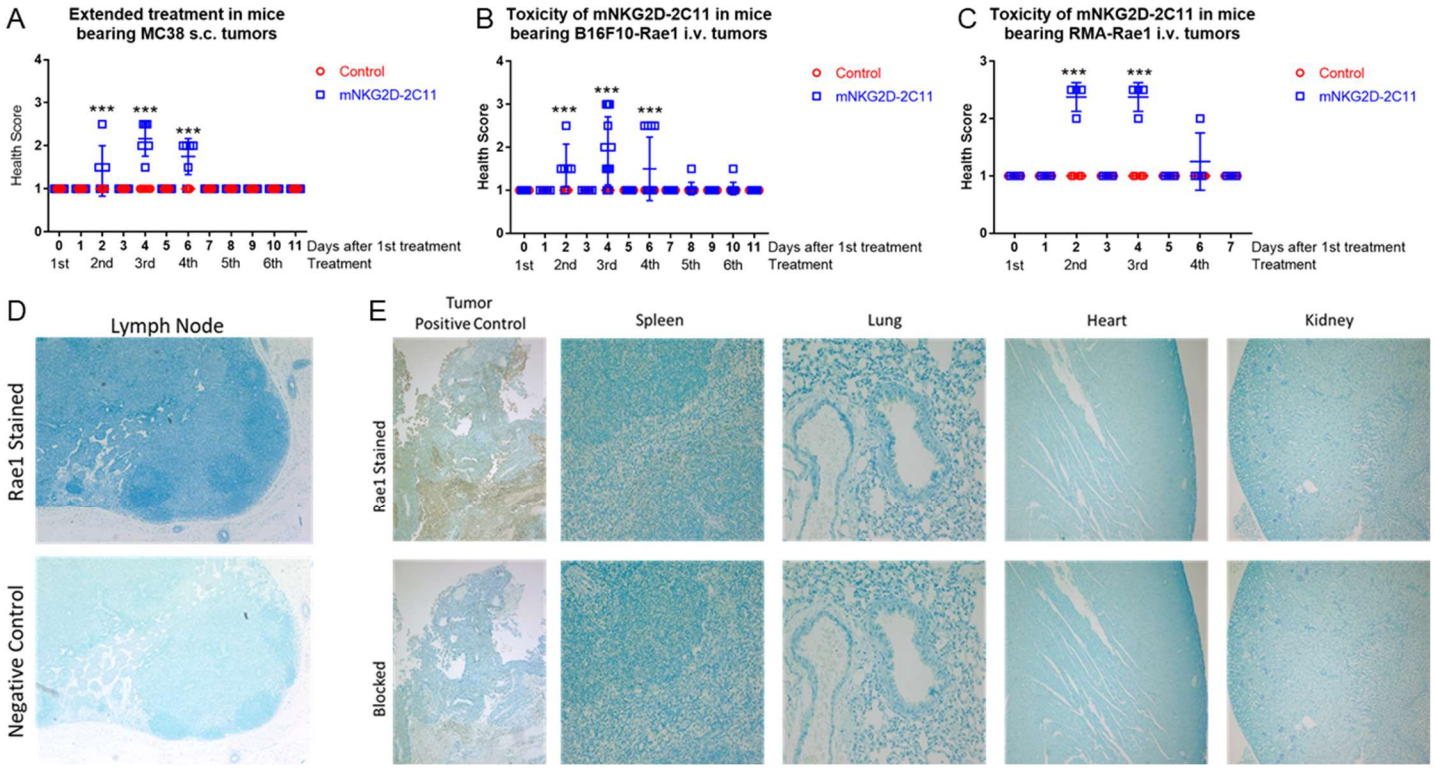
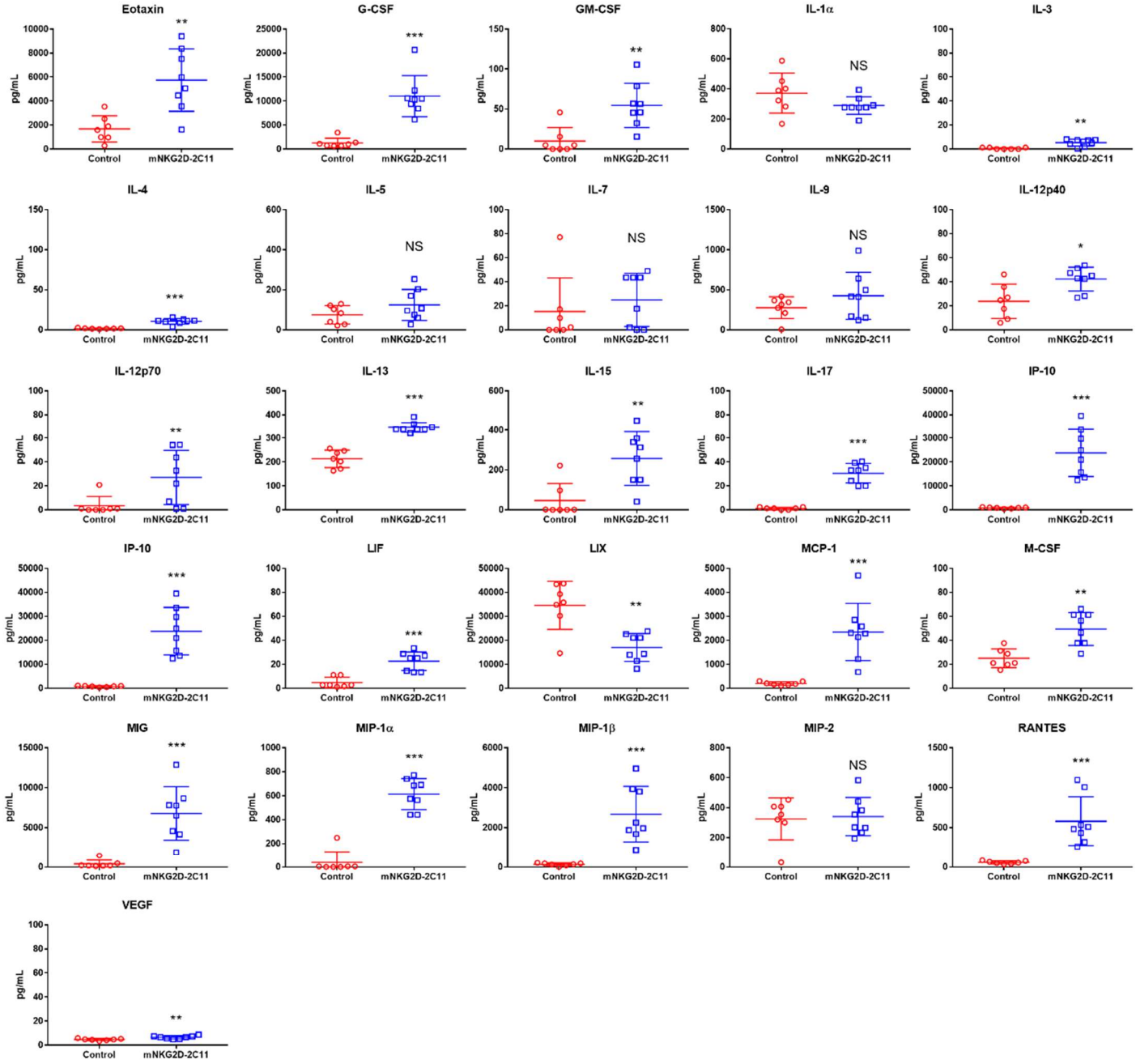
Supplemental Figure 1:



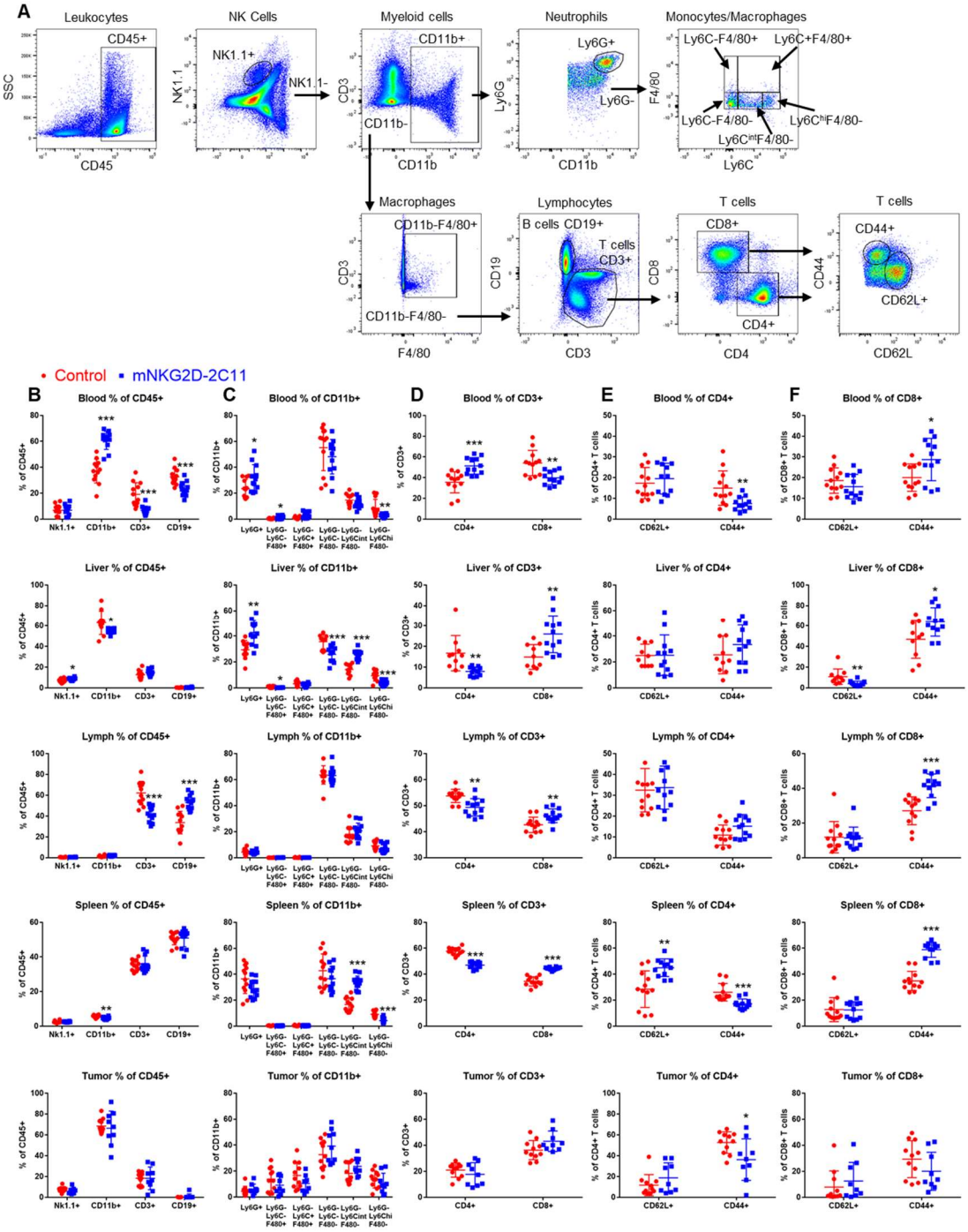
Supplemental Figure 1: Toxicity tapers off after 4 injections of mNKG2D-2C11 and Rae1 staining of mouse tissues. **(**A) MC38 ($1x10^6$) cells were injected s.c. into WT B6 mice. Treatment was initiated when tumors reached ~$15mm^2$. Mice received a total of six 10µg i.v injections of bsTCE every other day. Health scoring was blinded and evaluated 3h and 24h after each treatment. Data from one experiment (n=6). **(**B) B16F10-Rae1 ($7.5x10^4$) cells were injected i.v. into WT B6 mice. Treatment was initiated 3 days after tumor injection. Mice received a total of six 10µg i.v injections of bsTCE every other day. Health scoring was blinded and evaluated 3h and 24h after each treatment. Data from two experiment (n=12). **(**C) RMA-Rae1 ($1x10^5$) cells were injected i.v. into WT B6 mice. Treatment was initiated 3 days after tumor injection. Mice received a total of four 10µg i.v injections of bsTCE every other day. Health scoring was blinded and evaluated 3h and 24h after each treatment. Data from one experiment (n=4). (D, E) Representative images of Rae1 staining in the indicated organ of B6 mice or contiguous tissue sections stained with secondary only (B) or blocked with recombinant Rae1 (C). Slides counterstained with methylene blue. All images at 100x magnification. (A-C) Error bars indicate +/- SD. Statistical significance determined by repeated measures two-way ANOVA with Bonferroni's multiple comparisons test. *** $p<0.001$

Supplemental Figure 2:



Supplemental Figure 2: Changes in cytokines at the peak of observed symptoms. MC38 ($1x10^6$) cells were injected s.c. into WT B6 mice. Subsequently, mice received a total of three 10µg i.v injections of bsTCE every other day. 3h after the 3rd bsTCE injection plasma was collected and analyzed by multiplex cytokine array. Plasma concentration of cytokines shown as mean +/- SD. Data pooled from two experiments (n=8). Statistical significance determined by unpaired two-tailed Mann-Whitney test. * $p<0.05$, ** $p<0.01$, *** $p<0.001$, NS=not statistically significant.

Supplemental Figure 3:



Supplemental Figure 3: Gating strategy, controls and analysis of immune populations at the peak of mNKG2D-2C11 induced toxicity (A) Diagram of flow cytometry gating strategy to identify the indicated cell populations. Representative images from spleen samples are shown. (B-F) MC38 ($1x10^6$) cells were injected s.c. into WT B6 mice. Subsequently, mice received a total of three 10µg i.v injections of bsTCE every other day. 3h after the 3rd bsTCE injection flow cytometry was performed to analyze cell populations in the indicated tissues. (B) Cell populations are shown as a % of CD45+ cells, (C) %CD11b+ cells, (D) %CD3+ cells, (E) %CD4+ T cells and (F) %CD8+ T cells. Data pooled from 4 experiments (n=9-12). Statistical significance determined by unpaired t test without assuming a consistent SD. Error bars show mean +/- SD. * $p<0.05$, ** $p<0.01$, *** $p<0.001$, NS=not statistically significant.