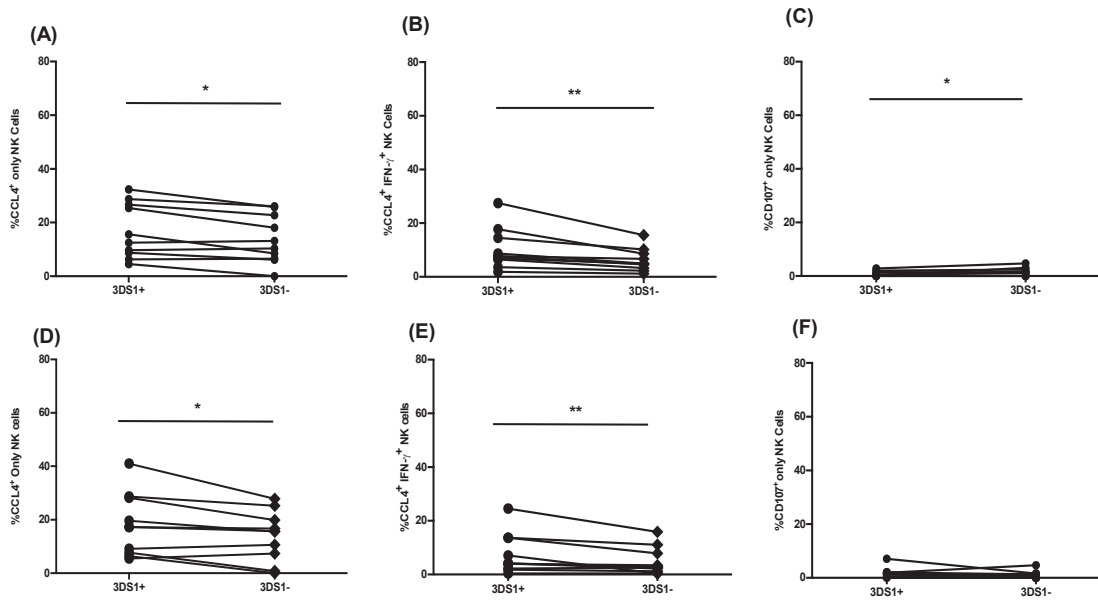
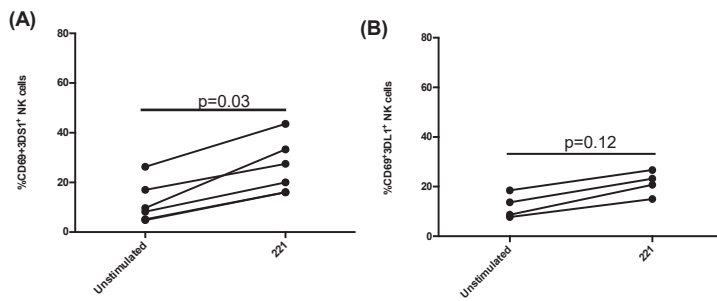


## Figure S1



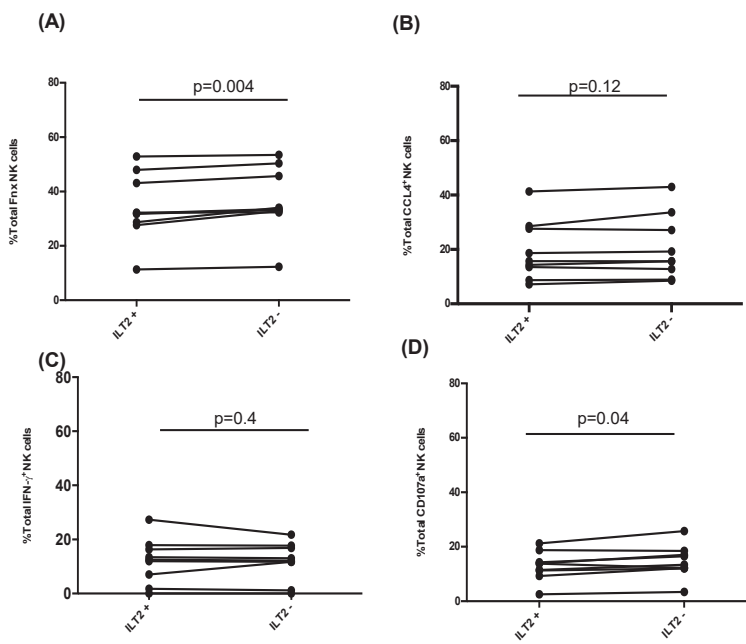
**Figure S1. Differences in the frequency of 221 stimulated KIR3DS1<sup>+</sup> than KIR3DS1<sup>-</sup> NK cells secreting CCL4 only, secreting both CCL4 and IFN- $\gamma$  and expressing CD107a only.** Shown on the y-axis is the frequency of inclusively gated (A-C) and exclusively gated (D-F) KIR3DS1<sup>+</sup> (3DS1<sup>+</sup>) and KIR3DS1<sup>-</sup> (3DS1<sup>-</sup>) cells positive for CCL4 secretion only (% CCL4<sup>+</sup> only NK cells) (A, D), positive for CCL4 and IFN- $\gamma$  secretion (% CCL4<sup>+</sup>IFN- $\gamma$ <sup>+</sup> NK cells) (B, E) and positive for CD107a expression only (% CD107a<sup>+</sup> only NK cells) (C, F). Each data point represents results from 1 of a total of 10 KIR3DS1 hmz. The significance of between-group results was assessed using Wilcoxon matched pairs tests. Significant between-group differences are shown by \* -  $p \leq 0.05$  and \*\* -  $p \leq 0.01$ .

**Figure S2**



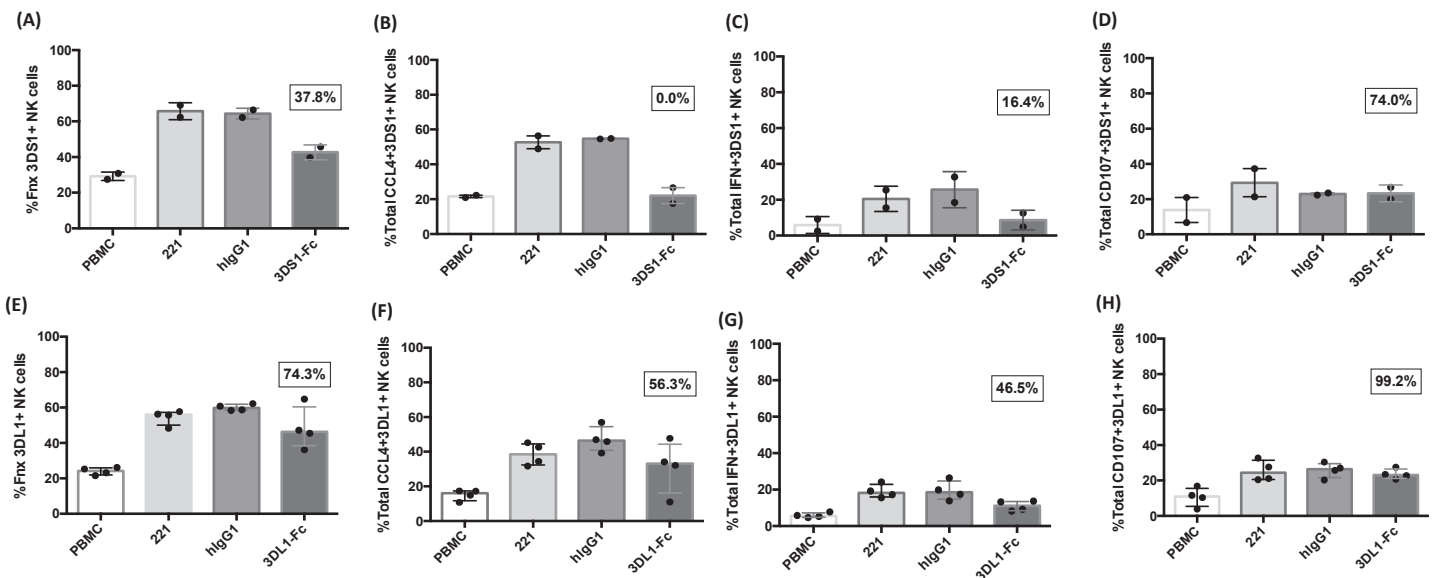
**Figure S2. 221 stimulation induces an increased frequency of CD69<sup>+</sup> NK cells.** Shown on the y-axis is the frequency of exclusively gated CD69<sup>+</sup>KIR3DS1<sup>+</sup> CD56<sup>dim</sup> NK cells (left panel) and CD69<sup>+</sup>KIR3DL1<sup>+</sup>CD56<sup>dim</sup> NK cells (right panel) on unstimulated and 221 stimulated cells. Results from 5 and 4 observations were used to generate results for KIR3DS1<sup>+</sup> and KIR3DL1<sup>+</sup> NK cells, respectively. A Wilcoxon matched pairs test was used to assess the significance of differences between unstimulated and stimulated conditions. P-values for these comparisons are shown over the lines linking the 2 test conditions.

## Figure S3



**Figure S3. Comparisons of the frequency of functional ILT-2<sup>+</sup> versus ILT-2<sup>-</sup> cells following stimulation with 221 cells.** Shown on the y-axis is the frequency of exclusively gated ILT-2<sup>+</sup> and ILT-2<sup>-</sup> NK cells exhibiting (A) the sum of all functions tested (% Total Fxn NK cells), (B) the sum of cells secreting CCL4 (% Total CCL4<sup>+</sup> NK cells), (C) the sum of cells secreting IFN- $\gamma$  (% Total IFN- $\gamma$ <sup>+</sup> NK cells) and (D) the sum of cells expressing CD107a (% Total CD107a<sup>+</sup> NK cells). Each data point represents results from 1 of a total of 9 KIR3DS1 hmz. The significance of between-group results was assessed using Wilcoxon matched pairs tests. P-values for comparisons between exclusively gated ILT-2<sup>+</sup> and ILT-2<sup>-</sup> NK cells are shown over the lines linking the 2 populations in each panel.

**Figure S4**



**Figure S4. The effect of blocking KIR3DS1 or KIR3DL1 on NK cells from *KIR3DL1/S1* heterozygotes and KIR3DL1 on NK cells from KIR3DL1 homozygotes stimulated by 221 cells.** Shown on the y-axis is the frequency of exclusively gated KIR3DS1<sup>+</sup>CD3<sup>-</sup>CD56<sup>dim</sup> NK cells (A-D) or exclusively gates KIR3DL1<sup>+</sup>CD3<sup>-</sup>CD56<sup>dim</sup> NK cells (E-H) exhibiting (A, E) the sum of all functions tested (% Total Fxn NK cells), (B, F) the sum of cells secreting CCL4 (% Total CCL4<sup>+</sup> NK cells), (C, G) the sum of cells secreting IFN-γ (% Total IFN-γ<sup>+</sup> NK cells) and (D, H) the sum of cells expressing CD107a (% Total CD107a<sup>+</sup> NK cells) following no stimulation (PBMC), stimulation with 221 cells (221), stimulation with 221 cells pre-coated with human IgG1 antibody (hlgG1) and stimulated with 221 cells pre-coated with KIR3DS1-Fc chimera protein (3DS1-Fc) (A-D) or the KIR3DL1-Fc (3DL1-Fc) (E-H). Bar heights and error bars represent the median and interquartile range of KIR3DS1<sup>+</sup> cells from 2 *KIR3DL1/S1* heterozygotes carrying no *HLA-Bw4* alleles (A-D) and KIR3DL1<sup>+</sup> NK cells from 2 *KIR3DL1/S1* heterozygotes and 2 *KIR3DL1* homozygotes carrying no *HLA-Bw4* alleles. The boxes over the 3DS1-Fc and 3DL1-Fc blocking conditions show the percent reduction in the frequency of functional cells from that seen for cells stimulated with 221 cells with no blocking.