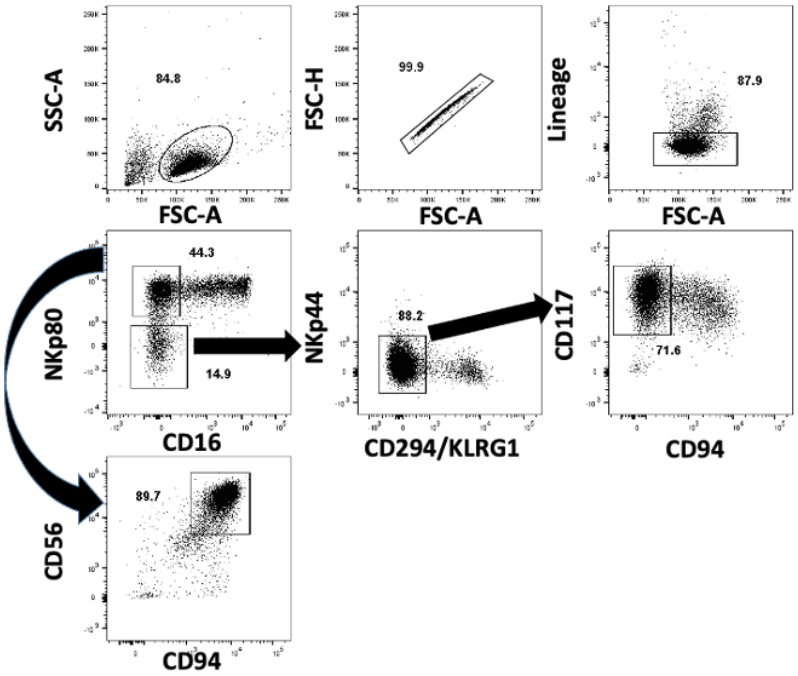
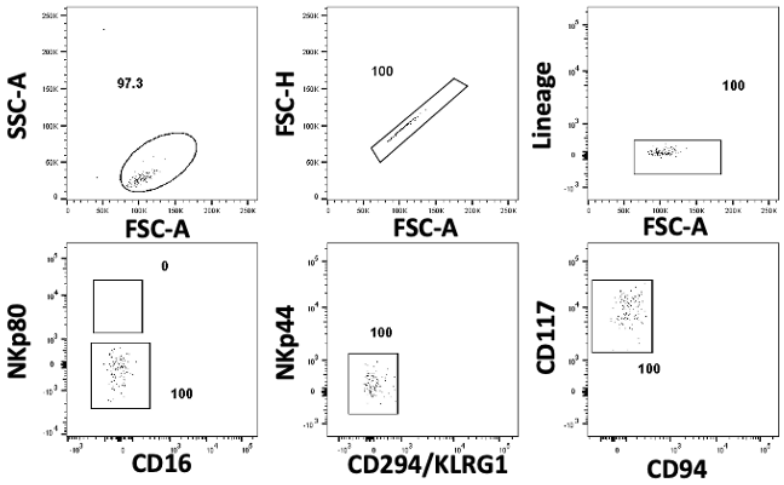
Figure S1

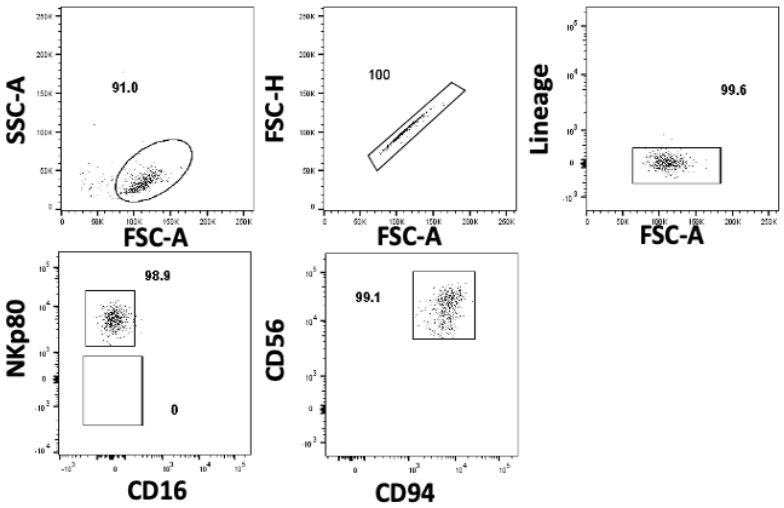
Pre-Sort



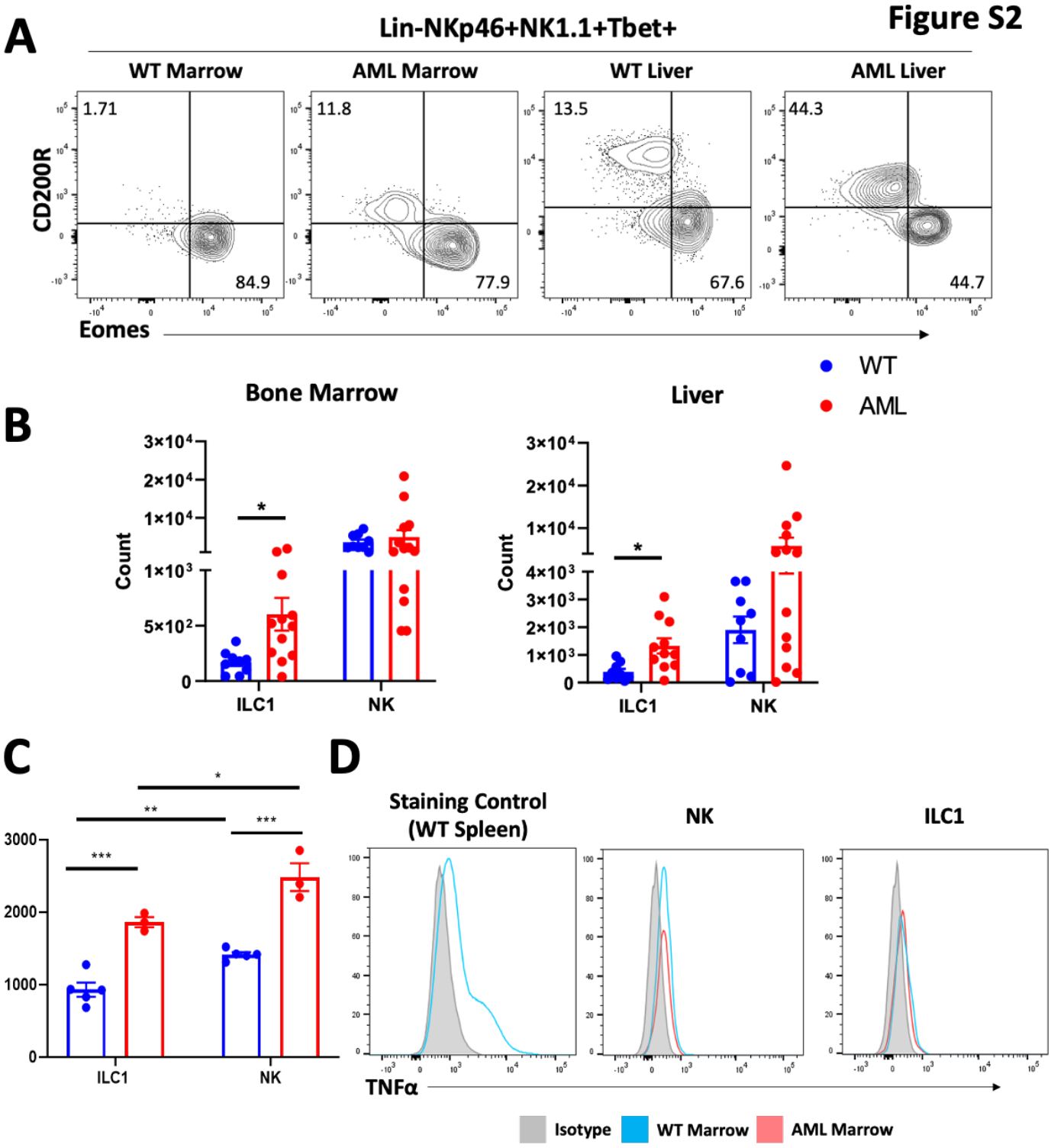
ILCP Purity



CD56^{bright} Purity

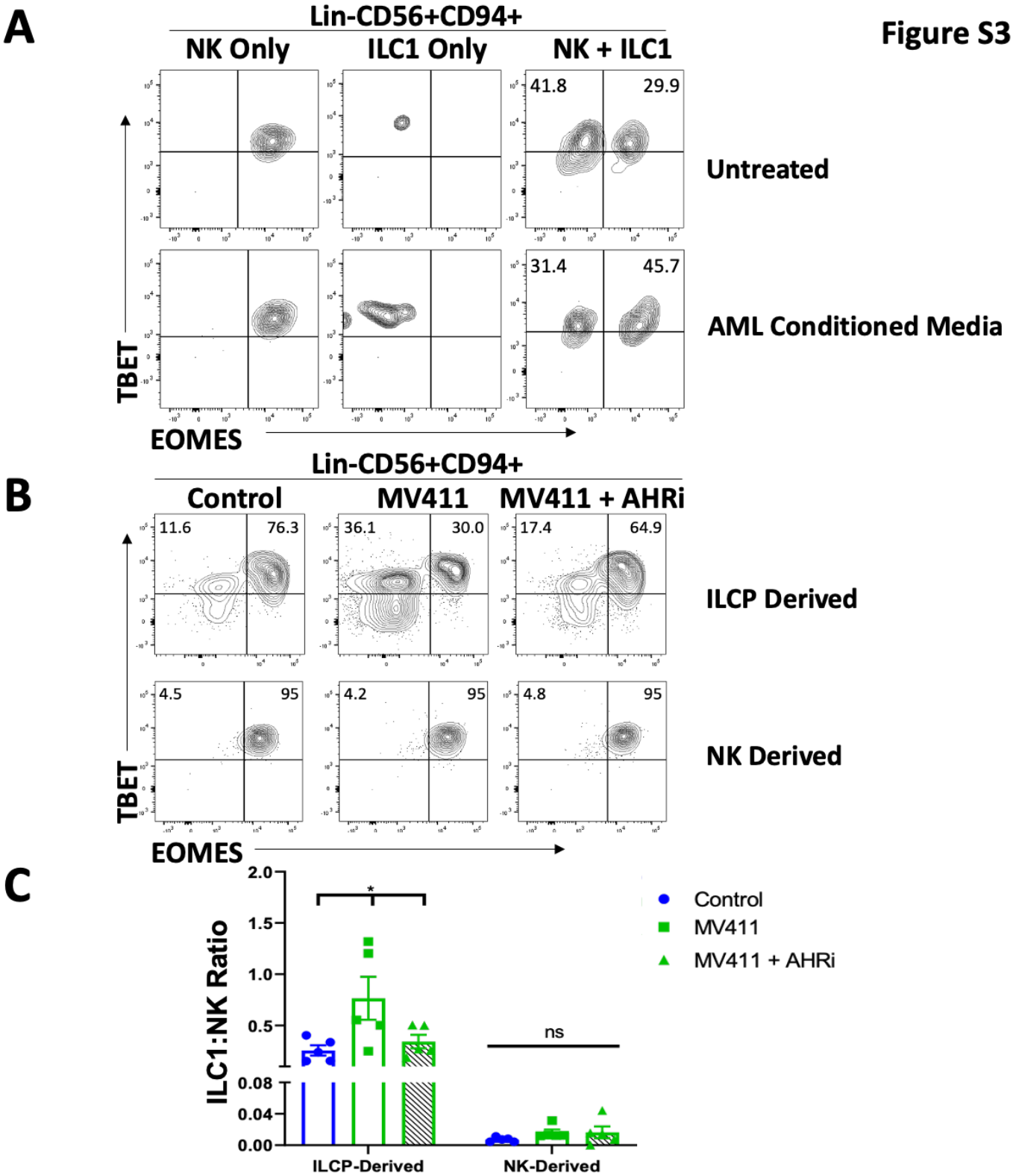


Supplemental Figure 1: Gating strategy used to isolate ILCPs and CD56^{bright} NK cells from the peripheral blood of normal donors. Post-sort purity analysis for both populations showed >98% purity.



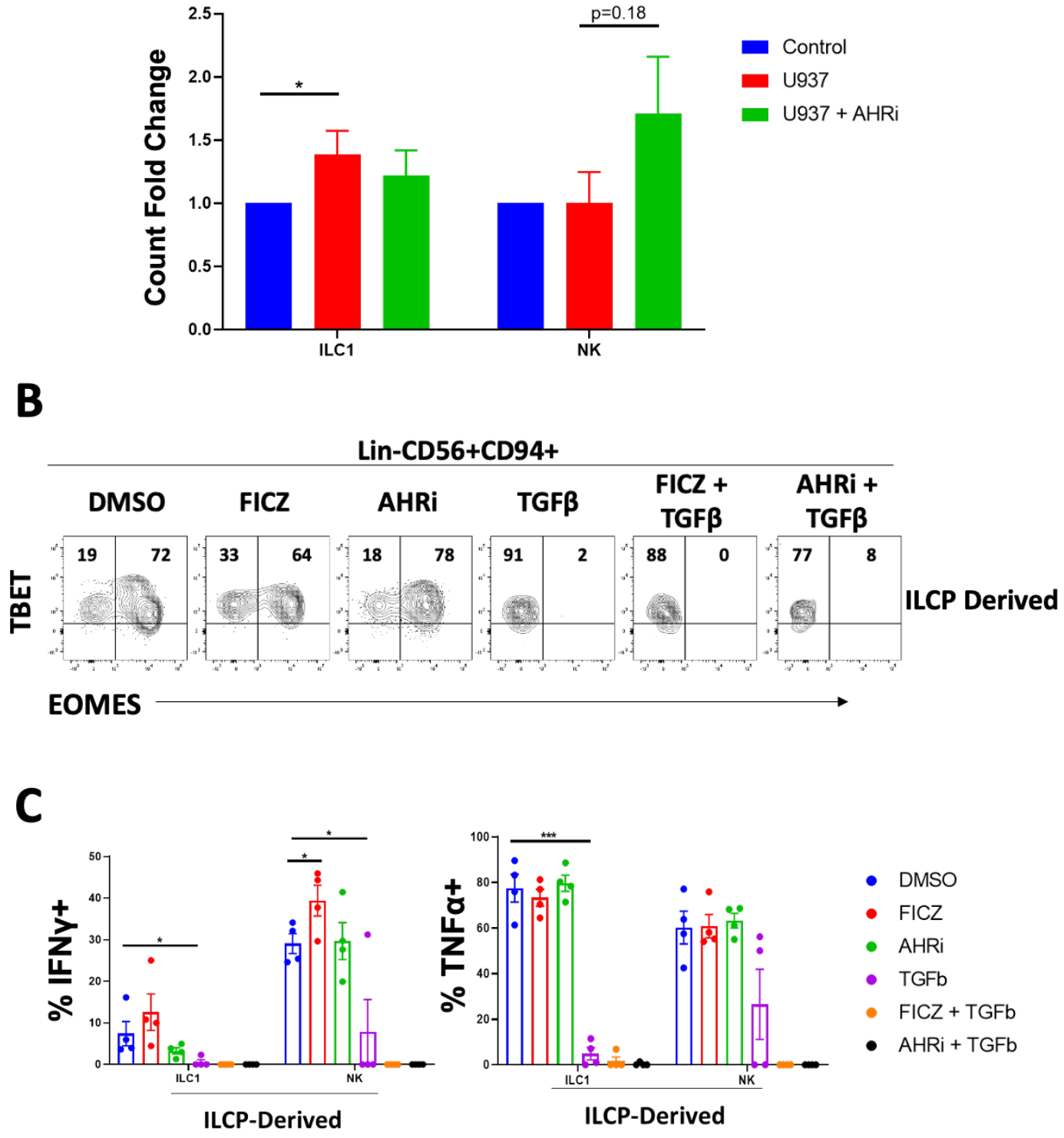
Supplemental Figure 2: A) Representative flow plots of Eomes vs CD200R expression among Lin-NKp46+NK1.1+Tbet+ cells in the liver and bone marrow of spontaneous *Mll*-PTD;*Flt3*-ITD AML mice relative to non-leukemic littermate controls. B) Quantification of absolute cell counts for ILC1s and NK cells in the bone marrow and liver of spontaneous AML mice. n=9 WT, n=12 AML, *p<0.05. Error bars represent ±SEM. C) Ki67 expression measured by flow cytometry for NK cells and ILC1s in the marrow of transplanted leukemic mice and controls. n=5 WT, n=3 AML, *p<0.05, **p<0.01, ***p<0.001. Error bars represent ±SEM. D) Representative flow plots of TNFα staining among Group 1 ILCs in the marrow of WT or leukemic mice. Stimulation of single cell suspensions from the bone marrow of WT and leukemic mice showed undetectable levels of TNFα production among NK cells and ILC1s in the bone marrow compartment. A spleen sample run in parallel was included as a staining control for TNFα. n=5 WT, n=13 AML.

Figure S3



Supplemental Figure 3: A) Representative flow plots of group 1 ILC generating clones. ILCPs were single cell cloned from 4 biological donors for 4 weeks with IL-7 and IL-15 on OP9-DL1 stromal cells along with the indicated treatment condition. Clones used for analysis formed either NK cells only, ILC1s only, or both. B) Post-culture analysis of TBET and EOMES expression among Lin-CD56+CD94+ cells. ILCPs (Lin-NKp80-CD294-KLRG1-NKp44-CD94-CD16-CD117+) and CD56^{bright} NK cells (Lin-CD56+CD94+CD16-) were isolated from normal peripheral blood of 5 independent donors and cultured with IL-7 on OP9-DL1 cells for 4 weeks in the presence of the AML cell line MV411 (± AHRi). MV411 were co-cultured in transwells. Isolated populations were distributed evenly between conditions following initial cell sorting. C) Summary data of ILC1:NK ratios from A). n=5, *p<0.05. Error bars represent ±SEM. ANOVA was used for analysis in C).

Figure S4



Supplemental Figure 4: A) Count fold changes from ILCP-derived ILC1 and NK cells exposed to U937 AML +/- an AHRi. Counts were normalized to the control condition for each donor. n=10, *p<0.05. Error bars represent ±SEM. B) The effects of TGFβ both in isolation or with concomitant AHR modulation were determined using the ex vivo co-culture system with ILCPs. Following 4 weeks, cell phenotypes were analyzed by flow cytometry. Plots are representative of 4 biological donors. C) IFNγ and TNFα levels in cells from B) following 4-hour PMA/Ionomycin stimulation. n=4, *p<0.05, ***p<0.001. Error bars represent ±SEM.