Supplemental materials

Antibodies used for analysis in this study: BCL2, BCLxl, BFL1, and BCLw (Cell Signaling, Beverly, MA, USA); MCL1 (Becton Dickenson, Sparks, MD, USA); BCLb (Abcam, Cambridge, MA, USA); MYC (Santa Cruz, Santa Cruz, CA, USA); beta-actin (Sigma, St. Louis, MO, USA); tubulin (Sigma, St. Louis, MO, USA); phosphorylated-histone H3 (cell signaling, Beverly, MA, USA); GR-1, Mac-1, TCR-beta, B220 (Becton Dickinson, Sparks, MD, USA).

Cell lines derived from human leukemia and lymphoma patients: Myeloid lineage-derived cell lines KG1, MV411, U937, Kasumi1 and K562 were gifts from M. Moore, Memorial Sloan-Kettering Cancer Center, New York, NY; lymphoid-derived cell lines ALL-SIL, Jurkat and BV173 were gifts from A. Capobianco, The Wistar Institute, Philadelphia, PA.

Supplemental methods

Bone Marrow harvest, infection and transplantation assay. In vivo oncogenic cooperation assays were performed using FVB/n mice acquired from Taconic (Hudson, NY, USA). Donor mice were treated with 5-fluorouracil four days prior to bone marrow harvest. Red blood cells were lysed using hypotonic buffer (150 mM ammonium chloride, 10 mM Tris-HCl). Lineage positive cells were then removed using MACS lineage depletion kit (Miltenyii, Auburn, CA, USA). Lineage depleted cells were infected using viral supernatants packaged in 293T cells with centrifugation. After infection cells were immediately transplanted into the tail vein of lethally irradiated

FVB/n recipients.

Supplemental Figure legends

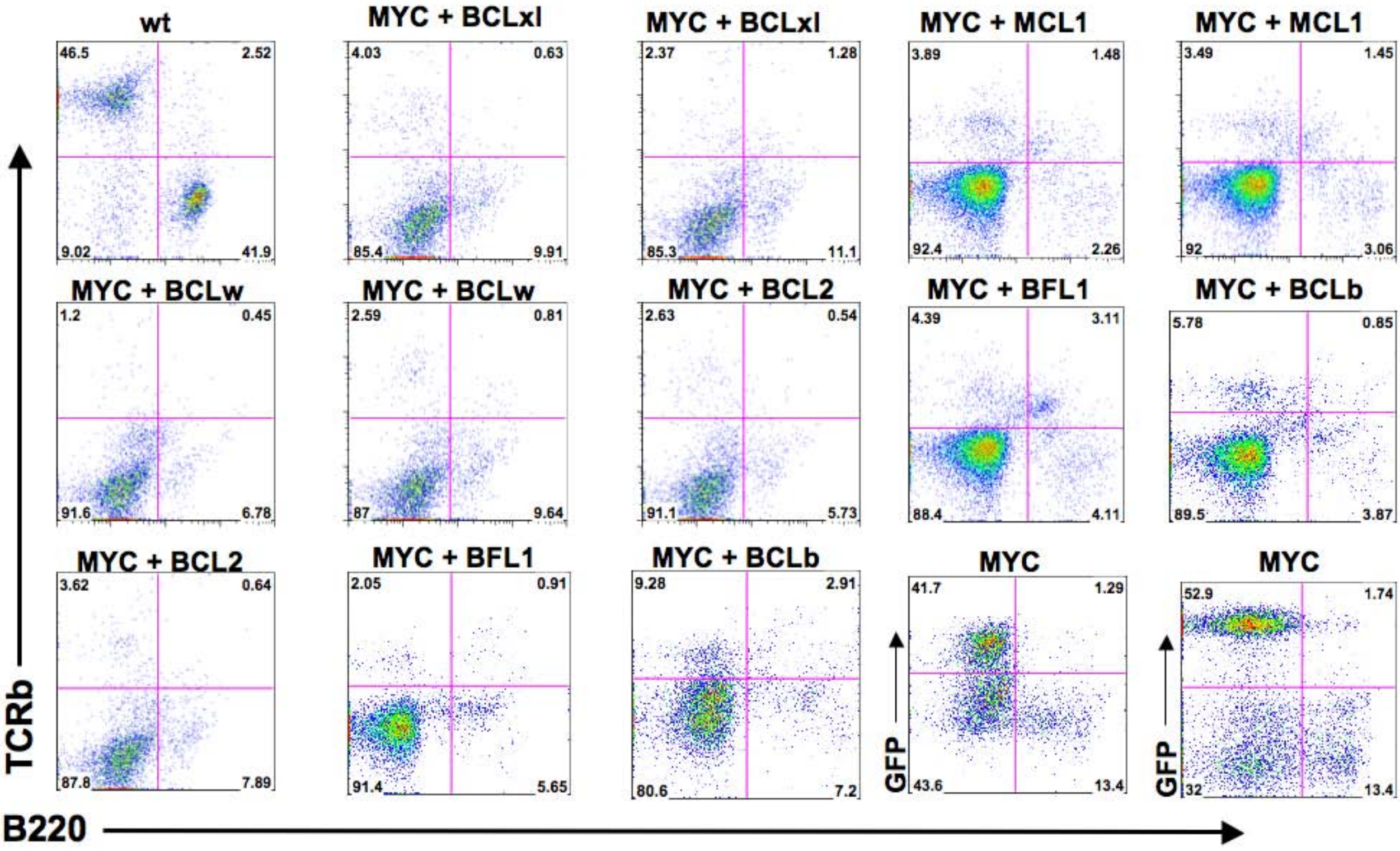
Supplemental 1.

Mice with MYC-induced leukemias do not show an increase of lymphoid cells in the spleen. Flow cytometric analysis was performed on spleens from mice that required euthanasia using antibodies that recognize T- and B-cell markers. A control FVB/n mouse is shown as an indication of the normal resident ratios of T- and B-cells in the spleen. All experimental mice show a massive loss in the splenic compartment comprising the T- and B-cell compartments. This is due to the abnormally high numbers of myeloid cells within the spleen of these mice (see Figure 3 and supplemental 2). Tumors induced by MYC + GFP expression alone demonstrate that all GFP positive cells are B220 negative.

Supplemental 2

MYC-induced leukemias resemble acute myelogenous leukemia regardless of cooperating *BCL* gene. As in Figure 3, cells from all mice that required euthanization were analyzed by flow cytometry to determine the phenotypic nature of the disease. All mice examined had significant increases in the percentage of cells that stained for the myeloid cell surface markers GR-1 and Mac-1. Flow cytometry profiles from the spleen of syngeneic FVB mouse and two examples for each genotype of AML are shown as additional representative examples.

Supplemental 1



Supplemental 2