Supplemental Table 1.

IHC staining with CD37 antibody (clone 2B8) in different normal and tumor tissues

Normal tissue	IHC staining	Tumor tissue	IHC staining
Cardiac muscle	-	Bladder Cancer	-
Muscle	-	Cervical Cancer	-
Cerebellum	-	Endometrial Carcinoma	-
Medulla oblongata	-	Ovarian Cancer	-
Brain	-	Breast Cancer	-
Lung	-	Lung Cancer	-
Tonsil	+	Prostate Carcinoma	-
Pancreas	-/+	Renal Carcinoma	-
Kidney	-	Liver Cancer	-
Liver	-	Rectal Cancer	-
Rectum	-	Colon Cancer	-
Testicle	-	Gastric Cancer	-
Duodenum	-/+	Esophagial Carcinoma	-
Thyroid	-	Cerebroma	+
Stomach	-		
Esophagus	-		

Several normal and tumor tissues were analyzed in two separate fields. Each tissue was analyzed in two different fields in two separate experiments. - shows negative staining; + shows positive staining; -/+ shows heterogenous staining.
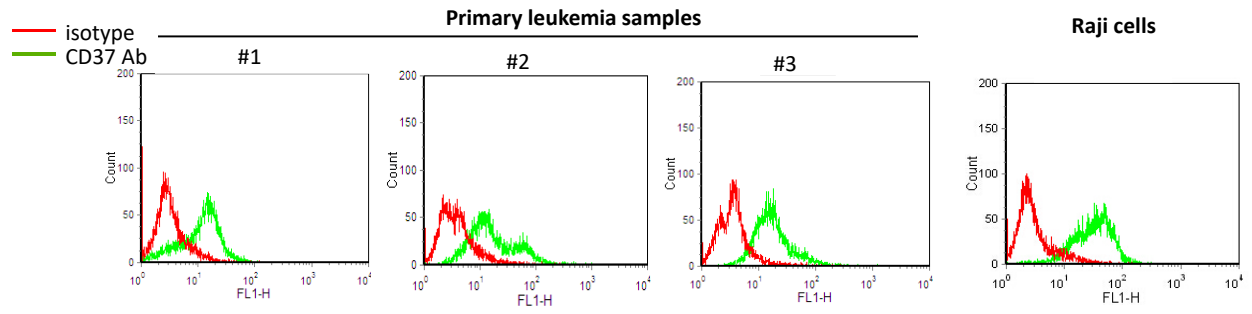
Figure 1S. FACS with CD37 antibody (2B8 clone) shows positive staining in three primary leukemia samples.
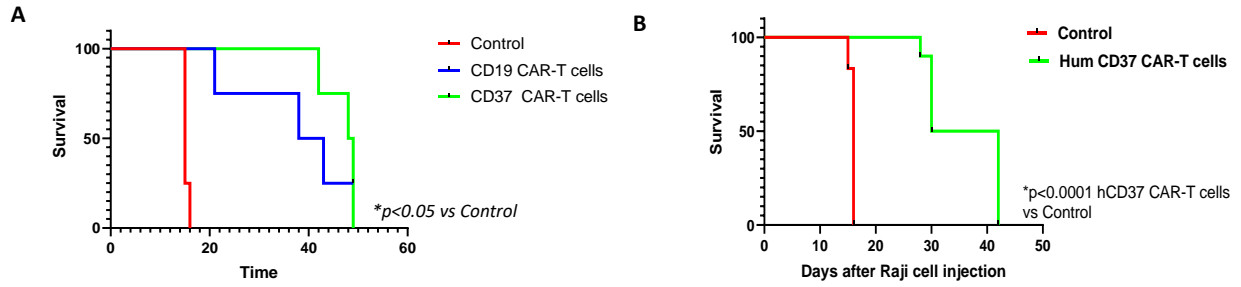
Supplemental Figure S2

Figure S2. Mouse and Humanized CD37 CAR-T cells significantly block Raji xenograft tumor growth *in vivo. A.* Mouse CD37 CAR-T and CD19 CAR-T cells significantly prolong mouse survival in Raji xenograft mouse model. p<0.05, Kaplan-Myer survival vs negative vehicle control group. B. Humanized CD37 CAR-T cells significantly prolong mouse survival in Raji xenograft mouse model. p<0.0001, Kaplan-Myer survival vs negative control group