**Fig S1.** The combination of BC250 and T cells treat mice in several ALL xenograft mouse models *in vivo*. **(A-C)** Immunodeficient NSG mice were intravenously inoculated with CD19(+) Daudiluciferase ( $10^6$ ), BV173-luciferase ( $10^6$ ), or Raji-luciferase ( $0.5 \times 10^6$ ). Treatment was started after 3 **(C,** Raji) or 14 **(A** and **B,** Daudi and BV173) days of leukemia inoculation. Treatment was consisted of ATC injections (3 doses each  $20 \times 10^6$  for Daudi, 1 dose of  $8.8 \times 10^6$  for BV173, or 3 doses each  $10 \times 10^6$  for Raji) with BC250 (CD3xCD19 BsAb) or the control BC119 (CD3xGD2 BsAb). Interleukin 2 was administered twice per week (1000 IU) to support ATC persistance. Leukemia growth was monitored using the IVIS bioluminescent imager.

