**Supplemental Figure Legend**

**Fig. S1. Suppression of CD47 does not enhance radiation growth delay in and athymic mouse SCC VII model of squamous cell carcinoma.** Athymic mice (Nu(Ncr)-Foxnnu ) were injected with SCCVII squamous cell carcinoma (1x105 SCC) into their right hindlimbs and were randomized into 2 groups after 5 days and received injections of CD47 Morpholino (10 µM), or saline. Tumor volume was calculated by the formula: volume = W2 × L/2, where W = shortest diameter and L = longest diameter.

**Fig. S2. CD47 blockade enhances T cell mediated cancer cell killing without affecting target cell proliferation.** (A) 15-12RM target cells were seeded into 16-well plates. RT-1-derived effector T cells were co-cultured with target cells at a ratio of 1:1, 1:2, 1:5. Target cell growth and viability was dynamically monitored using the RT-CES system. Target cell viability monitored by surface impedance. (B) 15-12RM cells were plated at the same density as in A and cell viability was measured by MTS assay. (C) Cytotoxicity was measured was measured by LDH release in CD8+ T cells used in the in vitro cytotoxicity assays in Fig. 4. N=3 \*p<0.05.

**Fig. S3. Efficiency of CD47 protein knockdown by CD47 morpholino.** (A) CD47 protein expression was determined in fibrosarcoma tumor lysates (A) and CD8+ T cells used for the in vitro cytotoxicity assay (B) by western blot hybridization using CD47 antibody clone 301.

**Fig. S4. Effect of T cell depletion on B16F10 melanoma responses to IR in WT and CD47-null mice.** (A) B16F10 melanoma cells were injected into WT and CD47-/- mice CD8+ T-cels were depleted and hind limbs and were irradiated at 10 Gy day 5. T cells were depleted weekly after first dose. (B) at the end of the study mice were sacrificed and tumors where excised and wet weight was measured (N=4,5) (C) Efficiency of anti-CD8 treatment. WT and CD47 null mice bearing B16F10 melanoma tumors were sacrificed at the end of the study, and trunk blood was collected. Circulating CD8 cells were measured by flow cytometry.

**Fig. S5. Ratio of Granzyme B gene expression to CD8 alpha gene expression in tumors.** Expression of granzyme B and CD8 alpha was determined by RT-PCR in 15-12RM tumors grown in immunocompetent BALB/c mice (A), or B16 melanoma tumors grown in WT or CD47-null C57BL/6 mice (B). Ratios were calculated by dividing the fold gene expression of granzyme B by the corresponding gene expression of CD8 alpha N=3.