

Supplementary Figure Legends

Supplementary Fig. 1A1B-CD47 antisense morpholino reduces tumor burden in the YUMM1.7 melanoma model (A) Tumor volume was determined throughout the study ($LW^{2/2}$). (* $p < 0.05$, $n = 5-6$ /group). **(B) Intratumoral cytotoxic (yellow cells due to co-localization of CD3+ (red, APC) and CD8+ (green, FITC)) T cells**

Supplementary Fig. 2A-B- B16 melanoma cells express the Pmel-1 antigen. B16 cell protein expression of the **(A)** Pmel-1 antigen with the **(B)** gp100 peptide fragment.

Supplementary Fig. 2C- CD47 antisense morpholino decreases protein expression of B16 melanoma tumors. Mice treated with CD47 morpholino (CD47(-)) have decreased CD47 protein expression within B16 melanoma tumors.

Supplementary Fig. 2D- CD47 antisense morpholino decreases protein expression of Pmel-1 CD8+ T cells. Pmel-1 CD8+ T cells treated with CD47 morpholino (CD47(-)) have decreased CD47 protein expression.

Supplementary Fig. 2E- Gating strategy for flow cytometry on Pmel-1 CD8+ T cells. To determine the differentiation of Pmel-1 CD8+ T cells, splenocytes were stained and gated based on cellular viability, CD3, and CD8 expression.

Supplementary Fig. 2F- Control morpholino doesn't alter CD8+ T cell effector function. Pmel-1 CD8+ T cell cytotoxic capabilities were unchanged when treated with CTRL (-) compared to control.

Supplementary Fig. 2G- Thrombospondin-1 doesn't alter cancer cell proliferation. The proliferation of B16 melanoma cells treated with 10 nM TSP1 is unchanged from the control.

Supplementary Fig. 3A- scRNA-seq immune cell population clusters. Data derived from scRNA-seq using the 10x genomics system was clustered into the following immune cell populations: NK cells (NKG7+, CD56+), T lymphocytes (CD3+, CD28+), B cells (CD19+, CD40+) and monocytes (CD68+, CD163+).

Supplementary Fig. 3B- Gating strategy for flow cytometry on human melanoma patient PBMC. To determine the percent of CD47 expressing T cells, human melanoma patient PBMC were stained and gated based on cellular viability, CD3, CD8, and CD47 expression.

Supplementary Fig. 3C- PBMC expressing PD-1 on CD8+ T cells. To determine the percent of PD-1 expressing T cells, human melanoma patient PBMC were stained and gated based on cellular viability, CD3, CD8, and PD-1 expression.

Supplementary Fig. 3D- PBMC co-expressing PD-1 and CD47 on CD8+ T cells. PBMCs were stained and gated based on cellular viability, CD3, CD8, and PD-1 and CD47 co-expression.