SUPPLEMENTARY INFORMATION

Prussian blue nanoparticles-based antigenicity and adjuvanticity trigger robust antitumor immune responses against neuroblastoma

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This supplementary information document contains Supplementary Figures S1-S4:
(S1) Properties of PEI-PBNPs, (S2) Photothermal heating curves of CpG-PBNPs used in the release assays, (S3) Immunostimulatory properties of CpG-PBNPs, and (S4) Tumor growth curves for individual mice in the various treatment groups.

Supplementary Figures

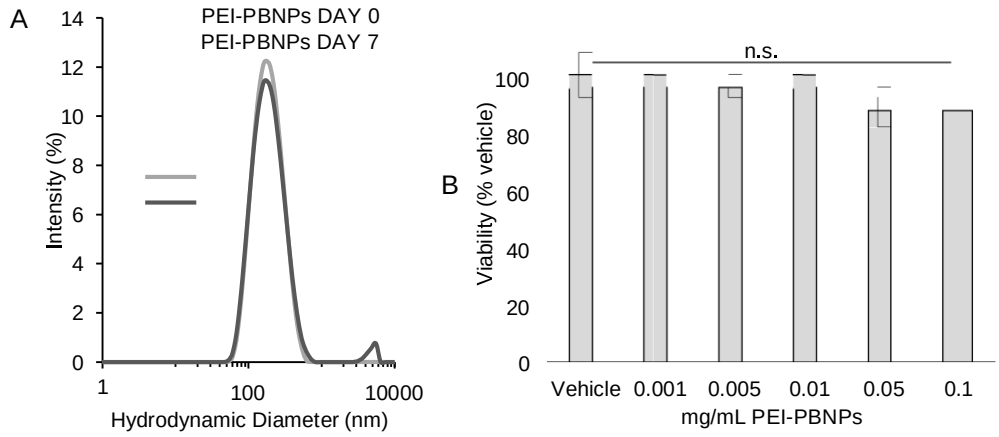

Figure S1. Properties of PEI-PBNPs. (A) Stability of PEI-PBNPs over the course of a week measured by DLS. (B) Cytotoxicity of varying concentrations (0.001 – 0.1 mg/mL) of PEI-PBNPs on Neuro2a cells measured by a cell viability assay (n.s., no statistical significant difference in viability, $p > 0.05$).

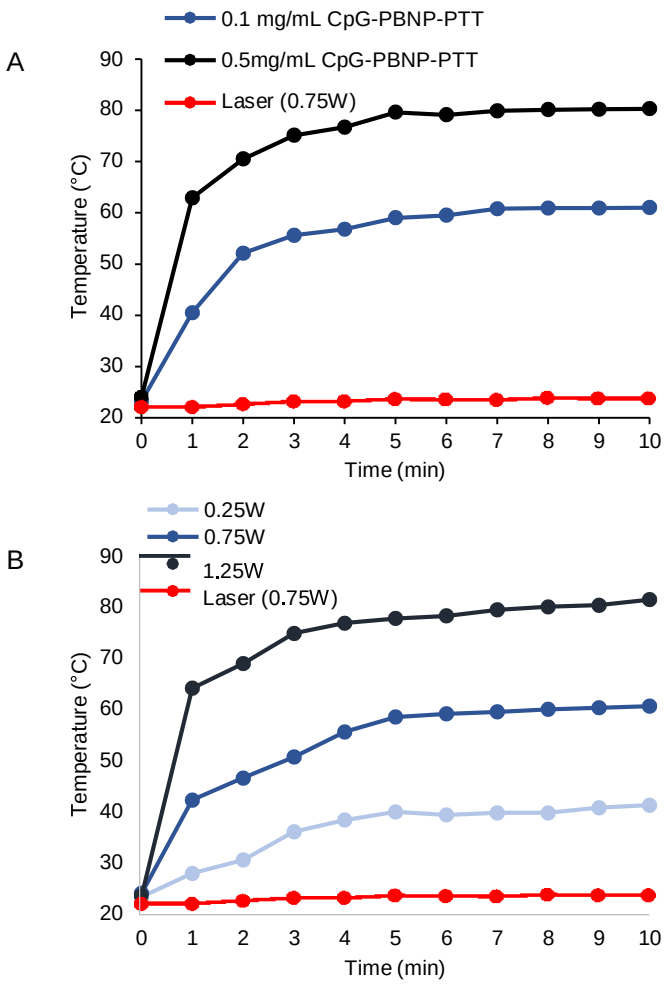

Figure S2. Photothermal heating curves of CpG-PBNPs. (A) Photothermal heating curves (temperature-time profiles) of varying concentrations (0.025 – 0.5 mg/mL) of CpG-PBNPs irradiated by an 808 nm NIR laser for 10 minutes at a power of 0.75 W (1.875 W/cm^2). (B) Photothermal heating of 1 mg/mL CpG-PBNPs using varying NIR laser powers (0.75 - 1.25 W) for 10 minutes.

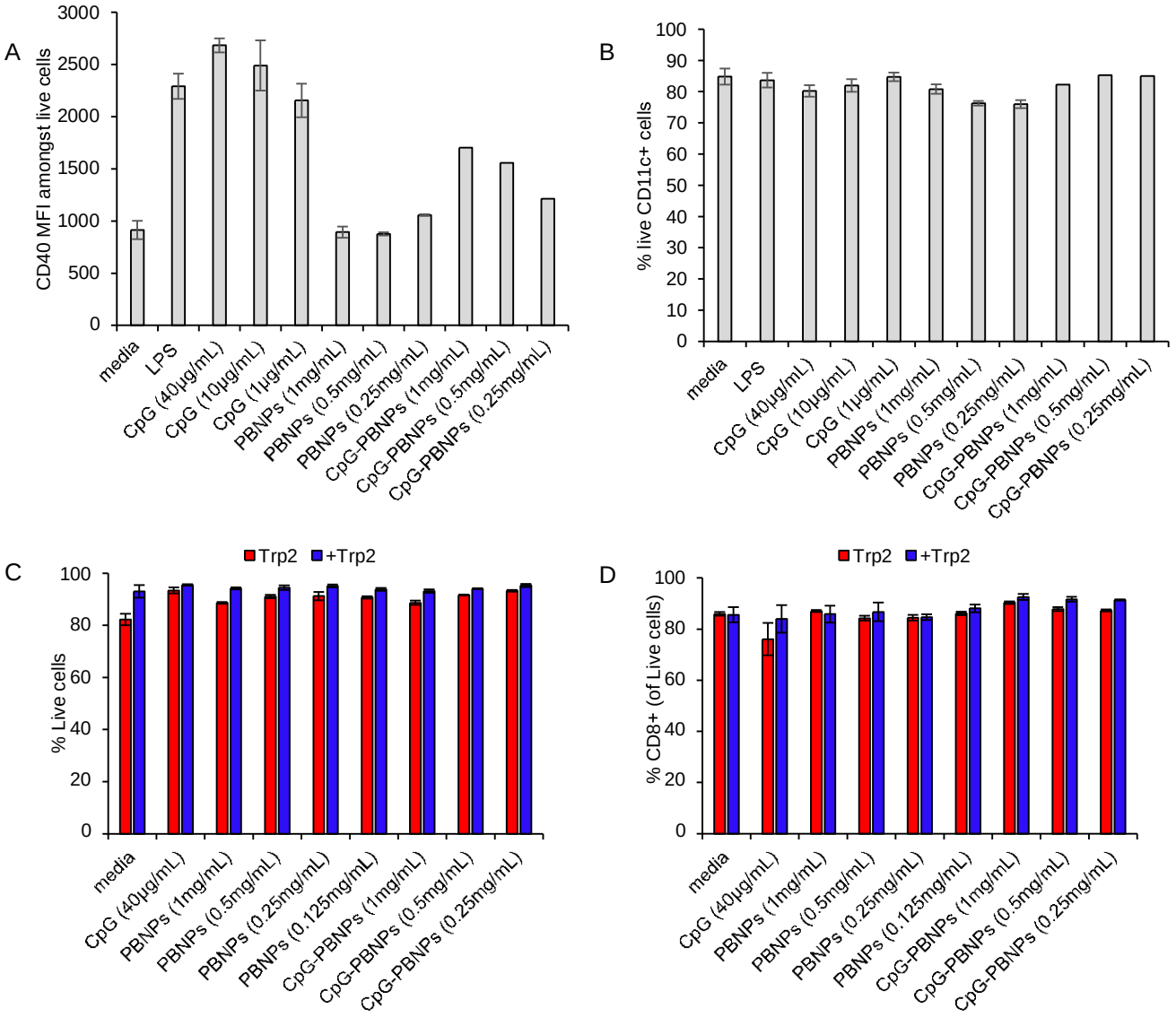

Figure S3. Immunostimulatory properties of CpG-PBNPs. (A) CD40 MFI amongst CD11c+ positive cells. (B) % live CD11c+ positive cells treated with varying concentrations (1 – 0.25 mg/mL) CpG-PBNPs and controls (Free CpG, PBNPs. (C) % live cells treated with varying concentrations (1x-4x; 1 – 0.25mg/mL) CpG-PBNPs and controls (Free CpG, PBNPs) with and without the antigen Trp2. (D) % CD8+ positive cells treated with varying concentrations (1 – 0.25 mg/mL) CpG-PBNPs and controls (media, free CpG, PBNPs).

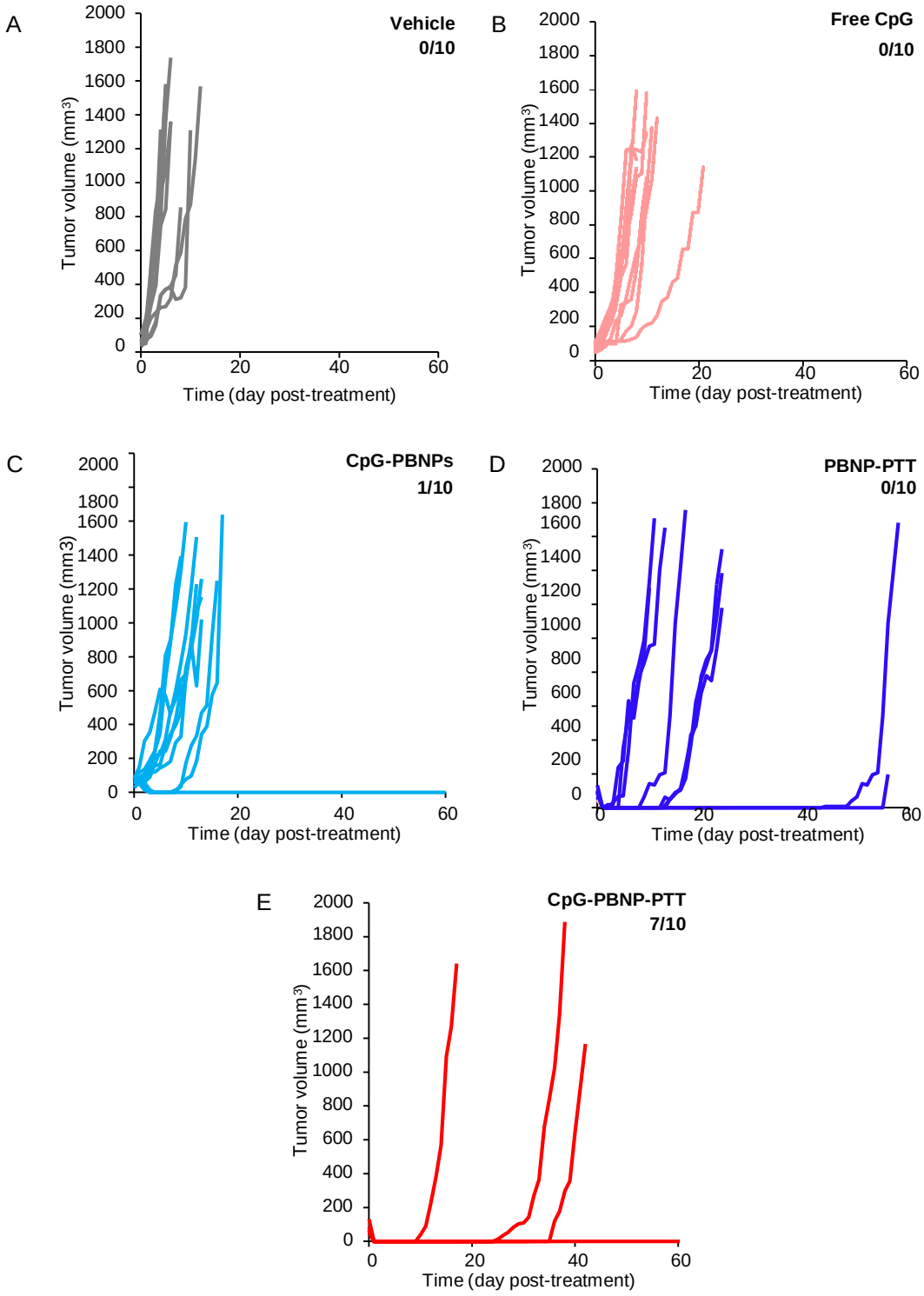

Figure S4. Tumor growth curves for individual mice in the various treatment groups: (A) Vehicle, (B) CpG-treated, (C) CpG-PBNP-treated, (D) PBNP-PTT-treated, (E) CpG-PBNP-PTT-treated. Each line represents tumor growth measured in one mouse (numbers in parentheses in each panel A-E indicate number of long-term surviving mice in each group i.e. >60 day survival).