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Supplemental Information

Nanoparticle Delivery of RIG-I Agonist Enables Effective and Safe Adjuvant Therapy in Pancreatic Cancer

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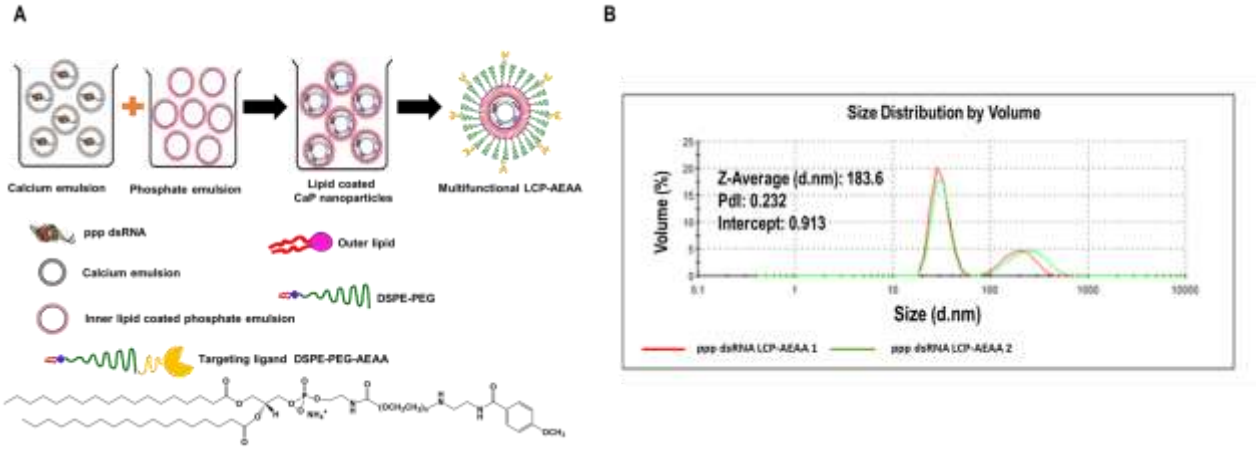

Figure S1: A. Schematic illustration of the LCP-AEAA nanoparticle formulation of ppp dsRNA, B. Size distribution of ppp dsRNA LCP-AEAA by dynamic light scattering. ppp dsRNA LCP-AEAA 1 and ppp dsRNA LCP-AEAA 2 represent two independent batches of the ppp dsRNA LCP-AEAA nanoparticles

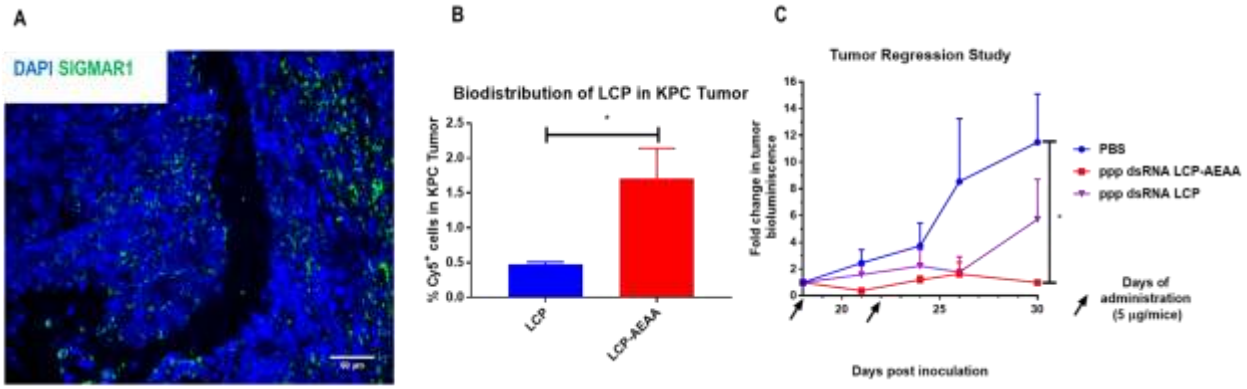

Figure S2. Effect of AEAA targeting on biodistribution & therapy in KPC tumor: A. KPC-RFP/Luc tumors were stained with antibodies against sigma1-receptor (SIGMAR1). Green represents SIGMAR1 and blue represents DAPI respectively, B. KPC-RFP/Luc tumor bearing mice were injected with LCP loaded with Cy5 labeled oligonucleotides. In the untargeted LCP group, DSPE-PEG-AEAA was not incorporated during synthesis of LCPs. Mice were sacrificed after 24 h and percentage of Cy5 positive cells were quantified by FACS (n=3), C. Tumor regression study comparing ppp dsRNA LCP with or without AEAA targeting, as described in Fig. S2B. Mice in PBS group treated with phosphate buffered saline. Animals received treatments on Day 18 and Day 22 post inoculation. Data show mean ± SEM (n = 3-4), *$p < 0.05$

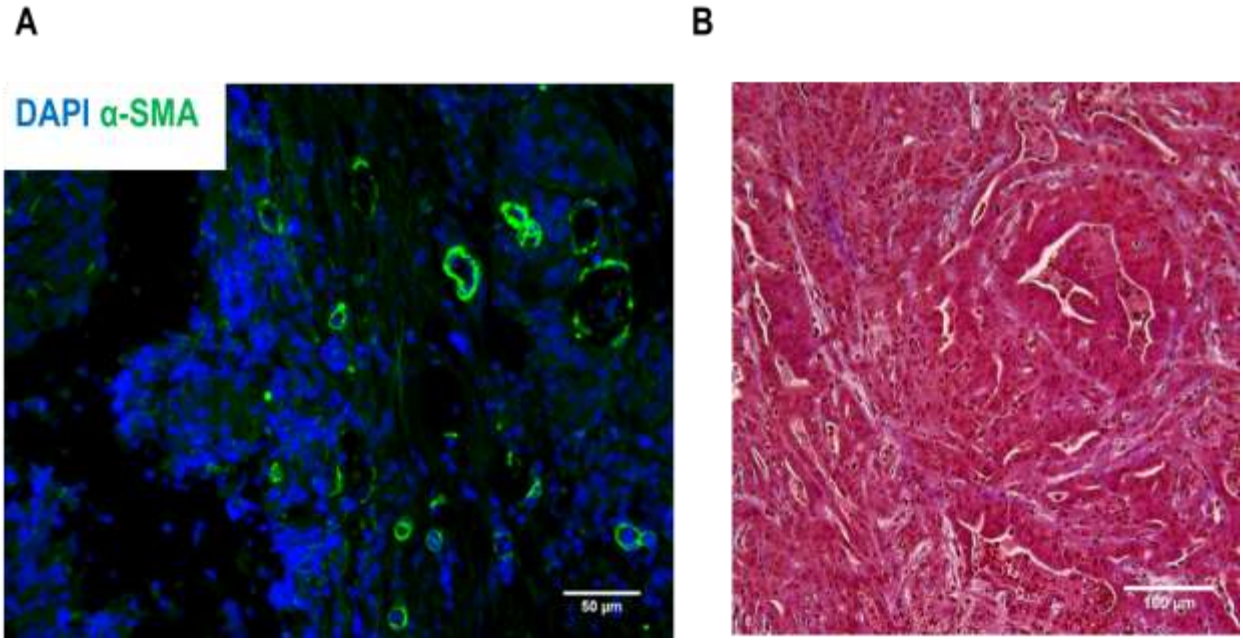

Figure S3: A. KPC-RFP/Luc tumors were stained with antibodies against alpha-smooth muscle actin (α-SMA). Green represents α-SMA and blue represents DAPI respectively. B. Masson's trichrome stain of KPC-RFP/Luc tumor

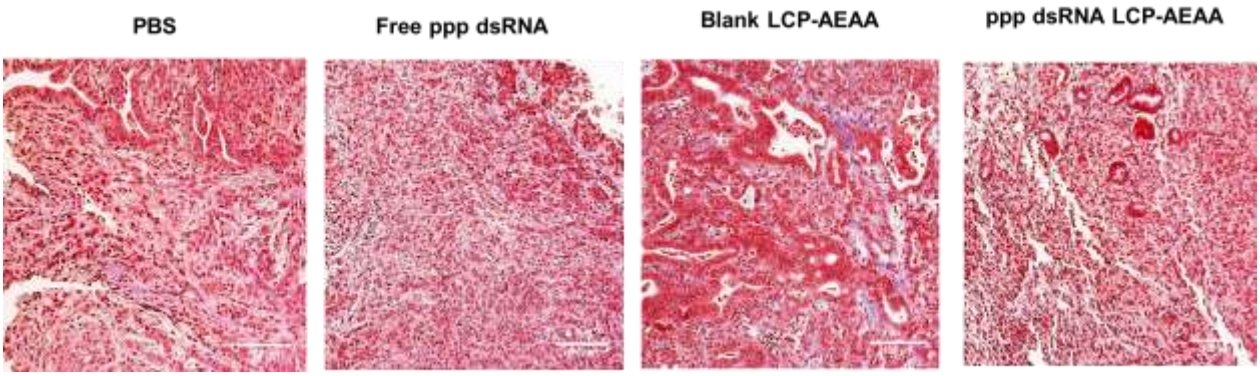

Figure S4: Masson's trichrome stain of orthotopic KPC-RFP/Luc tumor after different treatments

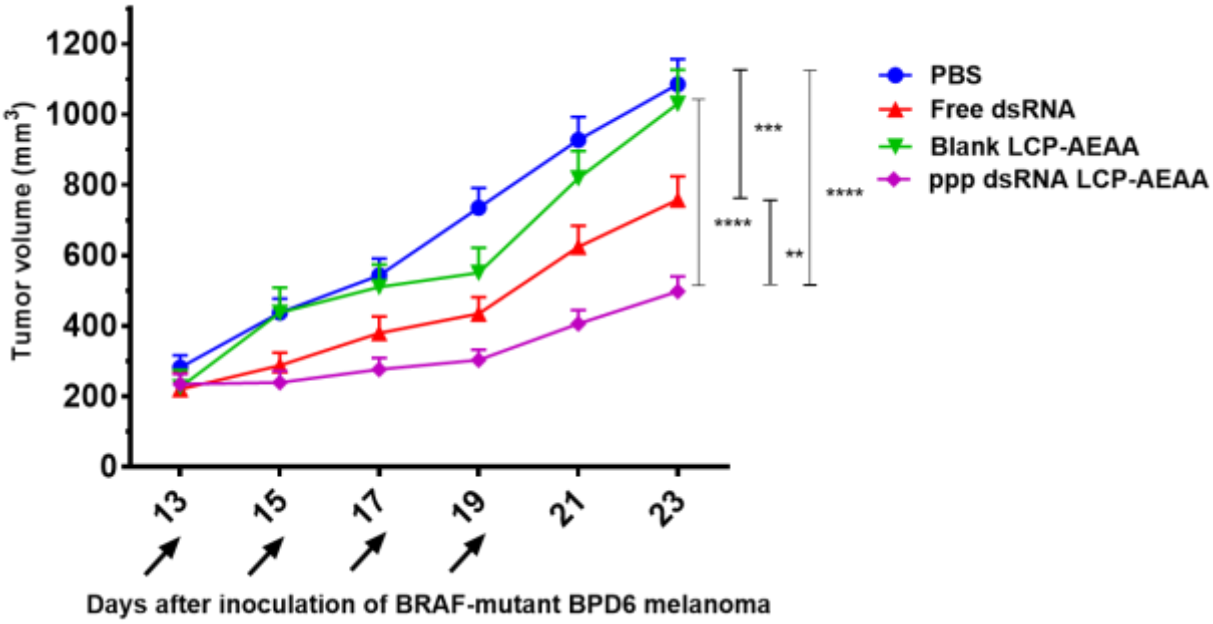

Figure S5: Tumor inhibition curve of subcutaneous syngeneic allograft of murine $BRAF^{V600E}$ PTEN-/- BPD6 melanoma model. Mice were intravenously injected with different therapeutic interventions in same doses as in Fig. 2B. Data show mean ± SEM (n = 4-8), ** $p < 0.01$, ***$p < 0.001$, ****$p < 0.0001$.

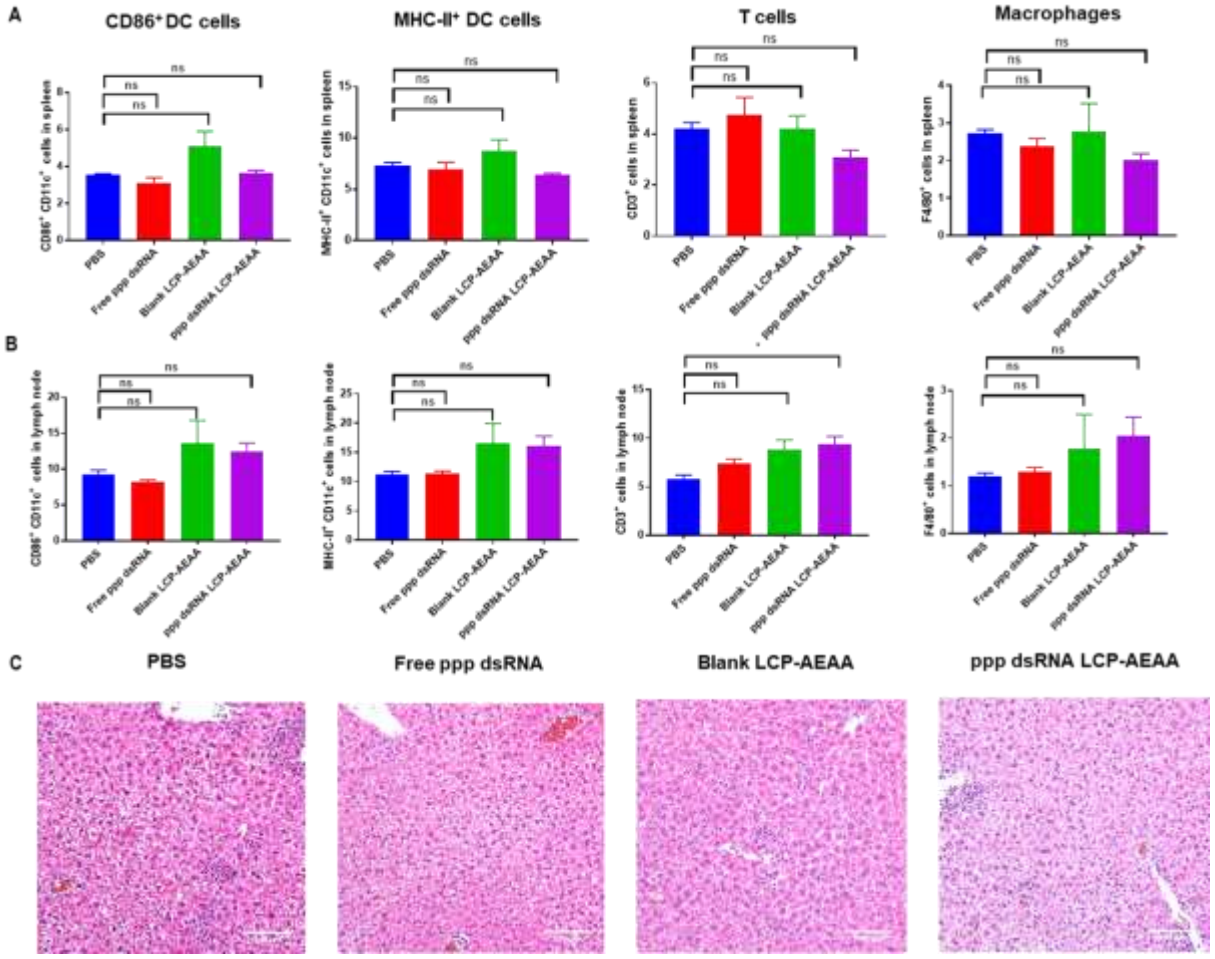

Figure S6: A & B. Healthy non-tumor-bearing syngeneic C57BL/6 mice bearing mice from different intervention groups were sacrificed 16 h post administration. **Spleen** (Fig. S7A) and **lymph nodes** (Fig. S7B.) were harvested and analysis of different immune cell populations was conducted by Flow cytometry. Data show mean ± SEM (n = 4), *p < 0.05, ns denotes non-significant, C. Representative Liver H&E sections from different intervention groups in same study