

Supporting Information for

A PD-L1 Targeting Nanotheranostic for Effective Photoacoustic Imaging Guided Photothermal- Immunotherapy of Tumor

Ruimin Chang, ‡^{a,b}, Tan Li, ‡^c, Yao Fu, ‡^{a,b}, Zeyu Chen,^d, Yilang He^c, Xin Sun^d, Yiyi Deng^c, Yanqing Zhong^c, Zuozhong Xie^a, Yang Yang^e, Jing Liu^c, Xiang Chen^{*a}, Hong Liu^{*a}, Yuetao Zhao^{*c}

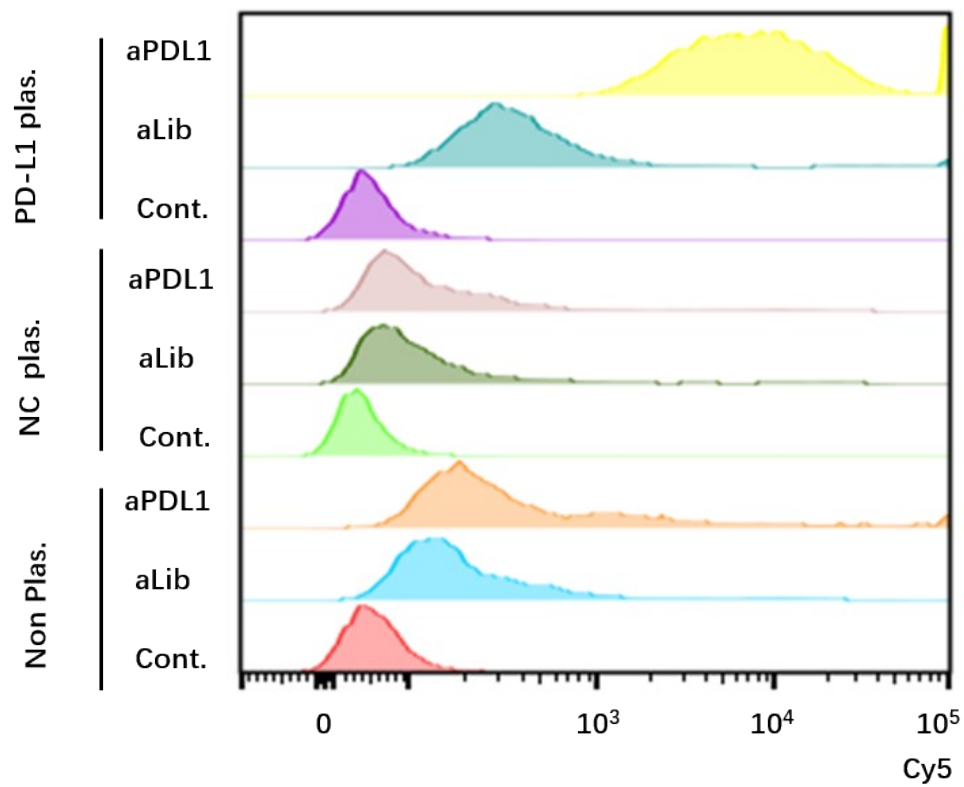


Figure S1. Flow cytometric analysis of Cy5-modified APDL1 treated normal LLC cells transfected with no plasmid (Non Plas.), control-plasmid (NC Plas.), and PD-L1 overexpressed plasmid (OE Plas.).

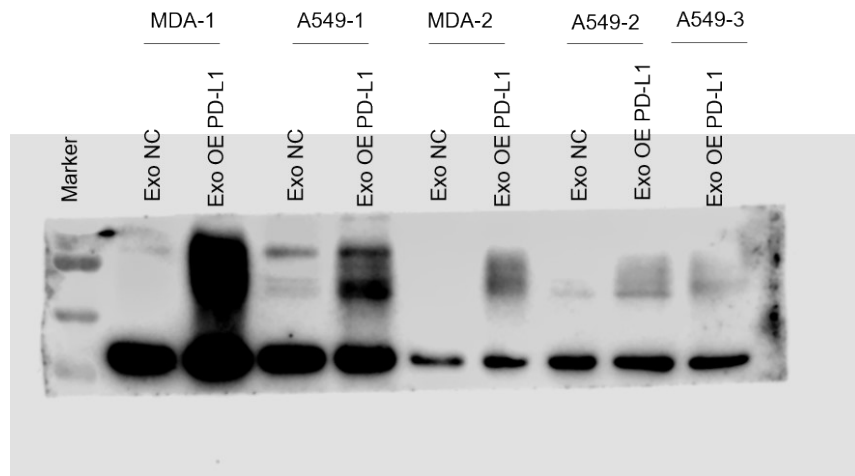


Figure S2. Expression of PD-L1 on exosomes from MDA cells and A549 cells transfected with blank-plasmid (Exo NC) and PD-L1 plasmid (Exo OE PD-L1) detected by western blot.

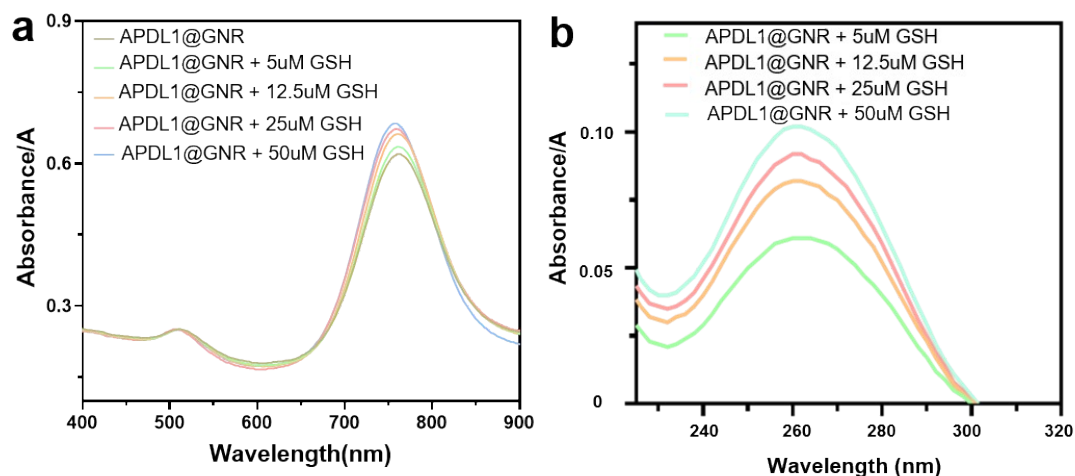


Figure S3. (a) The longitudinal surface plasmon resonance (LSPR) of APDL1@GNR blue-shifted after addition of GSH with concentrations. **(b)** The absorbance change in the supernatant after centrifugation of APDL1@GNR solution with addition of different amount of GSH.

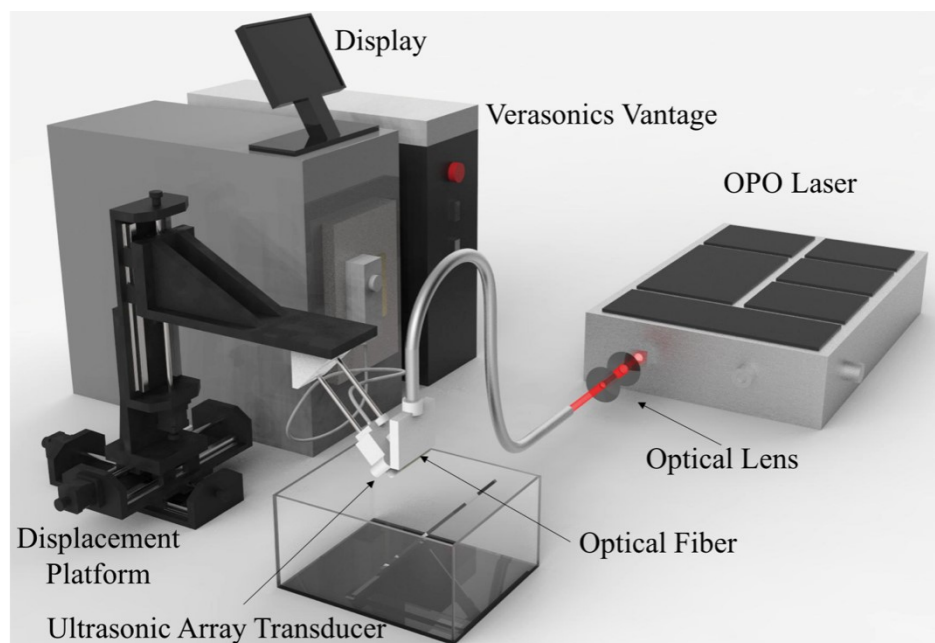


Figure S4. Illustration of photoacoustic imaging system.

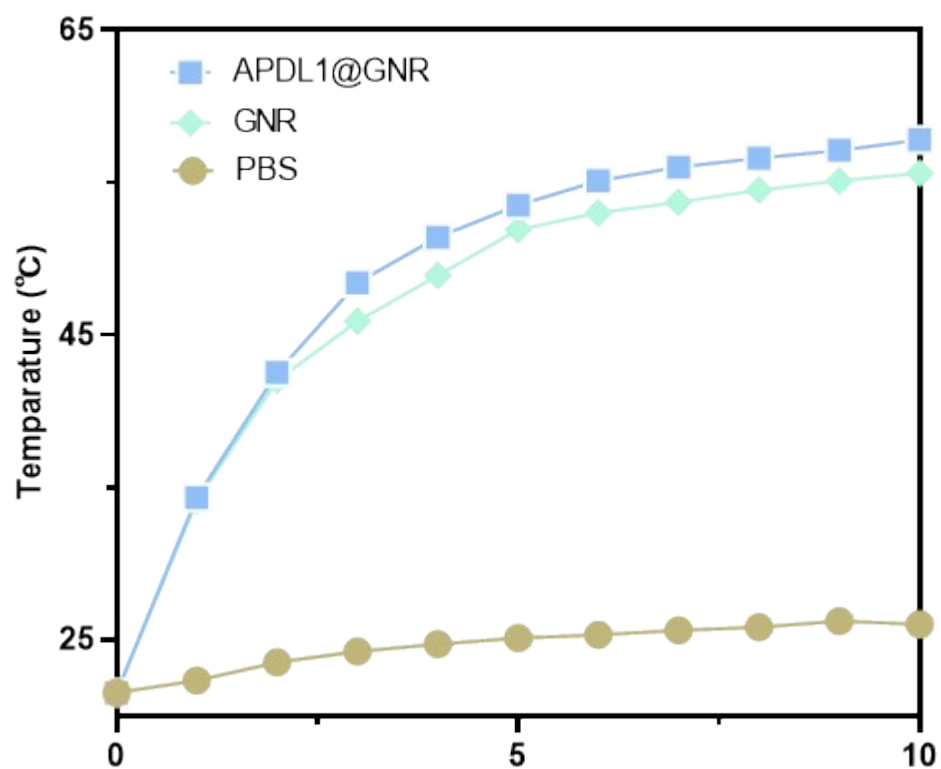


Figure S5. Photothermal heating curves of APDL1@GNR and GNR solution at 0.6 nM under an 808 nm laser irradiation (1.0 W cm^{-2}).

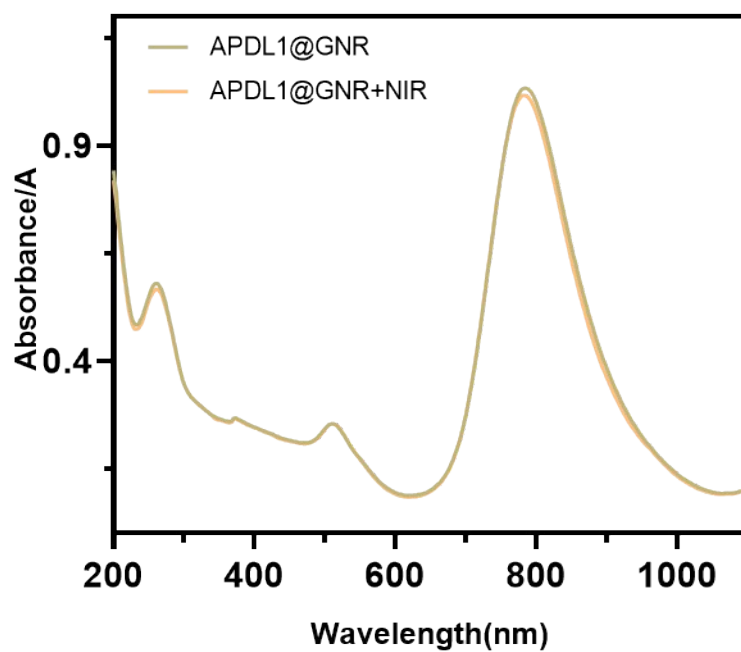


Figure S6. Absorption spectra of APDL1@GNR before and after irradiation with 808 nm laser and 1.0 W cm⁻² laser for 10 min.

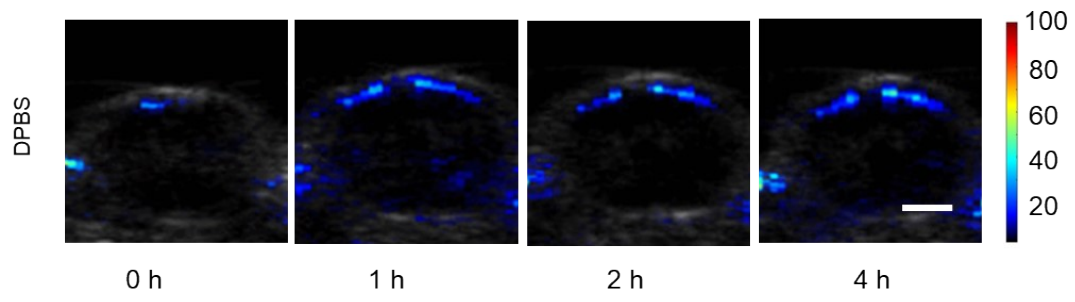


Figure S7. PA images of LLC tumor-bearing C57BL/6 mice treated with DPBS. Scale bar: 2 mm.

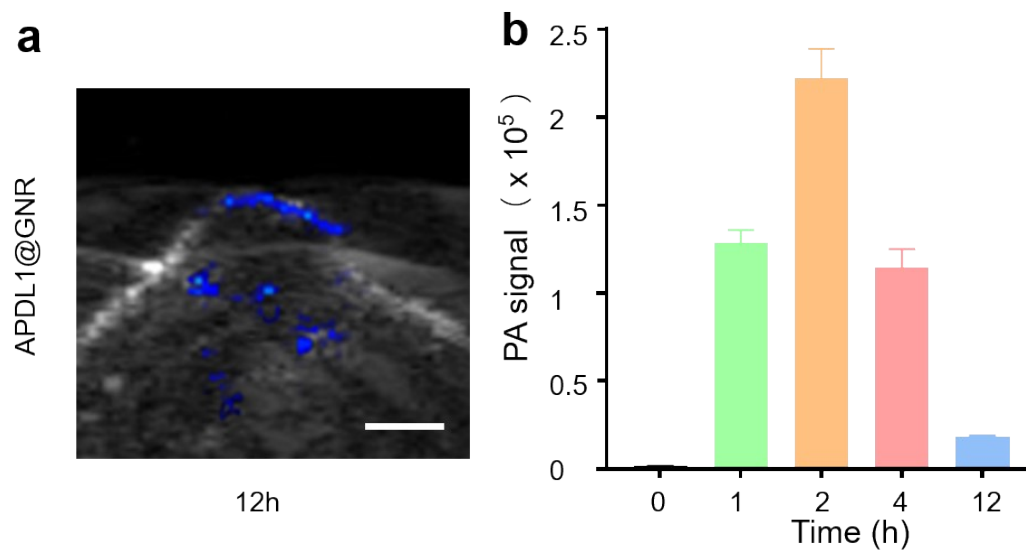


Figure S8. (a) PA images of LLC tumor-bearing C57BL/6 mice at 12 h after injection of APDL1@GNR. **(b)** Change of PA signals in tumor at different timepoint after injection of APDL1@GNR. Scale bar: 5 mm.

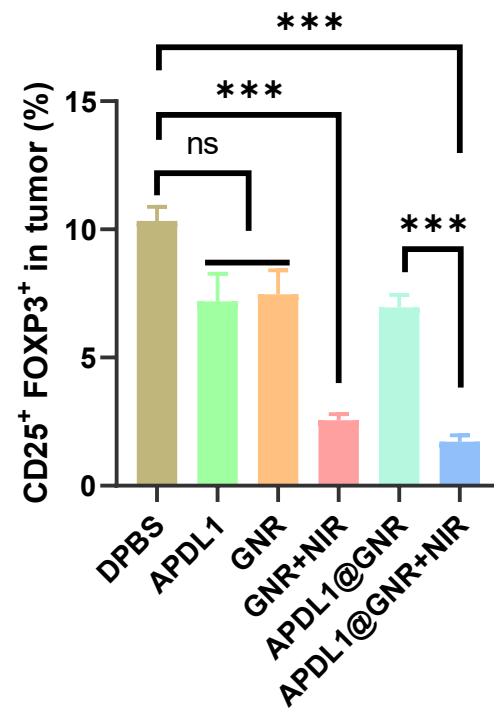


Figure S9. Quantification of CD25+Foxp3+ Tregs in tumor from groups by fluorescence-activated cell sorting (FACS).

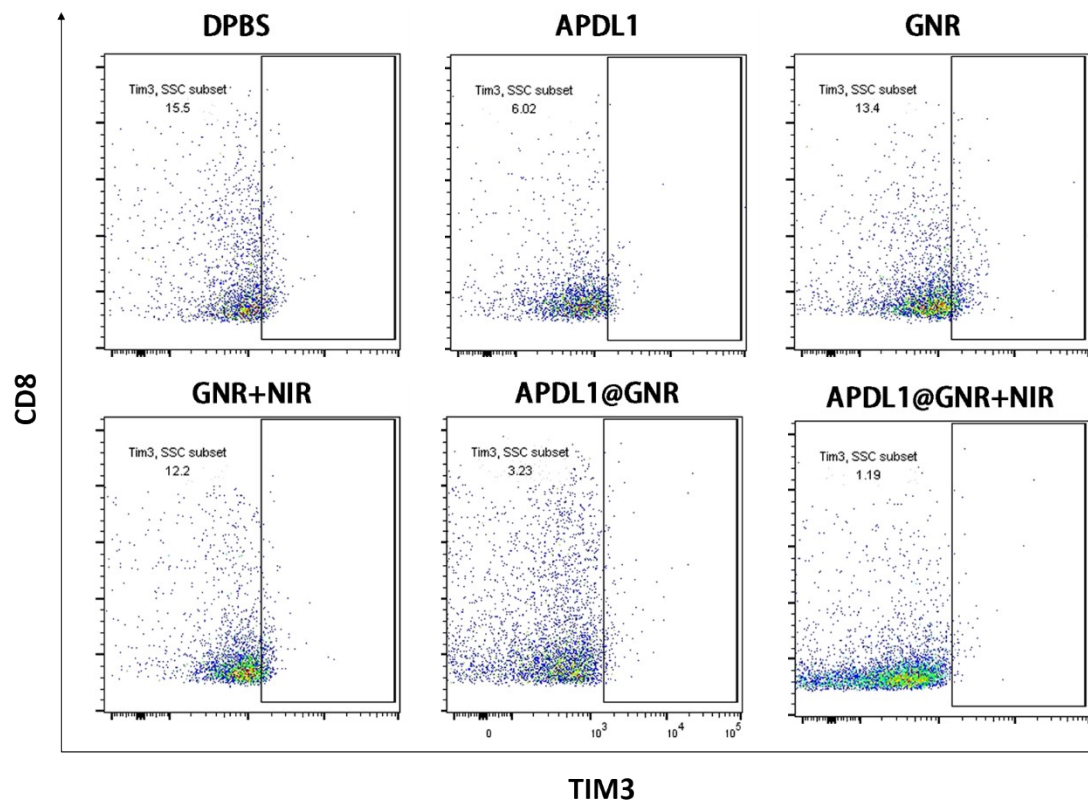


Figure S10. Fluorescence-activated cell sorting (FACS) of Tim⁺ CD8⁺ T cells in tumor from groups

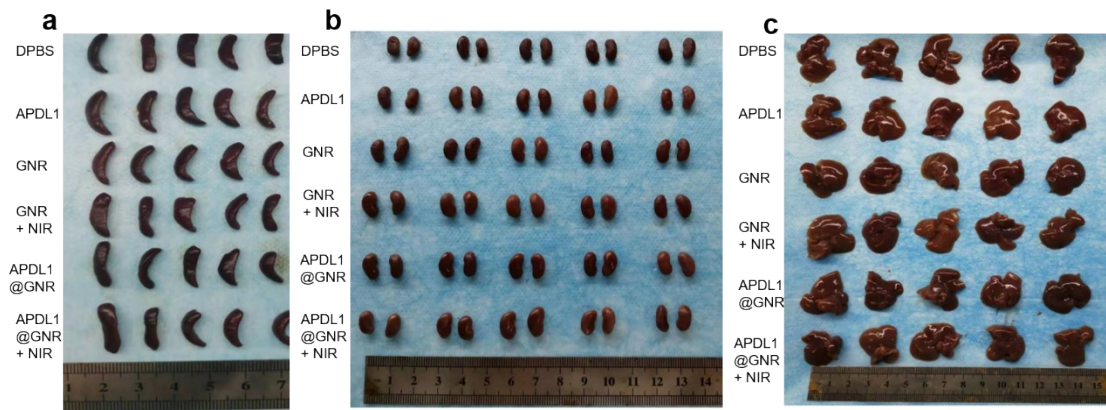


Figure S11. Captured spleen (a), kidney (b) and liver (c) of mice at the seventh days after treatment from groups.