Supporting Information

Multifunctional nanozyme for multimodal imaging-guided enhanced sonodynamic therapy by regulating the tumor microenvironment

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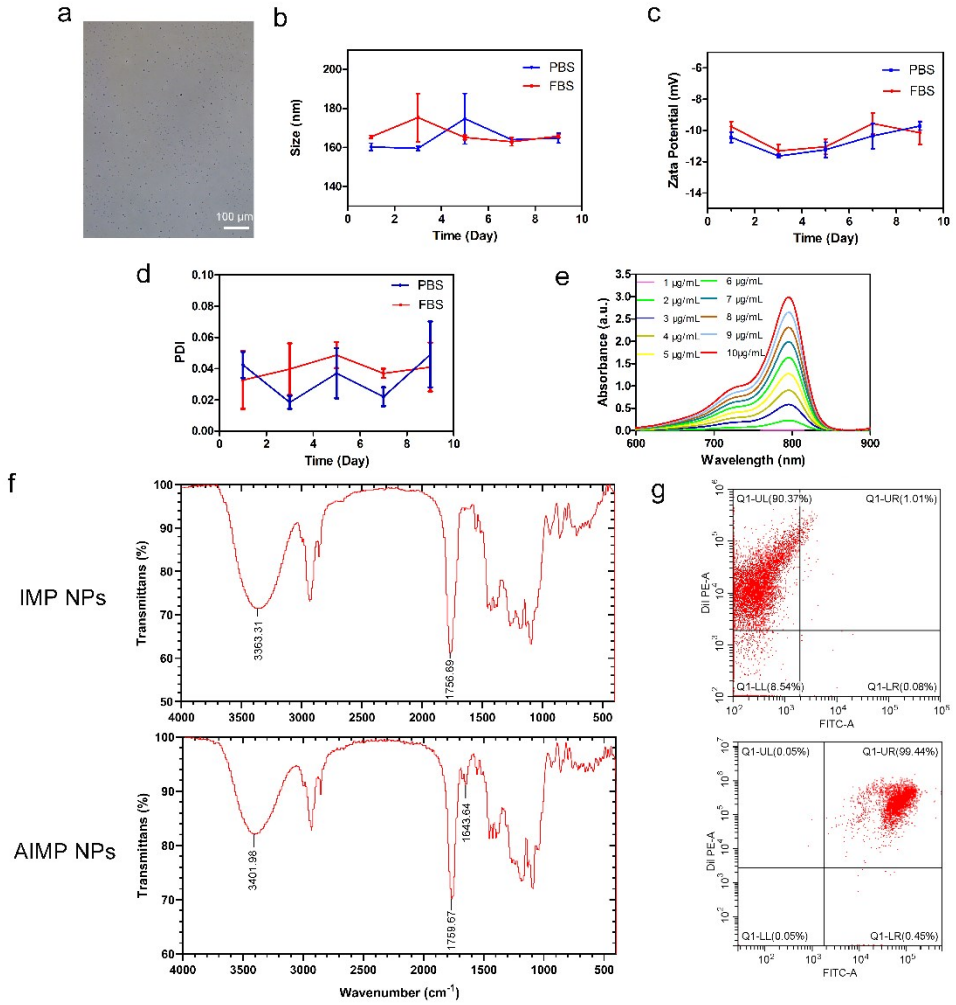

Figure S1. Characterizations of the NPs. (a) Optical microscope image of AIMP NPs. (b, c, d) Changes in the size, zeta potential distribution and PDI of AIMP NPs in PBS/FBS within 9 days. (e) UV–vis-NIR absorbance spectra of IR780 at different concentrations. (f) FTIR of IMP NPs and AIMP NPs. (g) FCM results of IMP NPs and AIMP NPs.

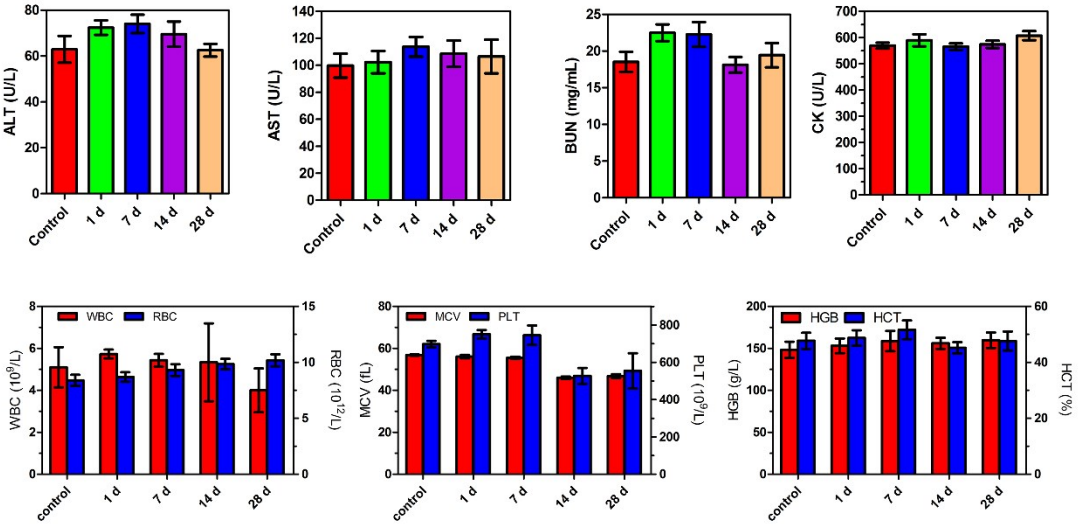

Figure S2. Blood biochemical analysis and hematological data from the healthy mice in the control group and 1, 7, 14 and 28 days after injection of AIMP NPs.

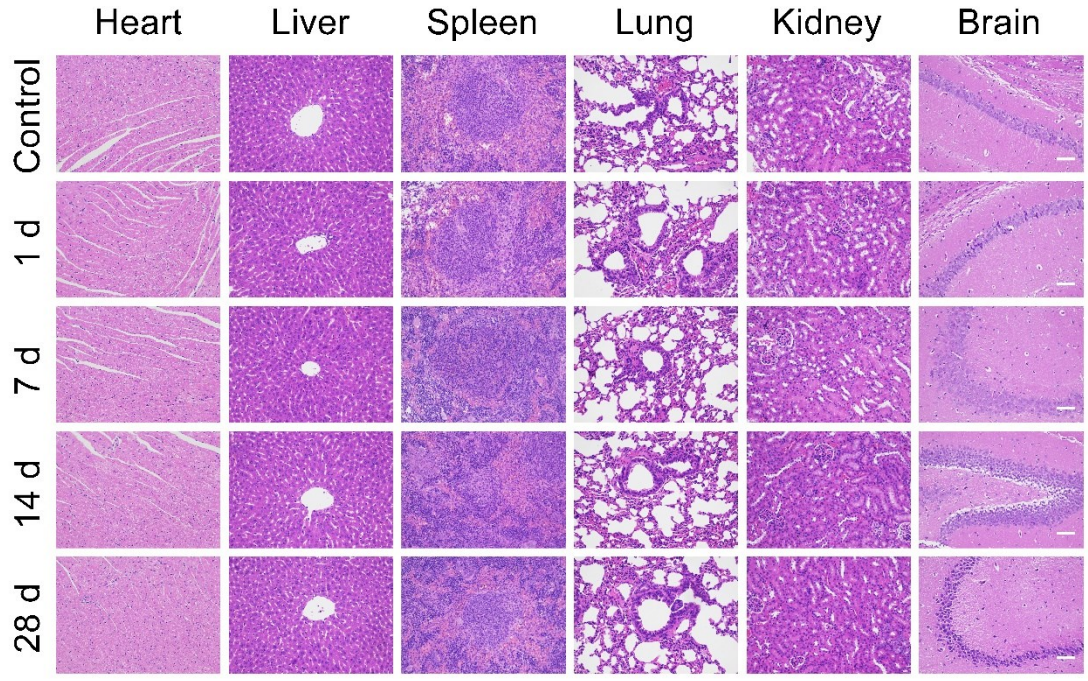

Figure S3. H&E staining of the major organs (heart, liver, spleen, lung, kidney and brain) of the healthy mice in the control group and 1, 7, 14 and 28 days after the injection of AIMP NPs. Scale bars: 100 μm.

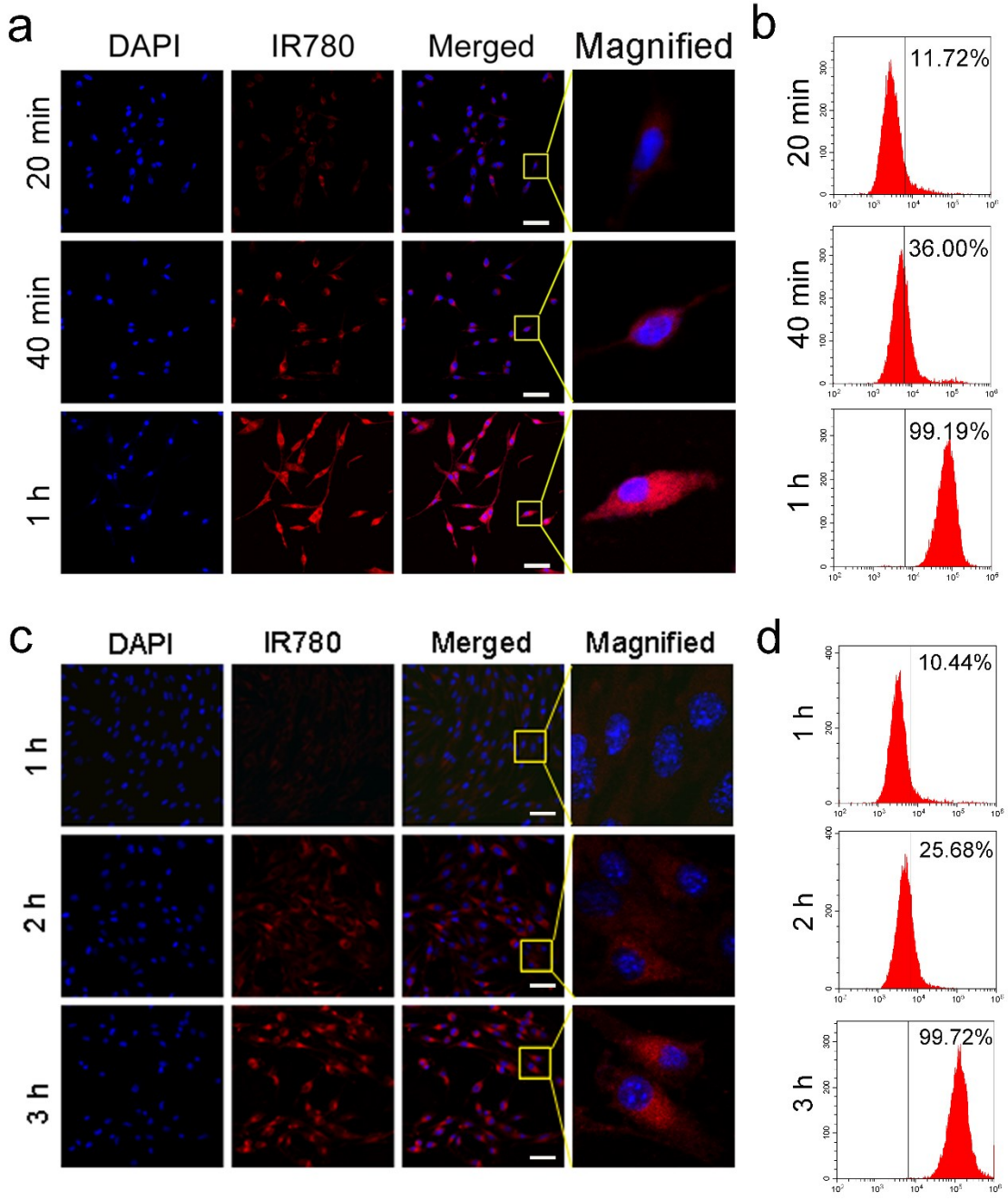

Figure S4. Evaluation of intracellular uptake. (a, c) CLSM images of the intracellular uptake of AIMP NPs by U87MG and Bend.3 cells after various intervals of incubation. Scale bars: 50 μm. (b, d) FCM analysis of the intracellular uptake of AIMP NPs by U87MG and Bend.3 cells after various intervals of incubation.

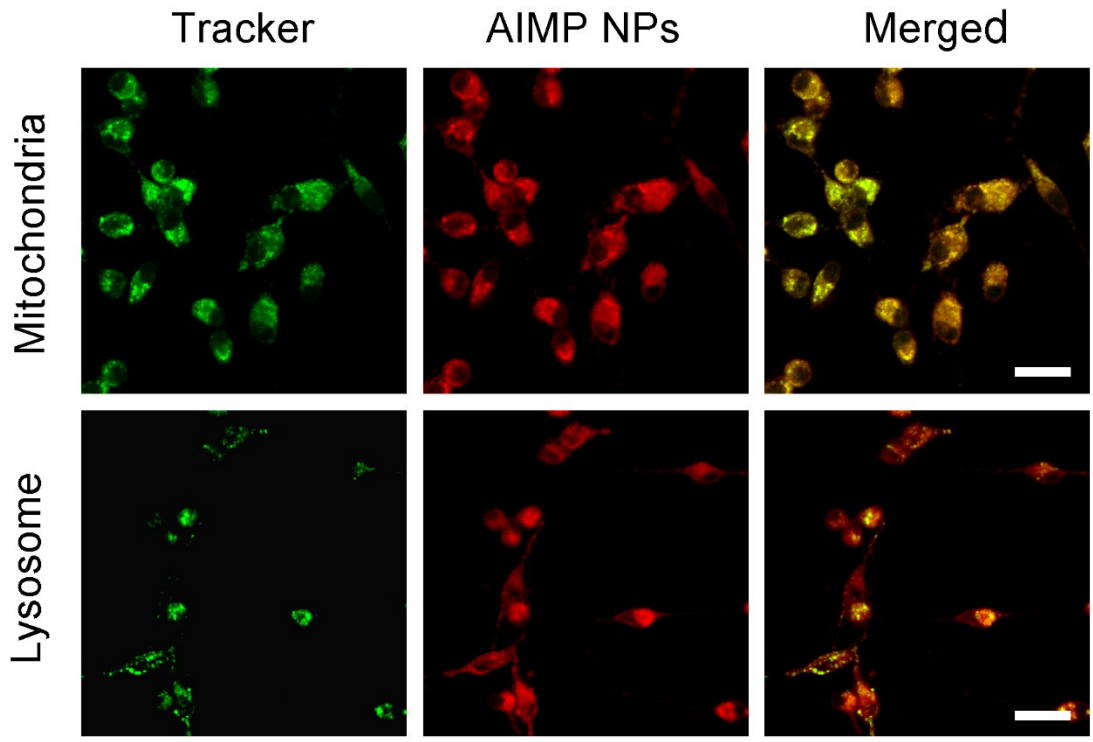

Figure S5. CLSM images of AIMP NPs colocalized with mitochondrial and lysosome trackers in U87MG cells. Scale bars: 25 μm.

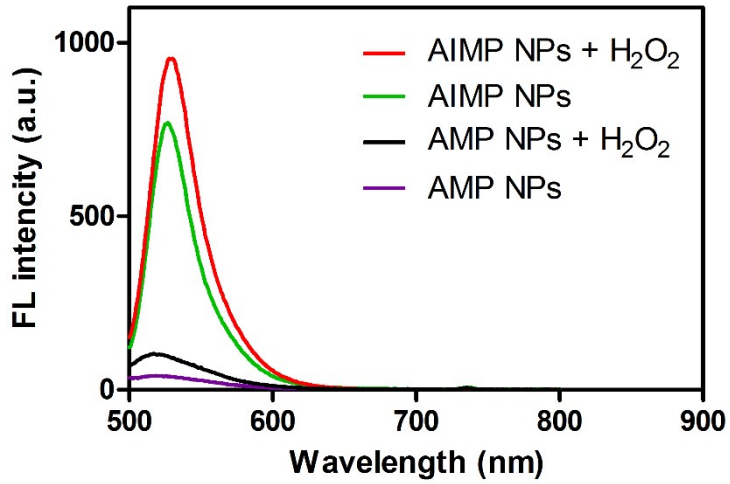

Figure S6. The LIFU-induced ROS generation of AMP NPs and AIMP NPs with and without H_2O_2 addition.

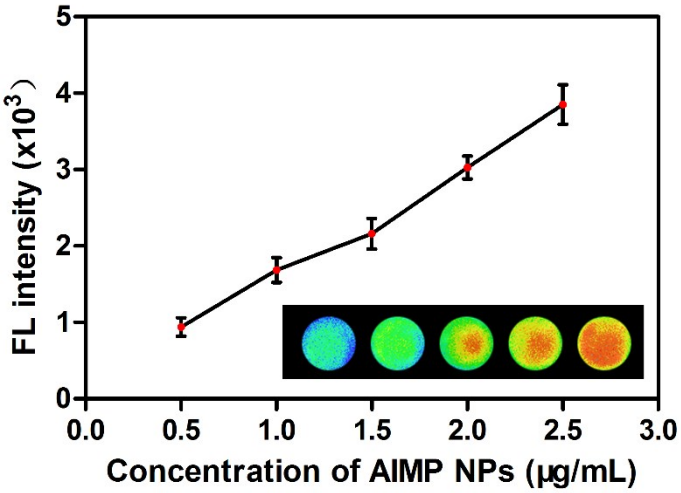

Figure S7. In vitro FL images and FL values of AIMP NPs at different concentrations.

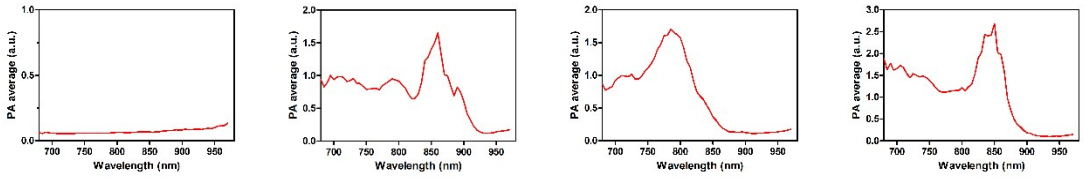

Figure S8. Full PA spectra of AP NPs, AMP NPs, AIP NPs and AIMP NPs.