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## **Supporting information**

## Self-responsive Co-delivery System for Remodeling Tumor

## **Intracellular Microenvironment to Promotes PTEN-mediated**

## **Antitumor Therapy**

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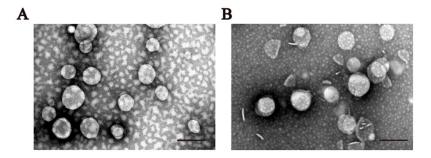
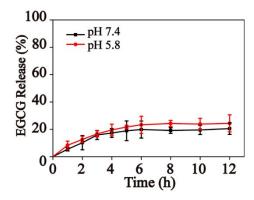


Figure S1. Representative TEM image of A) LP, B) LEP, Scale bar: 200 nm.



**Figure S2.** The effect of pH on release of EGCG form cationic liposome (n=3)

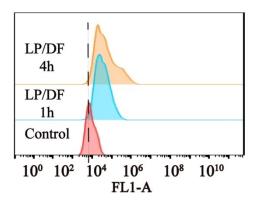
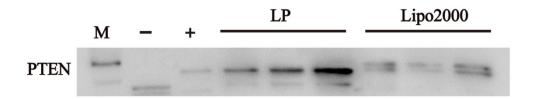
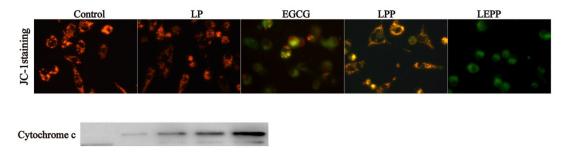


Figure S3. Flow cytometry detect of intracellular DNA-FAM after treatment with LP in PC-3.



**Figure S4.** Western bot assay analysis of PTEN protein expression in PC-3 cells with LP and Lipo2000.



**Figure S5**. Mitochondria membrane potential images (scale bar: 20μm) and Western blotting assays showing the expression level of cytochrome after different treatments.

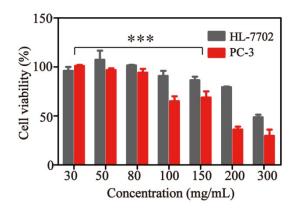


Figure S6. Cell viability of HL-7702 cells and PC-3 cells after incubated with LEPP for 24h (n=6).

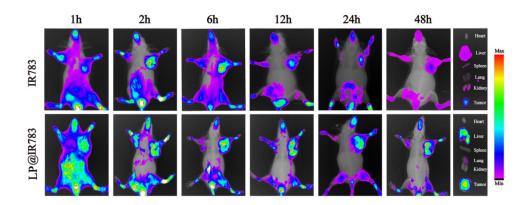
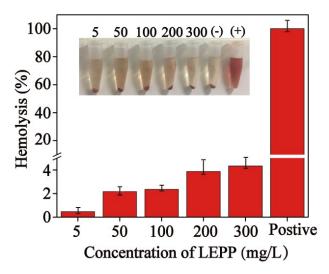


Figure S7. Representative fluorescence image in vivo optical images.



**Figure S8.** Hemolysis quantification analysis of red blood cells at various concentrations of LEPP (n=3).

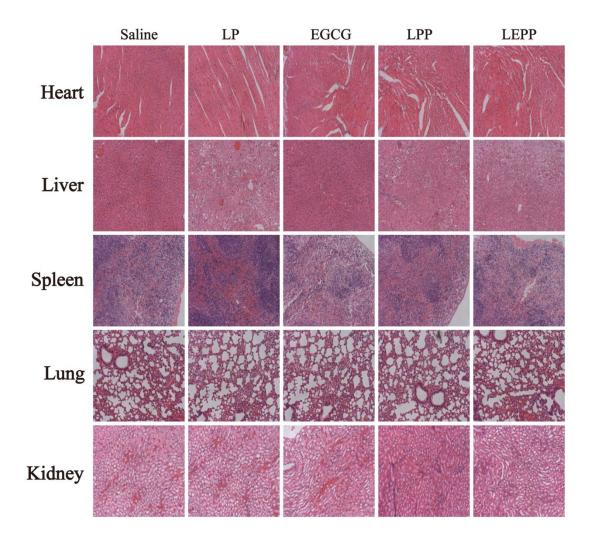


Figure S9. Histology analysis of major organs from mice separated with different group treatment.