Electronic supplementary information

Smart polymeric particles encapsulated gadolinium oxide and

europium: Theranostic probe for magnetic resonance/optical

imaging and antitumor drug delivery

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Fig. S1. ¹H-NMR spectrum of TPPs. ¹H NMR δ_H/ppm (600 MHz, DMSO-d6): 1.00 (-CH₃), 1.36 (-CH₂-), 1.87(-CH-), 3.78 (-NH-), 7.00-7.18(-Φ), 11.86(-COOH).



Fig. S2 Typical GPC curve of (a) TPPs and (b) PLTPPs.



Fig. S3 The D_h of the PLTPPs dialyzed against tris-buffer (0.01M) at 37 °C. The D_h are all exhibited as average values repeated for three times, and both of their polydispersity index (PDI) are lower than 0.1.



Fig. S4. Cell viability against H22 cells assessed by MTT assay.



Fig. S5. Antitumor activity of DOX-loaded PLTPPs against H22 cells *via* the cell viability assay with free DOX as the control.



Fig. S6. (a) T_1 -weighted SD rats MR images taken at time points of 0, 0.25, 0.5, 1, 2, 3, 6, and 9 h and (b) relative SI of liver and spleen.