Supporting Information

Rapid In Situ MRI Traceable Gel-forming Dual-drug Delivery for Synergistic Therapy of Brain Tumor

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Table S1. The state and time requirement of phase transition for hydrogel and hydrogel$_{Gd}$ incubated at various temperature. (x means the sol phase could not be transformed to gel phase; o means the sol phase could be transformed to gel phase at the temperature).
Figure S1. Reaction scheme for synthesis of amine-terminated CMC, and CMC-grafted PNIPAAmMA.
Figure S2. FTIR spectra of PNIPAAmMA, amine-terminated CMC, and CMC-g-PNIPAAmMA.
Figure S3. (A) DSC thermograms of hydrogel and hydrogel$_{Gd}$ in H$_2$O (20 wt%). (B) DSC thermograms of hydrogel and hydrogel$_{Gd}$ powders (containing 20 wt% of CMC-g-PNIPAAmMA).
Figure S4. Influence of temperature on the swelling of hydrogel and hydrogel_{Gd}.
Figure S5. (A) TEM images of BSA NPs (left) and BSA/PTX NPs (right). (B) FTIR spectra of PTX, BSA NPs, and BSA/PTX NPs.
Figure S6. SEM of hydrogel\textsubscript{Cd} before and after 7- and 14-day of incubation in PBS (pH 5.6) at 37°C.
Figure S7. (A) Hemolytic test of DI-water and hydrogel\textsubscript{Gd} at different concentrations (2.4, 6.0, 12.0, and 24.0 wt\% of CMC-g-PNIPAAmMA). Values are means ± SD (n = 3). (B) Photographs of haemolytic test while blood mixed with PBS, DI-water, and hydrogel\textsubscript{Gd} at different concentrations.
Figure S8. Cytotoxicity of BSA NPs at different concentrations towards to MBR 614 tumor cells. Values are means ± SD (n = 8).
Figure S9. (A) Body weight curves of mice bearing MBR 641-2 tumors after various treatments. Values are the means ± S.D. (n = 6). (B) Body weight curves of mice bearing U87 tumors after various treatments. Values are the means ± S.D. (n = 6).
Figure S10. Photographs of representative mice bearing MBR 614 tumors at the initial point (before treatment) to the end point (tumor volume > 3000 mm$^3$) for (a) control, (b) free EPI, (c) BSA NPs-incorporated hydrogel$_{Gd}$ implantation, (d) BSA/PTX NPs incorporated hydrogel$_{Gd}$/EPI implantation groups.