Supporting Information

GSH-activatable Camptothecin Prodrug-loaded Gold Nanostar Coated with Hyaluronic Acid for Targeted Breast Cancer Therapy via Multiple Radiosensitization Strategies

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Figure S1. The synthetic process of prodrug CPT-SS-FL.



Figure S2. The ¹H NMR of 3 in CDCl₃.



Figure S3. The ¹H NMR of 5 in CD₃OD.



Figure S4. The ¹H NMR of CPT-SS-FL in CDCl₃.



Figure S5. The ¹³C NMR of CPT-SS-FL in CDCl₃.



Figure S6. The ESI-MS spectra of CPT-SS-FL.



Figure S7. The photograph of the stability of **AS** (A) and (B) **ASH** in water, PBS, DMEM, and DMEM+10% FBS for 12 h.



Figure S8. Energetic contributions of key residues in Topotecan (a)/CPT (b)/CPT-SS-FL (c)—Topo I isomerase complex.



Figure S9. The GSH-mediated disulfide bond cleavage for CPT-SS-FL.



Figure S10. The FL was released from AS (CPT-SS-FL = 2.5μ M) at a different time in the presence of GSH.



Figure S11. The hemolytic activity of ASH.



Figure S12. The CLSM images of HIF-1 α protein expression in tumor tissue after different treatments. (scale bar = 50 μ m).



Figure S13. The CLSM images of γ -H2AX protein expression in tumor tissue after different treatments. (scale bar = 50 μ m)



Figure S14. The CLSM images of CRT exposure in tumor tissue after different treatments. (scale

bar = 50 μ m).



Figure S15. The CLSM images of HMGB1 release in tumor tissue after different treatments. (scale $bar = 50 \ \mu m$).