

Supporting information

Release of photoactivatable drugs from plasmonic nanoparticles for targeted cancer therapy

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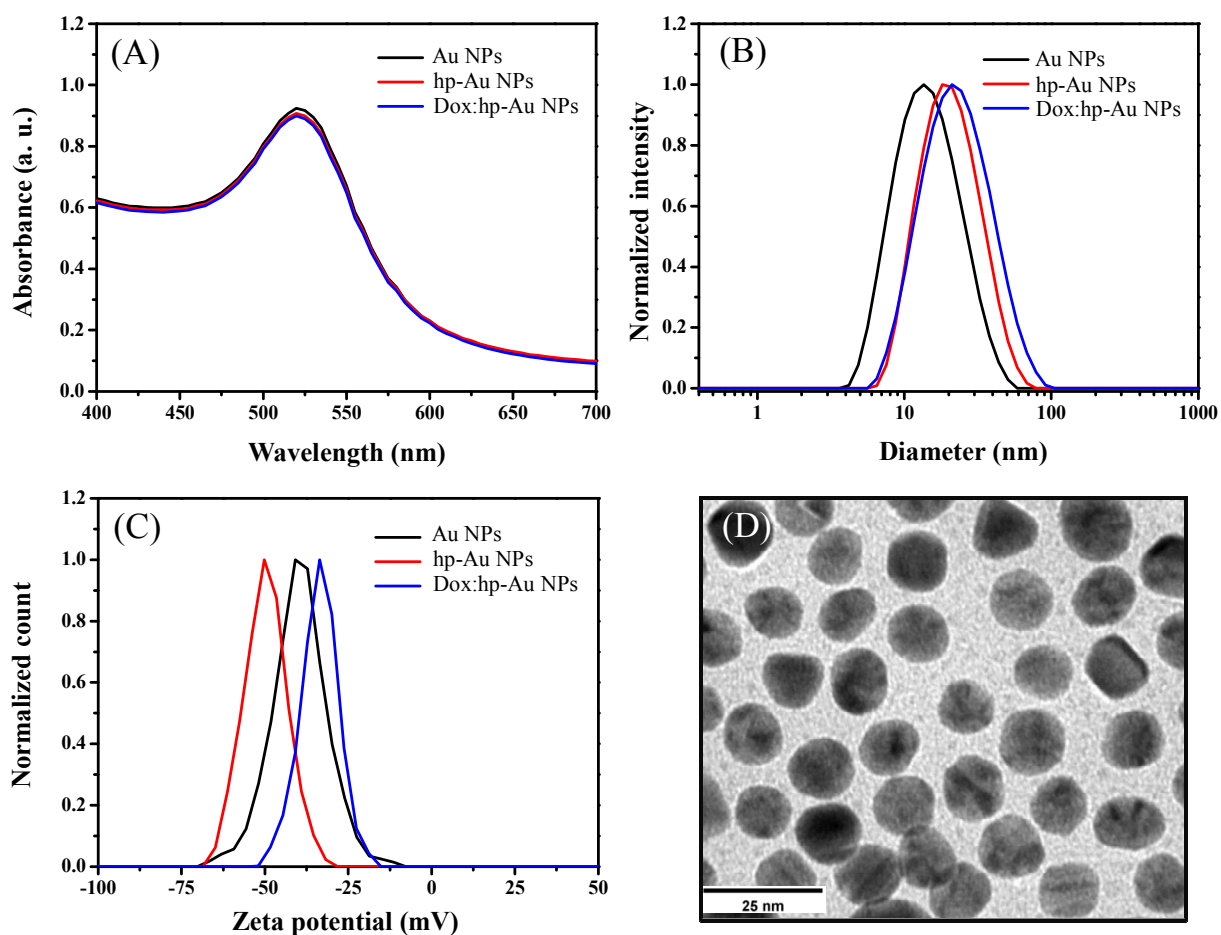


Figure S1. (A) UV-Vis absorption spectra, (B) hydrodynamic size distribution, and (C) zeta potential of citrate-stabilized Au NPs, hp-Au NPs, and Dox-loaded hp-Au NPs, respectively. Except for citrate-stabilized Au NPs, the other conjugates were prepared in DPBS buffer: 9.6 mM phosphate buffer, 136.8 mM NaCl, 4.2 mM KCl, pH 7.4. (D) TEM image of the as-prepared Au NPs.

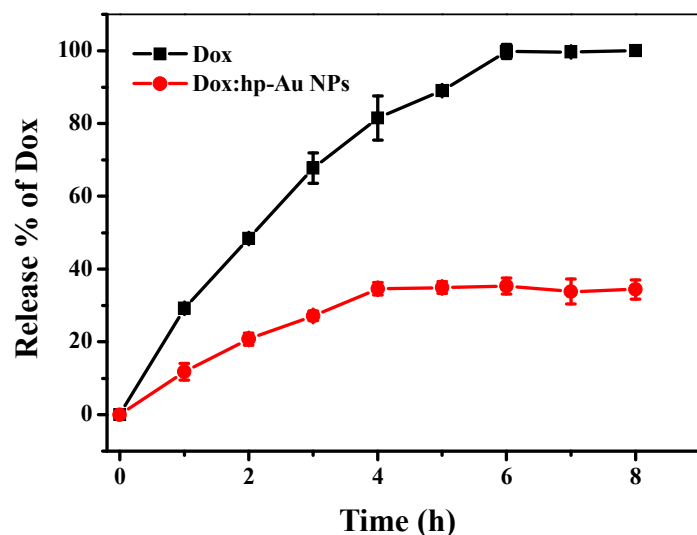


Figure S2. Time-dependent release profile of Dox from Dox-loaded hp-Au NP conjugates. The fluorescence signals of Dox were monitored at 590 nm. Buffer: 1% BSA in 10 mM phosphate buffer, 100 mM NaCl, pH 7.4.

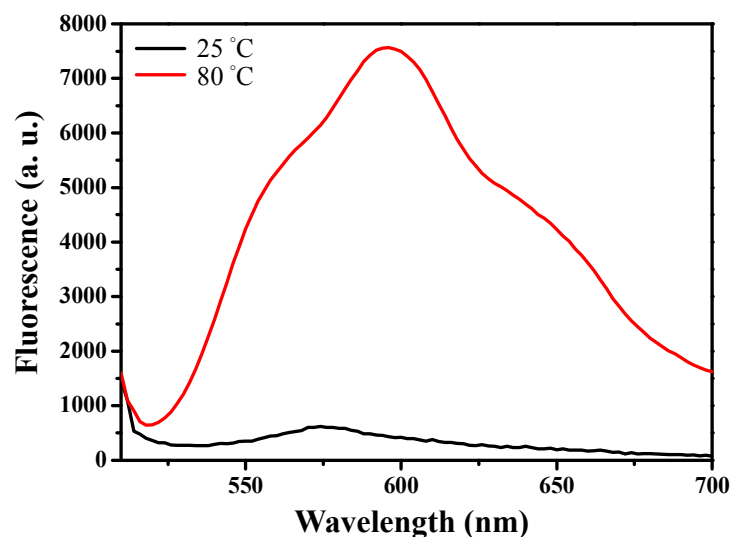


Figure S3. Thermal-induced Dox release from Dox-loaded hpDNA-modified Au NP conjugates. A solution of Dox:hp-Au NP conjugates was immersed in a thermal bath at 25 and 80°C for 10 min, respectively. The fluorescence signals of released Dox in the supernatant were determined after centrifuging down the nanoconjugates. Buffer: DPBS, 9.6 mM phosphate buffer, 136.8 mM NaCl, 4.2 mM KCl, pH 7.4

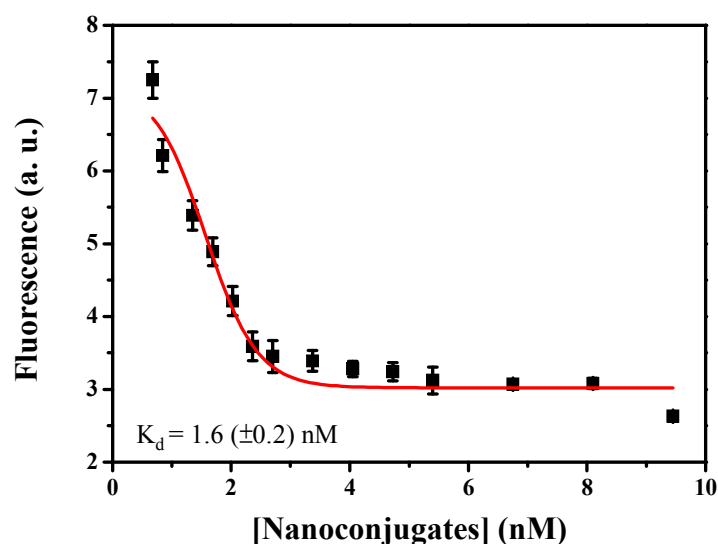


Figure S4. Flow cytometry to determine the binding affinity of sgc8c/hp-Au NPs to CCRF-CEM cells. The fluorescence is derived from the second stain of cells by fluorescein-labeled sgc8c.

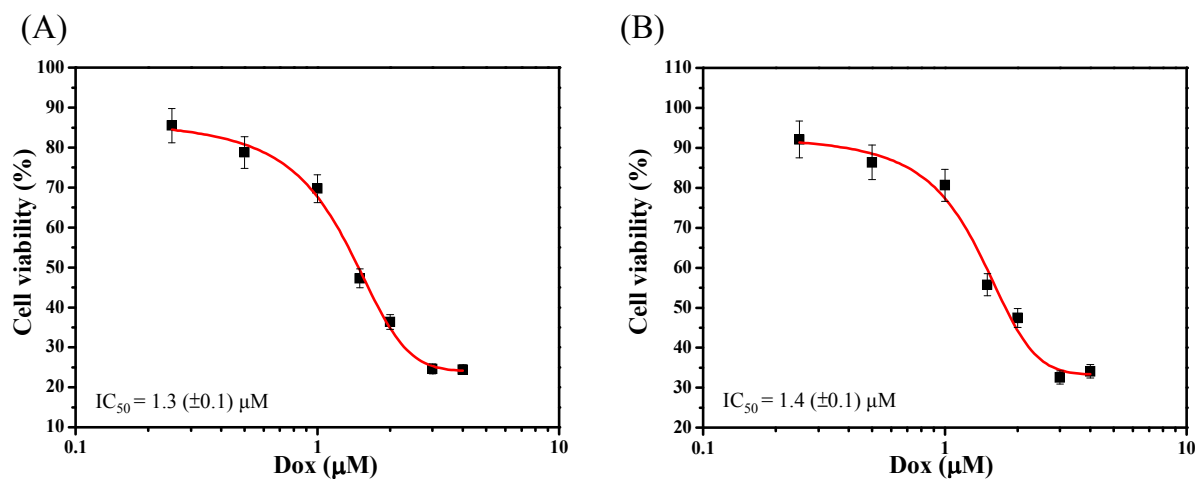


Figure S5. Dose–response curves of (A) free Dox and (B) Dox:sgc8c/hp-Au NPs toward CCRF-CEM (target) cells. Points and error bars represent the mean \pm SD for each drug concentration studied. The line represents the model fit to the data. Each experiment was repeated three times.

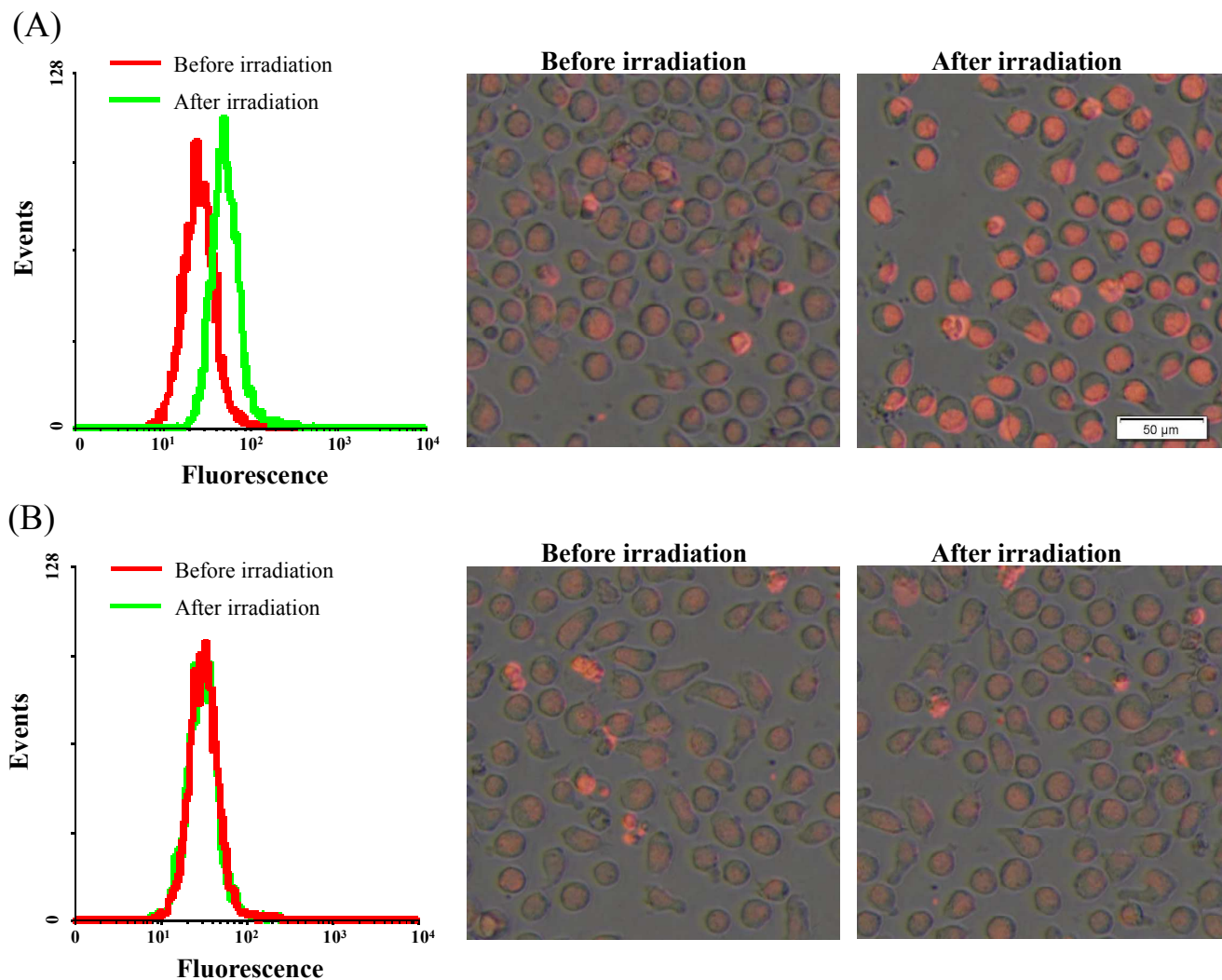


Figure S6. Light-induced Dox release. Flow cytometry histograms and microscopic images display the fluorescence signals of (A) free Dox, and (B) Dox:sgc8c/hp-Au NPs inside CCRF-CEM cells at 2 h. Treated cells were then exposed to a green laser at 532 nm (2.0 W/cm^2) for 10 min. The picture is an overlay image of fluorescence and bright field channels.