

Supporting Information

Reaction between Graphene Oxide and Intracellular Glutathione Affects Cell Viability and Proliferation

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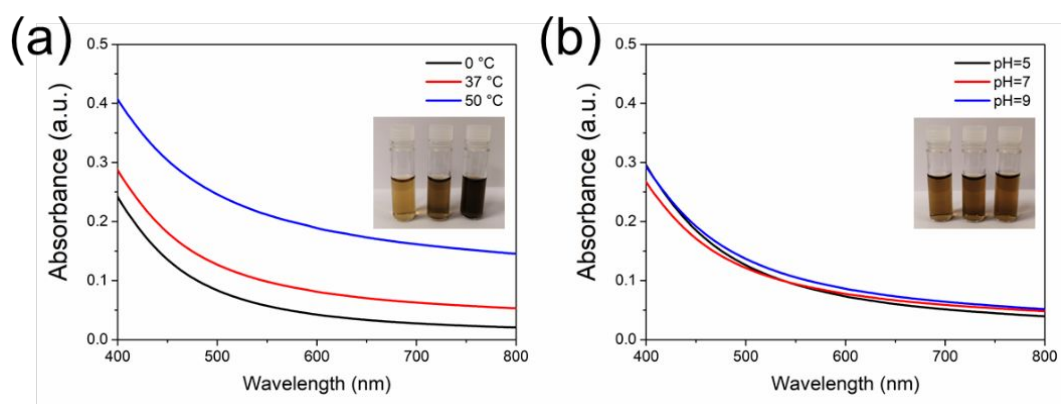


Figure S1. Color and absorbance changes of GO after reaction with GSH at different conditions. (a)

Different temperature after 3 h (pH=5). (b) Different pH after 3 h (T=37 °C).

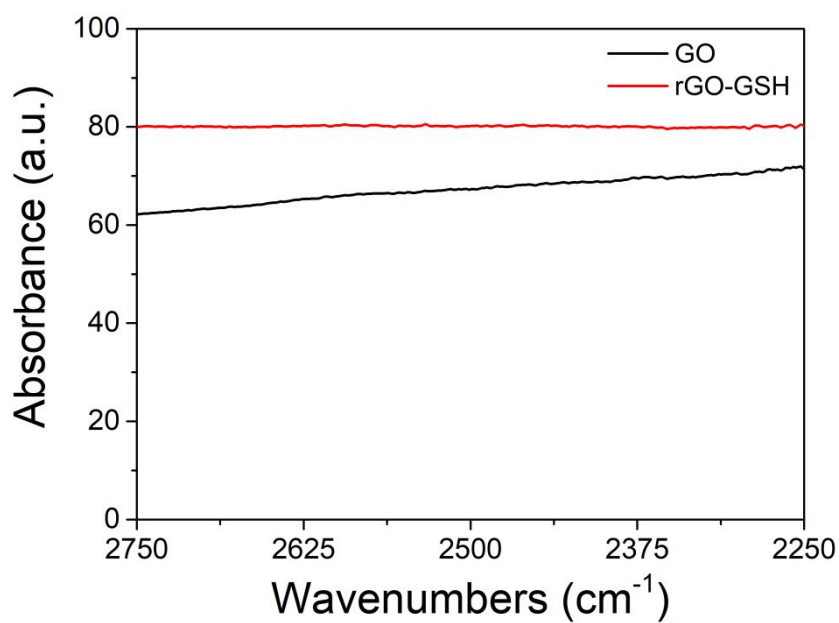


Figure S2. The magnification region of FT-IR spectra of GO and rGO-GSH to show the location of stretching band of thiol groups.

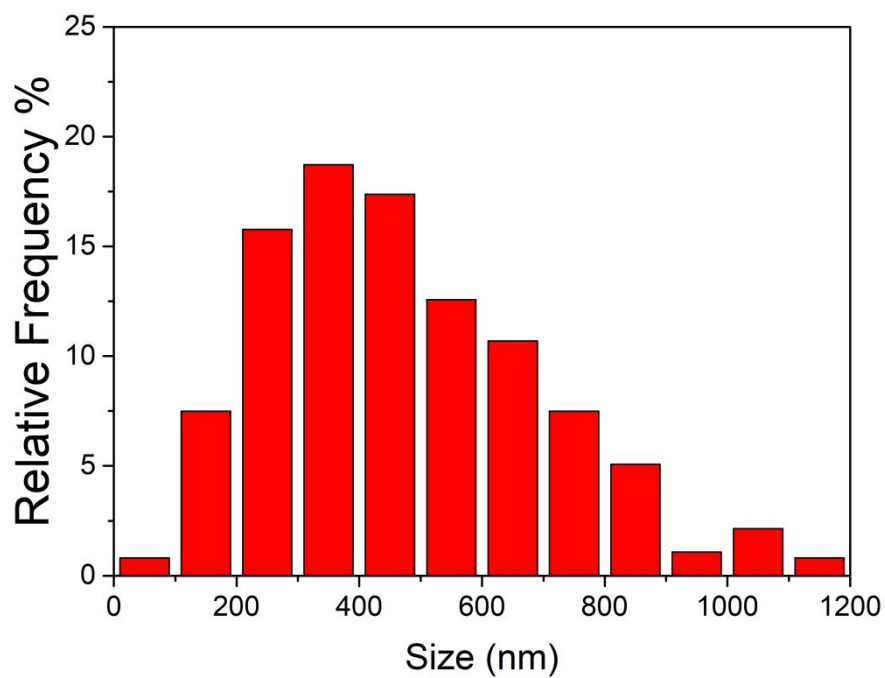


Figure S3. The size distribution of GO.

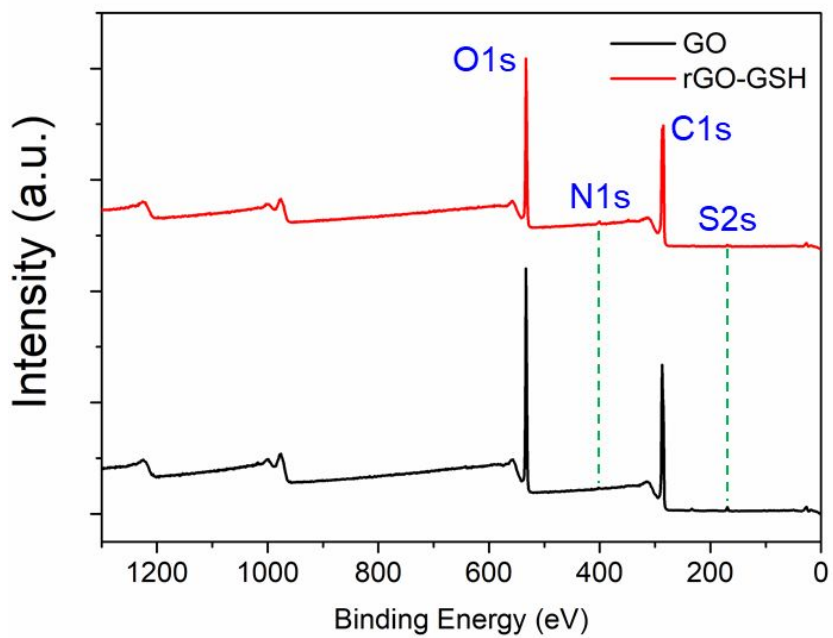


Figure S4. XPS survey spectra of GO and rGO-GSH.

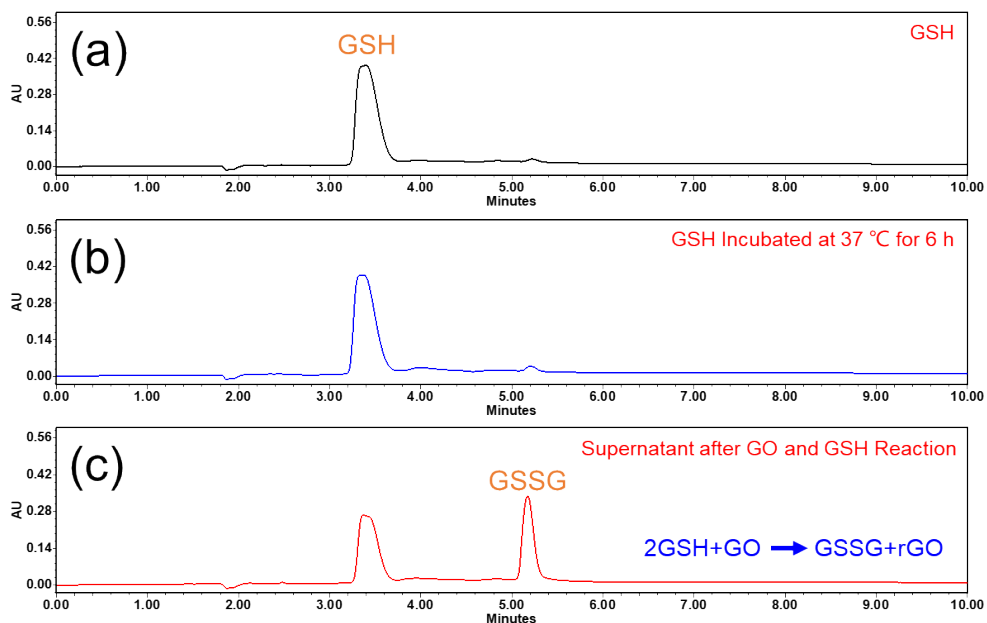


Figure S5. HPLC analysis of reaction products from supernatant. (a) GSH. (b) GSH incubated at 37 °C for 6 h. (c) Supernatant after GO and GSH reaction at 37 °C for 6 h.

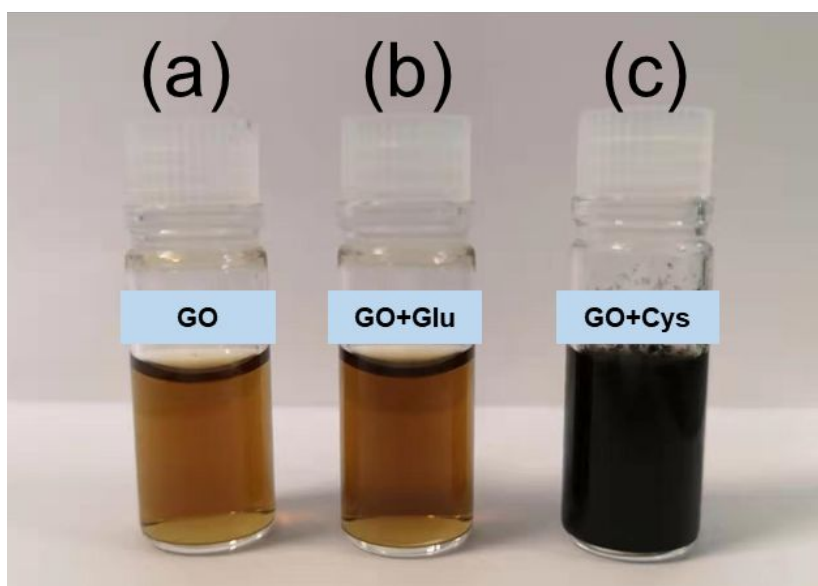


Figure S6. Optical images GO after reaction with glutamate or cysteine, respectively. (a) GO solution. (b) GO mixed with glutamate. (c) GO mixed with cysteine.

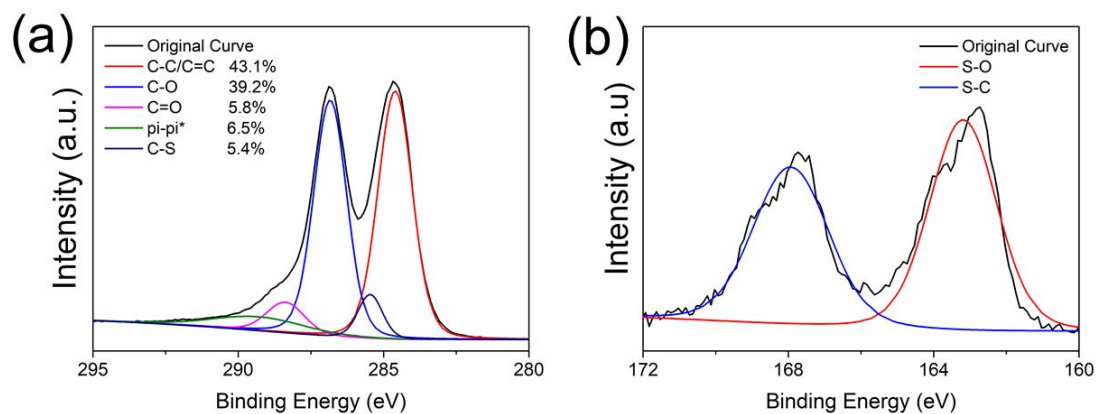


Figure S7. High resolution XPS spectra of rGO after reacted with cysteine. (a) High-resolution C1s. (b)

High-resolution S2p.

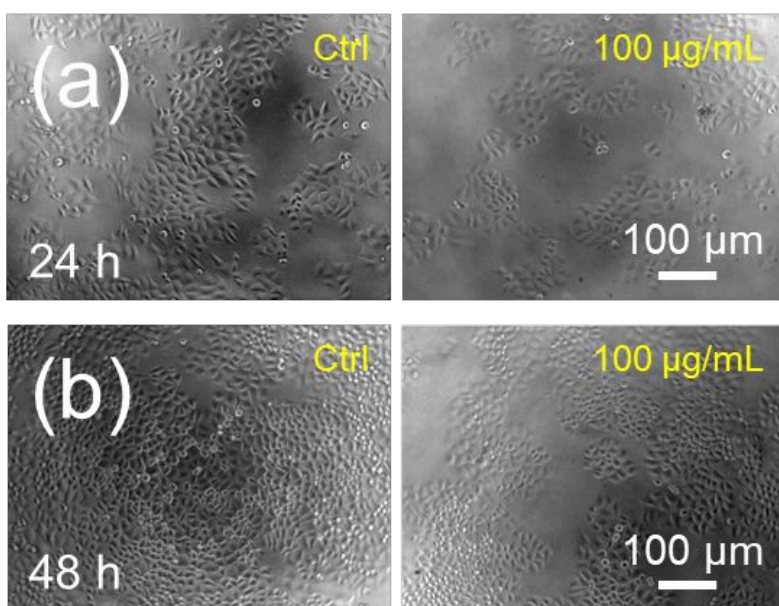


Figure S8. Bright field images of HeLa cells under 100 µg/mL concentration of GO after 24 h (a) and 48 h

(b), respectively.

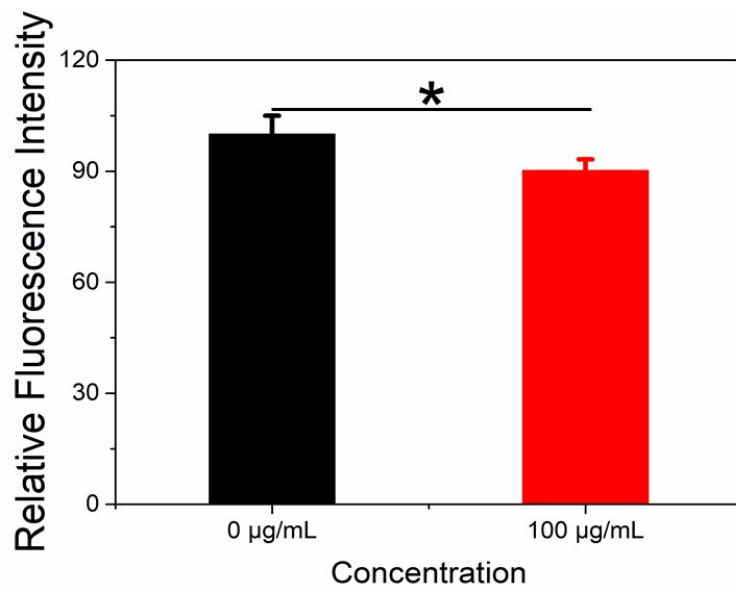


Figure S9. The relative fluorescence intensity of live cells.

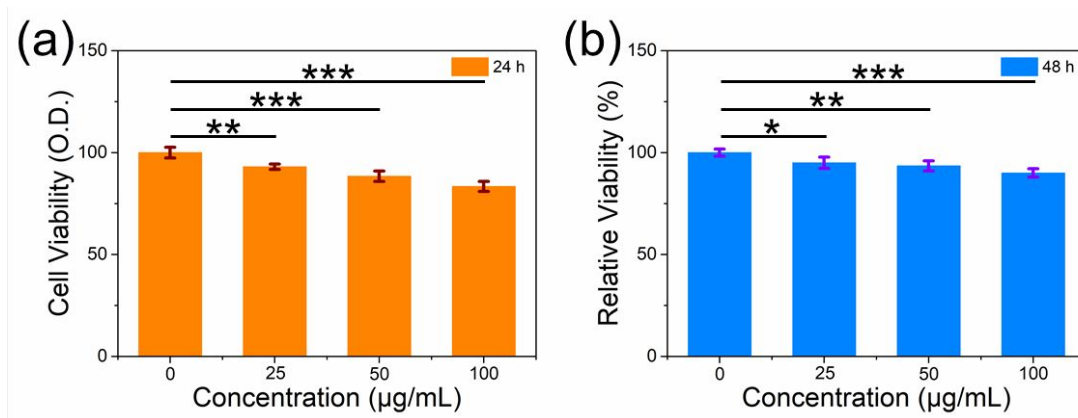


Figure S10. Viability of MCF-7 cells treated with GO at different concentrations after 24 h (a) and 48 h (b).

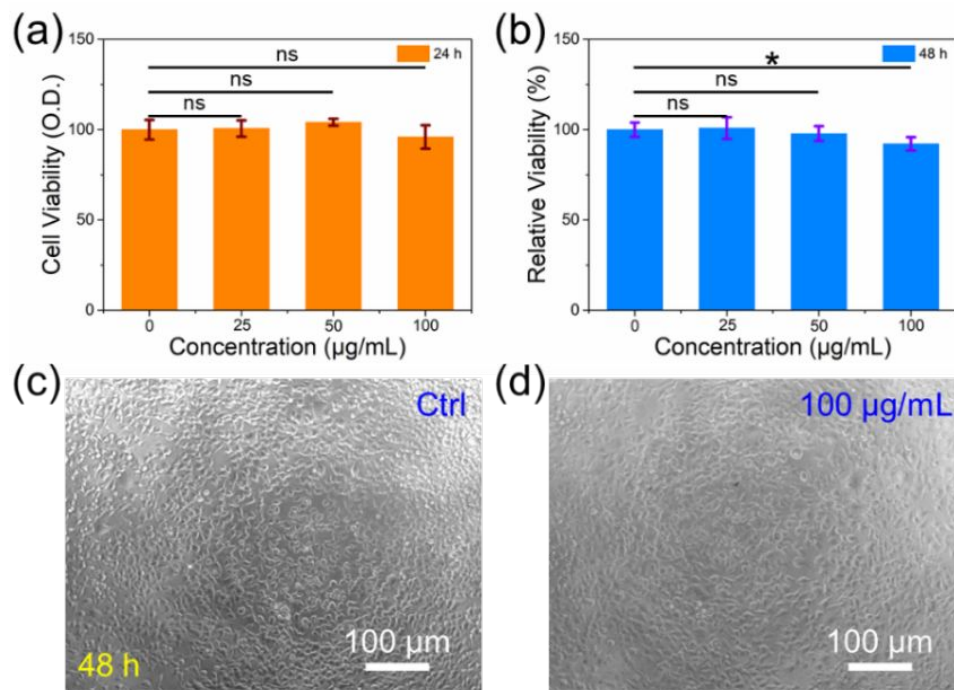


Figure S11. Viability of HaCaT cells treated with GO at different concentrations after 24 h (a) and 48 h (b).

(c) and (d) Bright field images of HaCaT cells treated with or without GO after 48 h.