

## Supporting Information (SI)

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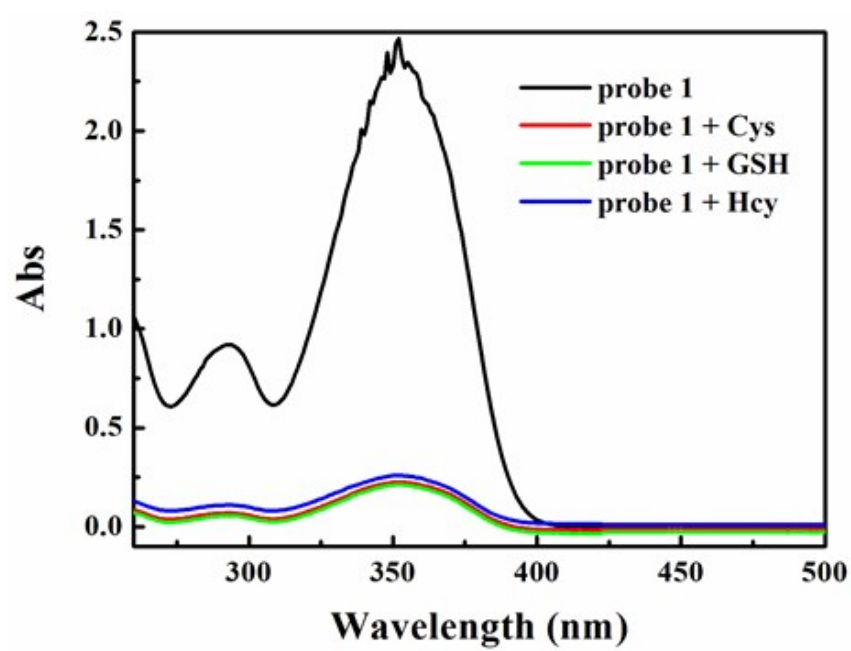
**Figure S1:** UV-vis absorption spectra of probe 1 towards GSH, Hcy

**Figure S2:** Fluorescence spectra of probe 1 (50.0  $\mu\text{M}$ ) coexistence with various concentrations of GSH and Hcy in PBS (10 mM, pH 7.4) solution ( $\lambda_{\text{ex}} = 350 \text{ nm}$ , Ex/Em slit: 5.0/10.0 nm) at 25  $^{\circ}\text{C}$ , and each curve was obtained after 180 s.

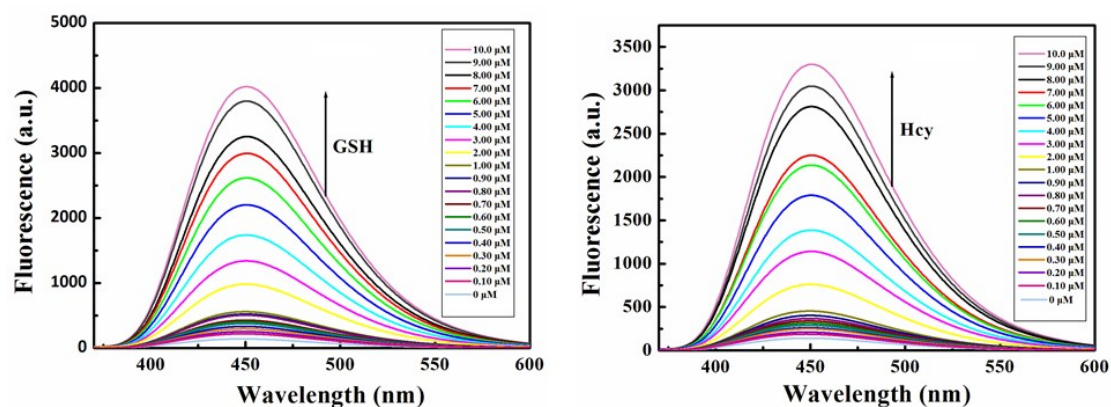
**Figure S3:** The linearity of the relative fluorescence intensity versus GSH and Hcy concentration.

**Figure S4:**  $^1\text{H}$  NMR spectra of the probe 1-Cys adduct

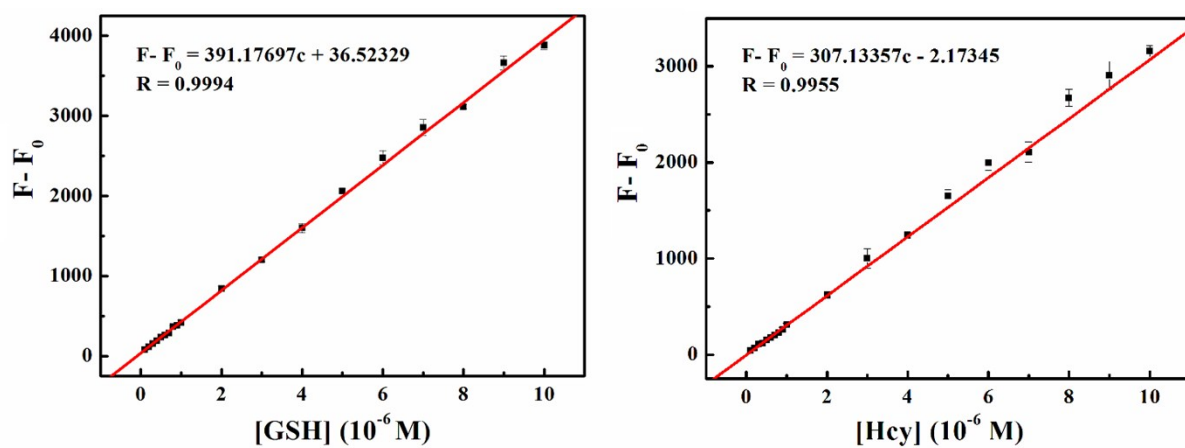
**Figure S5:** Mass spectrum of the probe 1-Cys adduct



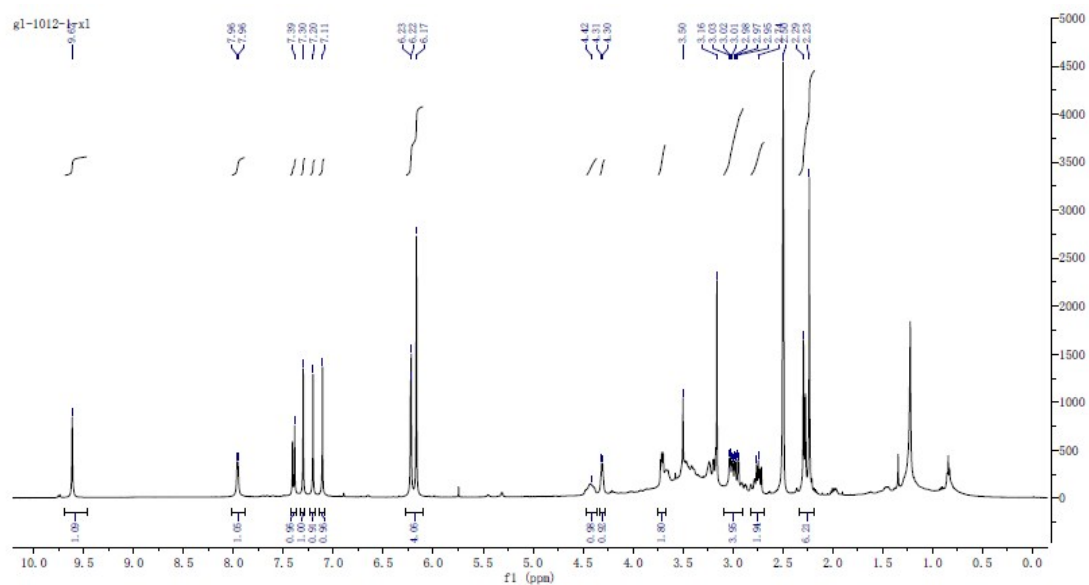
**Figure S1:** UV-vis absorption spectra of probe 1 towards Cys, GSH and Hcy.



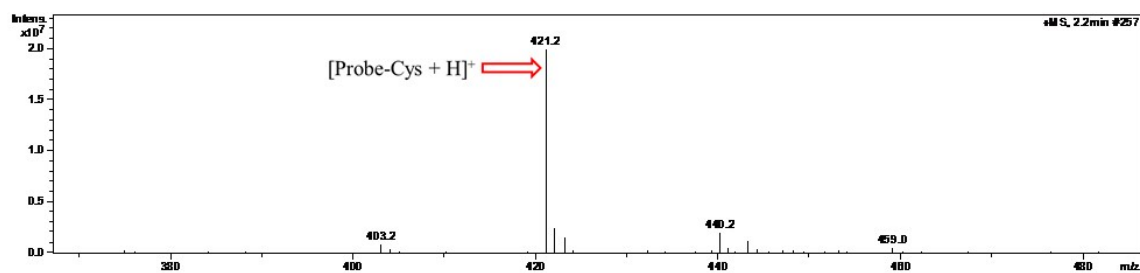
**Figure S2:** Fluorescence spectra of probe 1 (50.0  $\mu\text{M}$ ) coexistence with various concentrations of GSH and Hcy in PBS (10 mM, pH 7.4) solution ( $\lambda_{\text{ex}} = 350$  nm, Ex/Em slit: 5.0/10.0 nm) at 25  $^{\circ}\text{C}$ , and each curve was obtained after 180 s.



**Figure S3:** The linearity of the relative fluorescence intensity versus GSH and Hcy concentration.



**Figure S4:**  $^1\text{H}$  NMR spectra of the probe 1-Cys adduct  
 $^1\text{H}$  NMR (DMSO- $d_6$ , 500 MHz, ppm)  $\delta$  9.62 (s, 1H), 7.96 (s, 1H), 7.39 (s, 1H), 7.30 (s, 1H), 7.20 (s, 1H), 7.11 (s, 1H), 6.20 (m, 4H), 4.42 (m, 1H), 4.31 (s, 1H), 3.72-3.65 (m, 2H), 3.03-2.95 (m, 4H), 2.74 (m, 2H), 2.26 (m, 6H).



**Figure S5:** MS spectra of the probe 1-Cys adduct.

MS m/z caclcd. for  $C_{18}H_{16}N_2O_8S$   $[M+H]^+$ : 421.1, found: 421.2.