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NBD-based Fluorescent Chemosensor for the Selective Quantification of Copper and Sulfide in Aqueous Solution and Living Cells

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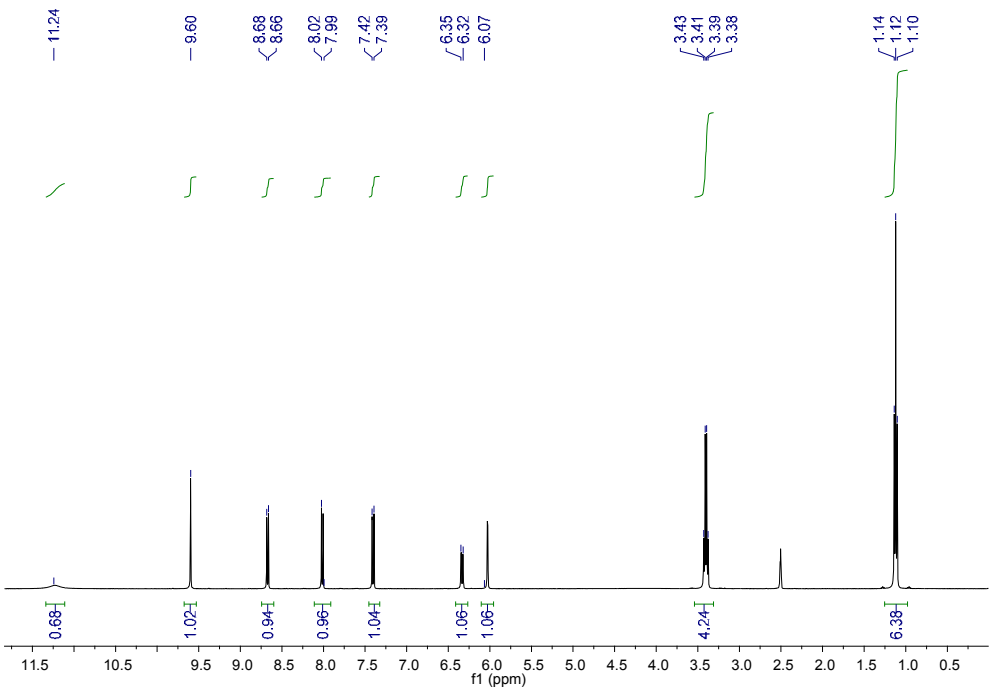

Fig. S1 ^{1}H-NMR of **NL** (DMSO-d_6)

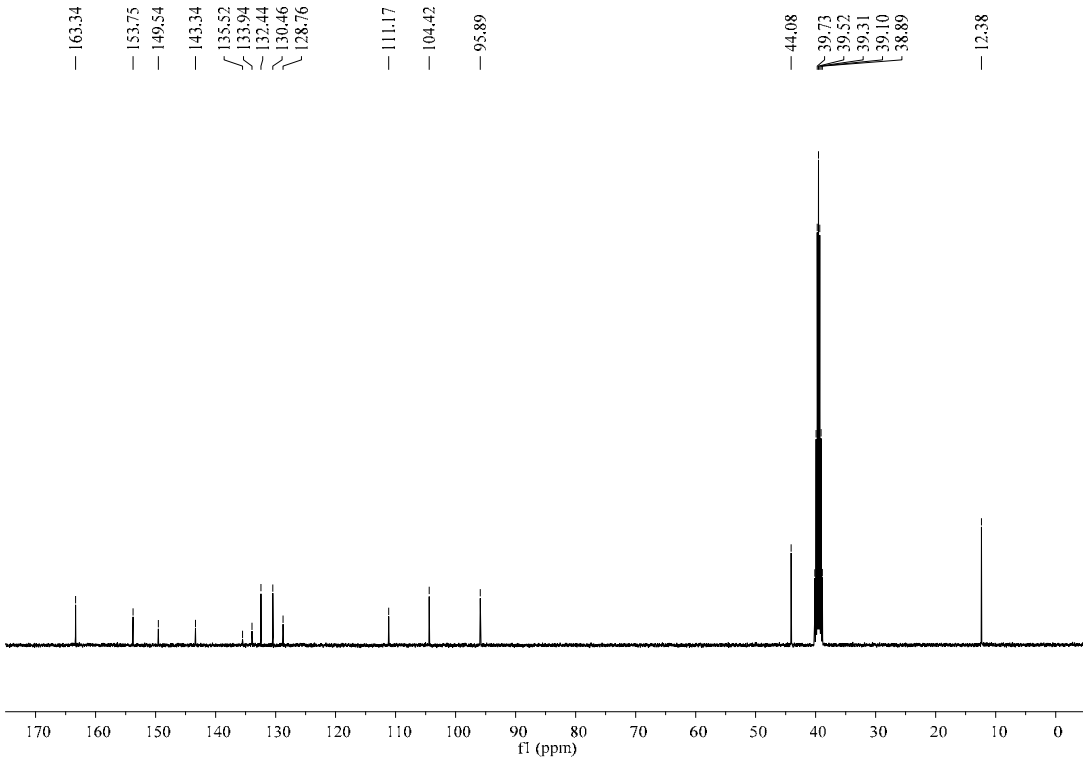

Fig. S2 ^{13}C-NMR of **NL** (DMSO-d_6)

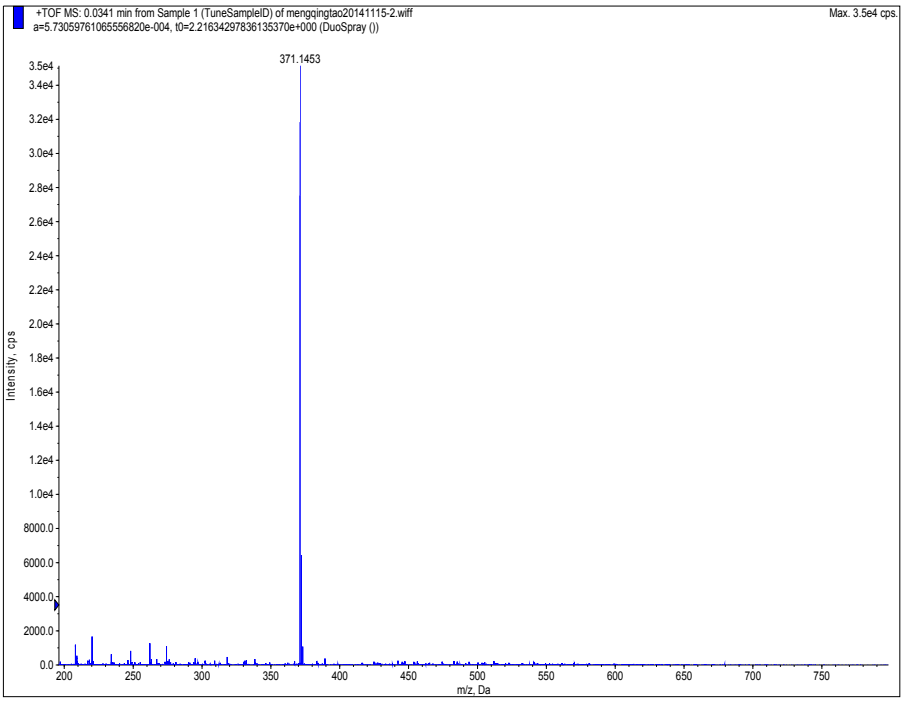

Fig. S3 High resolution TOF-MS of **NL**

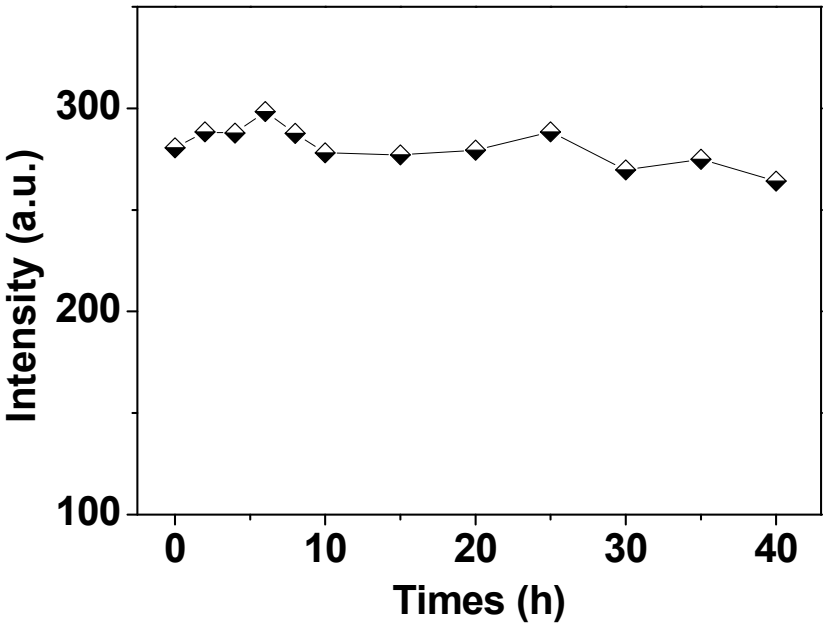

Fig. S4 Time-dependent fluorescence changes of NL in HEPES aqueous buffer (THF: H_2O = 3:7, 20 mM, pH = 7.4). Excitation at 430 nm.

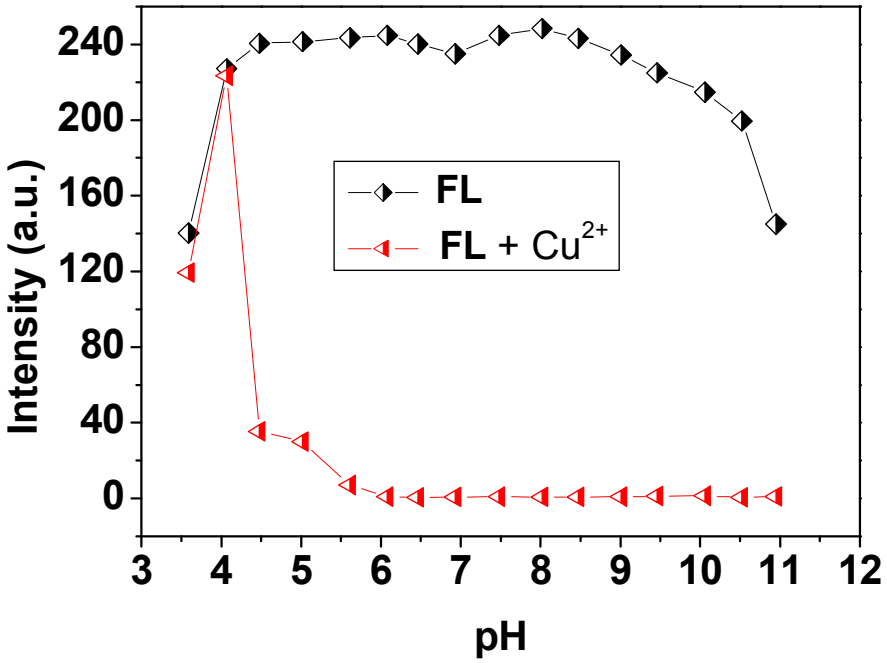

Fig. S5 Variations of fluorescence intensity at 519 nm of **NL** (10 μM) in aqueous solution with (bottom) and without (up) Cu^{2+} (0–20 μM) as a function of pH. Excitation at 430 nm.

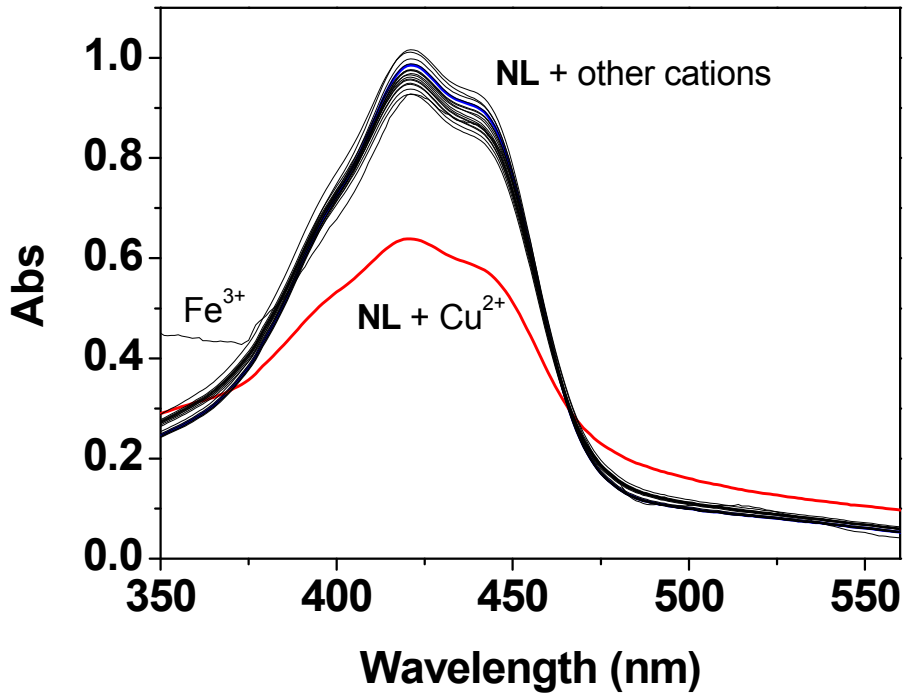

Fig. S6 Absorption spectra of **NL** (10 μM) in HEPES aqueous buffer (THF: H_2O = 3:7, 20 mM, pH = 7.4) upon addition of various metal ions (20 μM).

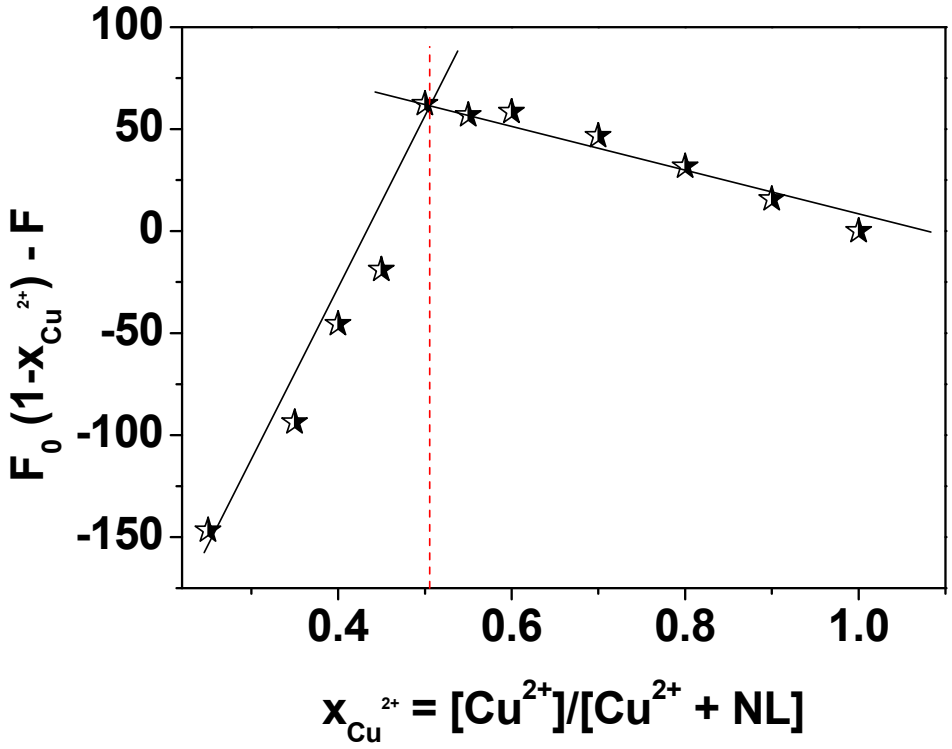

Fig. S7. The Job's plot of **NL** toward Cu^{2+}.

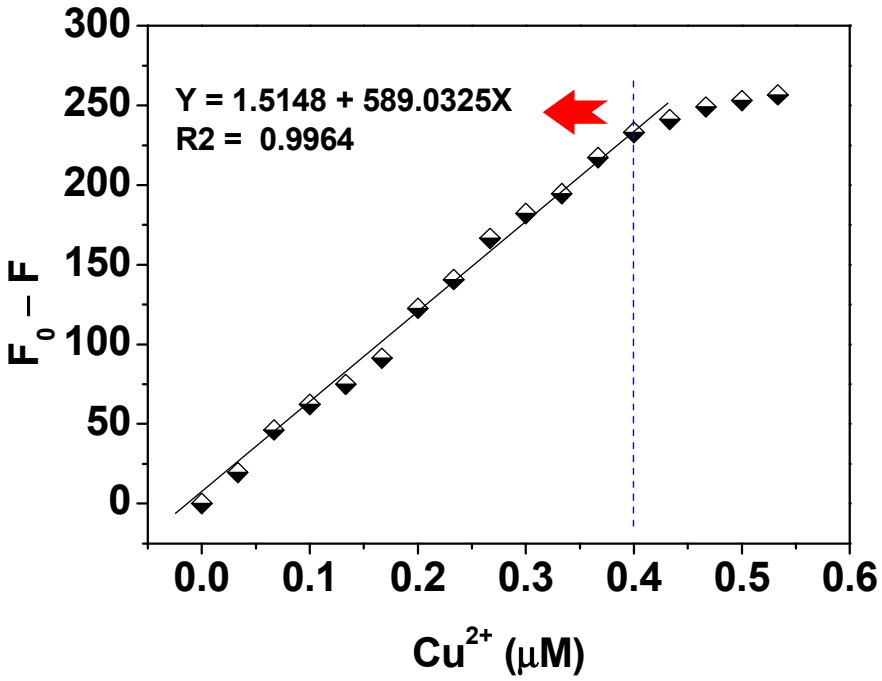

Fig. S8 Linear relationship between fluorescence intensity of **NL** (1 μM) at 519 nm versus the concentration of Cu^{2+} in HEPES buffer (THF: H_2O = 3:7, 20 mM, pH = 7.4). Excitation at 430 nm.

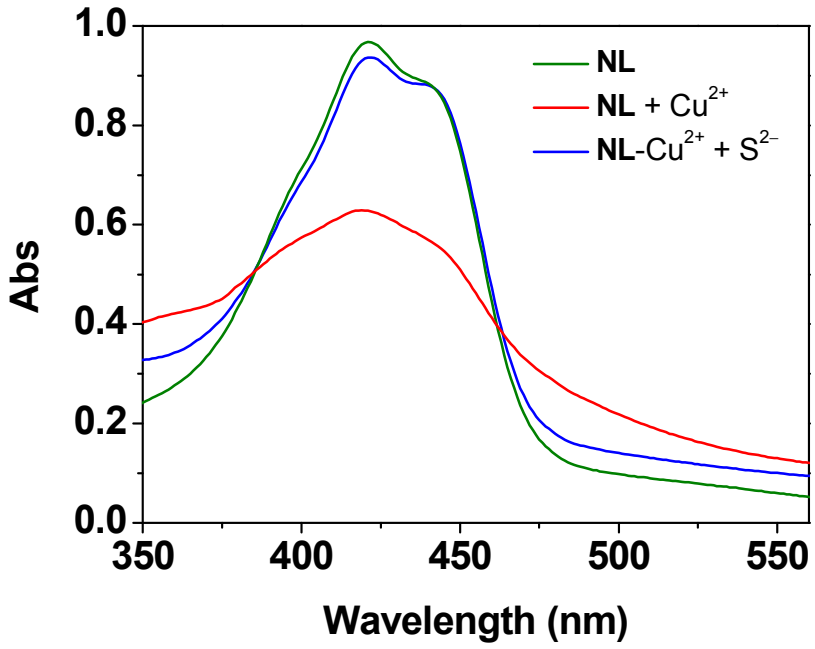

Fig. S9 UV-vis spectra of **NL** (10 μM) sequential in the presence of Cu^{2+} (20 μM) and S^{2-} (20 μM) in HEPES aqueous buffer (THF: H_2O = 3:7, 20 mM, pH = 7.4).

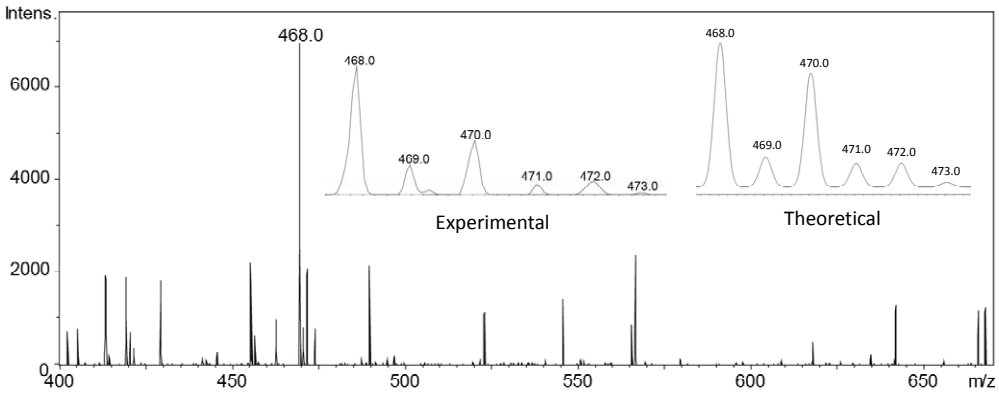

Figure S10 ESI-mass spectra of **NL**-Cu^{2+} ensemble

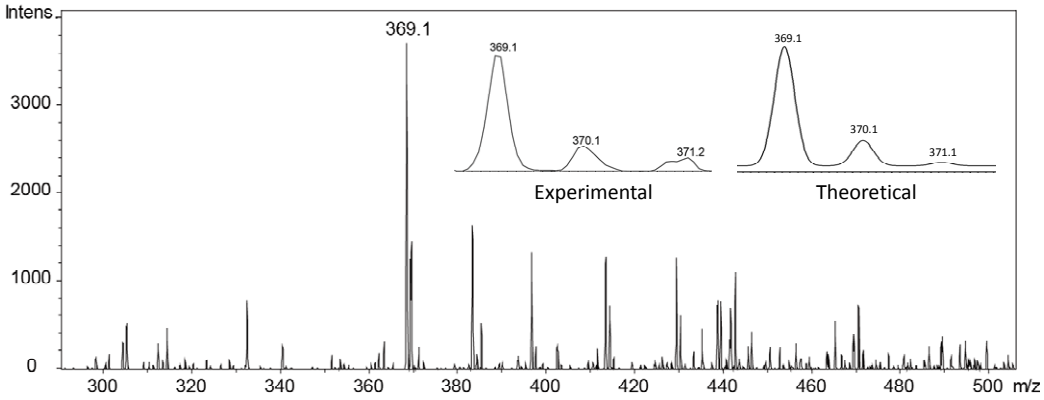

Figure S11 ESI-mass spectra of **NL**-Cu^{2+} ensemble in the presence of S^{2-}.

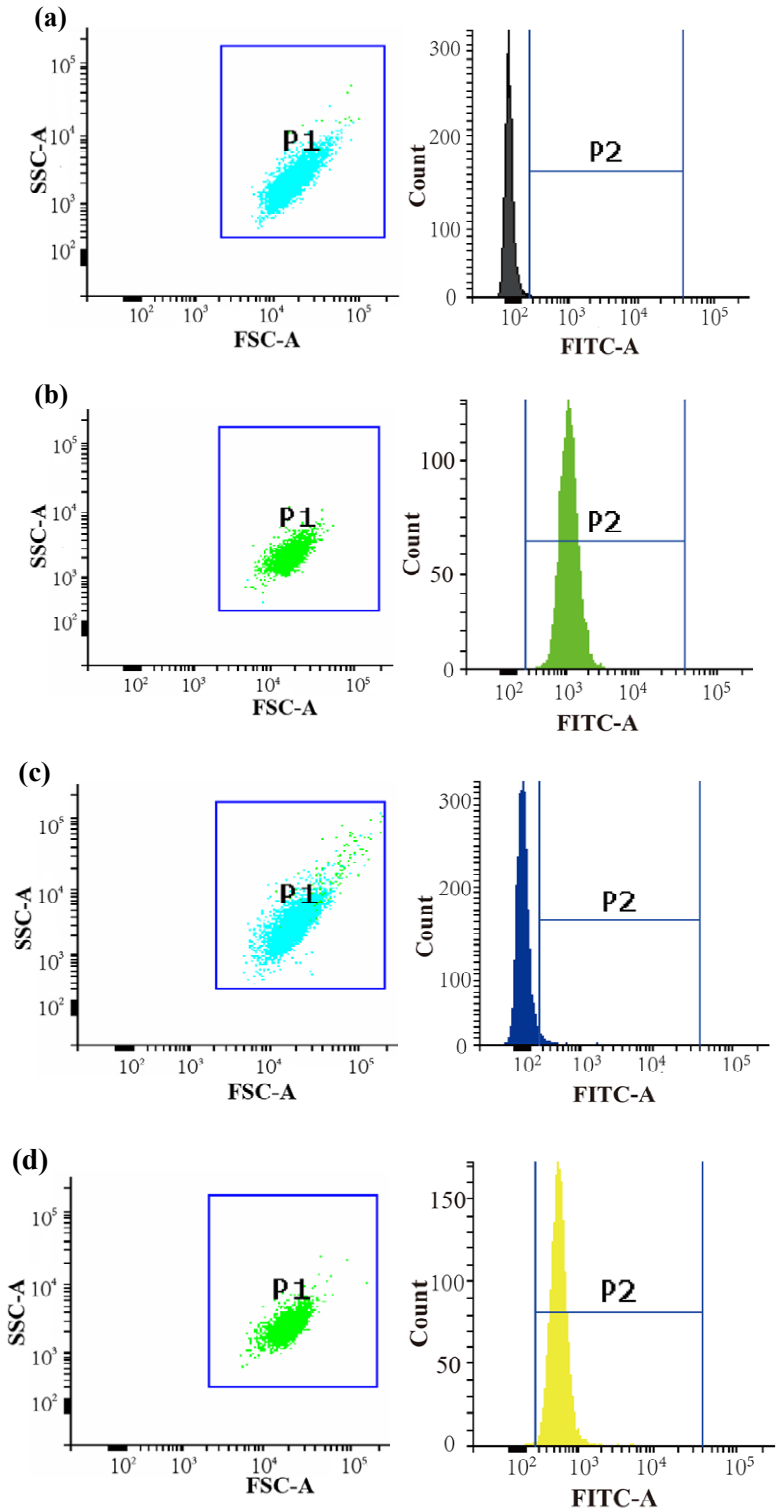

Fig. S12 Flow cytometric analysis of MDA-MB-231 cells stained with **NL** and its fluorescent response to Cu^{2+} and S^{2-}. (a) Control group: MDA-MB-231 cells only, (b) cells stained with 10 μM **NL** for 20 min, (c) **NL** stained cells treated with 20 μM Cu^{2+} for 15 min, (d) then incubated with 40 μM S^{2-} for another 30 min.