Electronic Supplementary Material (ESI) for Journal of Materials Chemistry B.

Supporting Information for

A Lysosome-targeted and Ratiometric Fluorescent Probe for Imaging Exogenous and Endogenous Hypochlorous Acid in Living Cells

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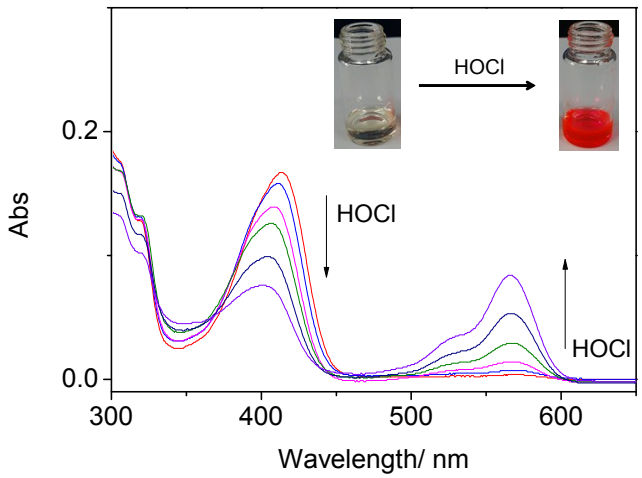

Figure S1 The absorption spectral changes of **Lyso-HA** (10 μM) upon addition of increasing concentrations of HOCl (0-10 equiv) in PBS buffer, pH 5.0, containing 30 % DMF as a cosolvent. Inset: Photographs showing the color changes of the probe Lyso-HA (1 mM) before and after addition of 10 equiv. HOCl to the solution.

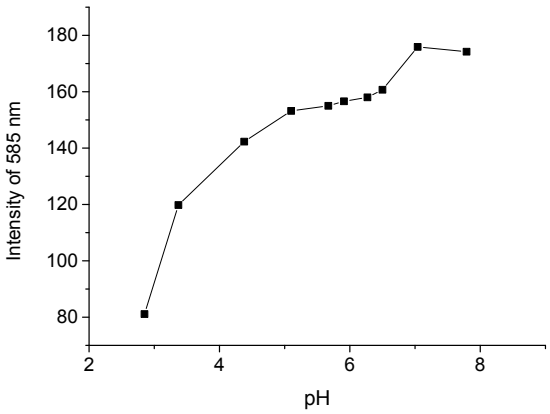

Figure S2 The emission intensity changes (at 585 nm) of **SP** at different pH PBS buffer, containing 30 % DMF as a cosolvent (λ_{ex} = 420 nm).

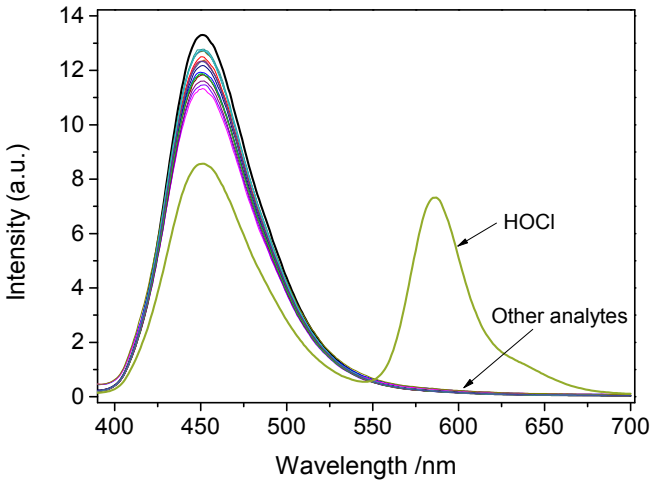

Figure S3 The fluorescence responses of the probe **Lyso-HA** (5.0 μM) to various relevant species (100 μM) in pH 5.0, PBS buffer (30 % DMF)

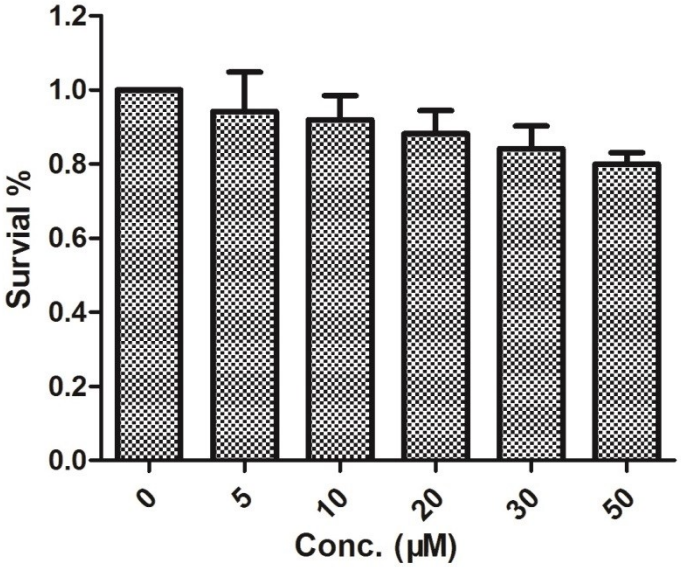

Figure S4 Cytotoxicity assays of **Lyso-HA** at different concentrations (0 μM; 5 μM; 10 μM; 20 μM; 30 μM; 50 μM) for HeLa cells.

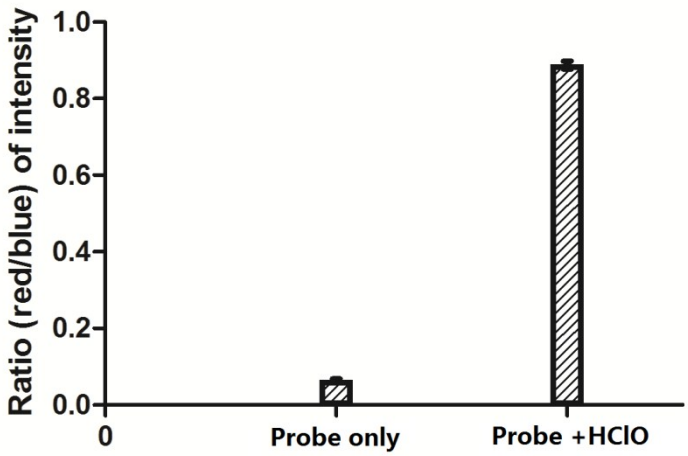

Figure S5 Quantified relative fluorescence intensity ratio of I_{red}/I_{blue} images analyzed using Nikon NIS Element software and presented as mean ± s.d, n = 3.

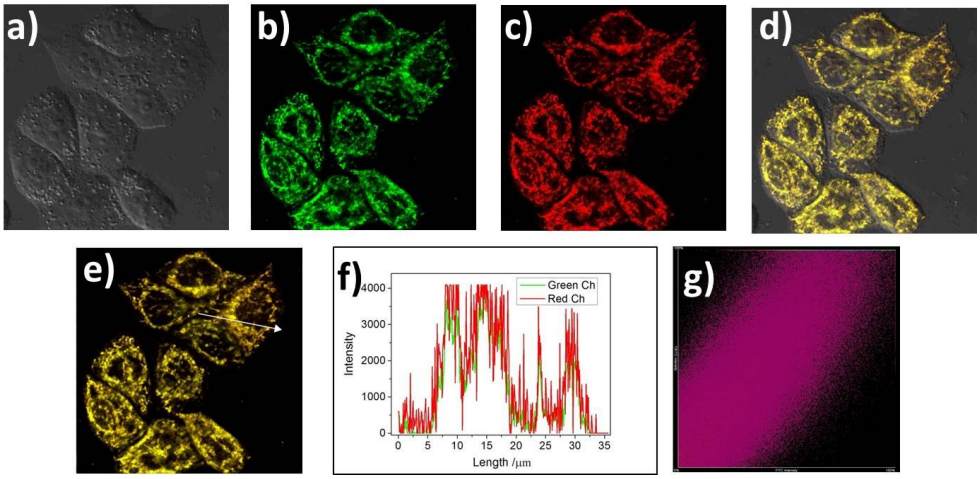

Figure S6 Brightfield and fluorescence images of HeLa cells stained with the probe **Lyso-HA** and LysoTracker Greeen. a) brightfield image; b) from green channel (lysosomes staining); c) from the red channel; d) overlay of brighfield, green and red channels; e) overlay of green and red channels; f) Intensity profile of linear region of interest across in the HeLa cell costained with LysoTracker Green and Red channel of **Lyso-HA** imaging of HOCl; g) Intensity scatter plot of green and red channels.

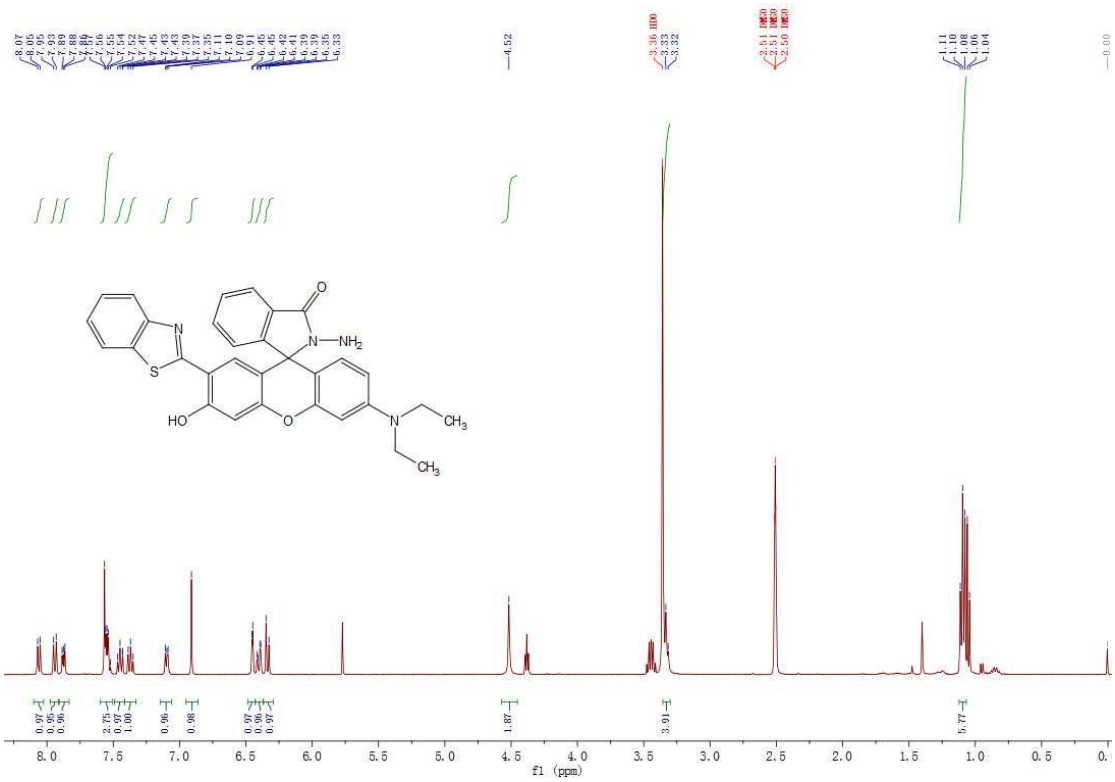

Figure S7 ^{1}H-NMR (DMSO-d_6) spectrum of compound **3**

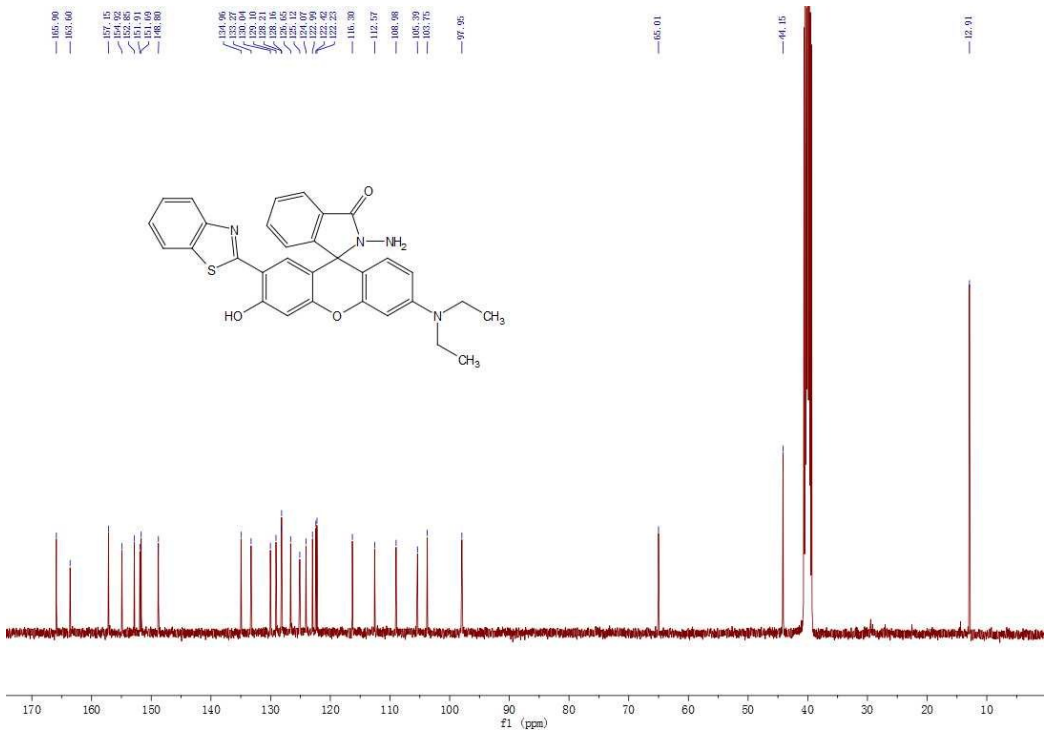

Figure S8 ^{13}C-NMR (DMSO-d_6) spectrum of compound **3**

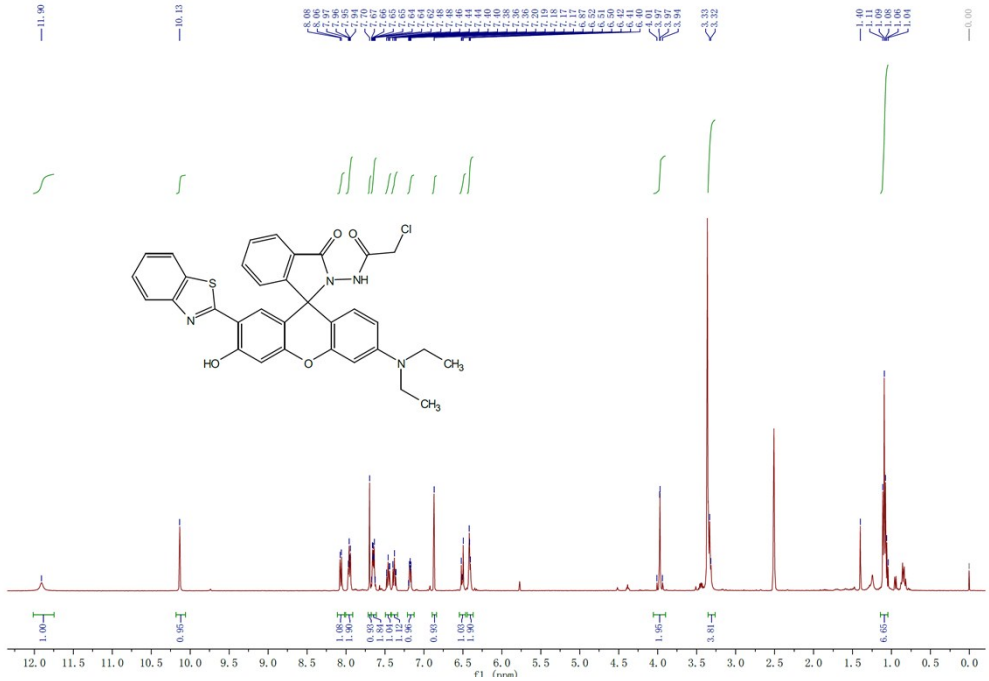

Figure S9 ^{1}H-NMR (DMSO-d_6) spectrum of compound **4**

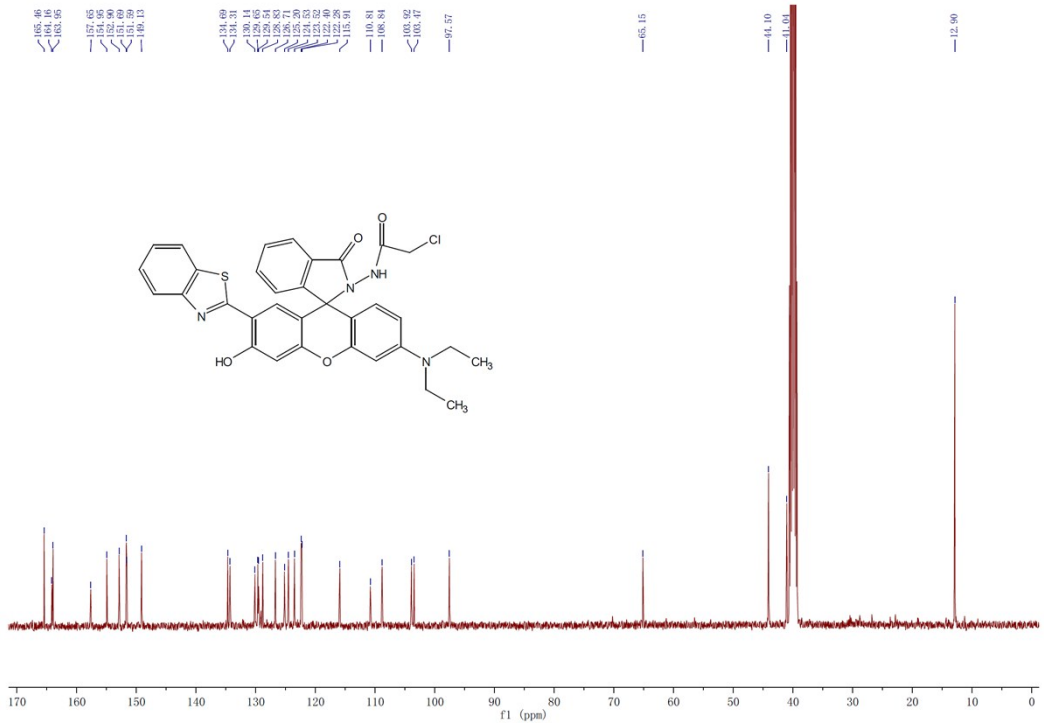

Figure S10 ^{13}C-NMR (DMSO-d_6) spectrum of compound **4**.

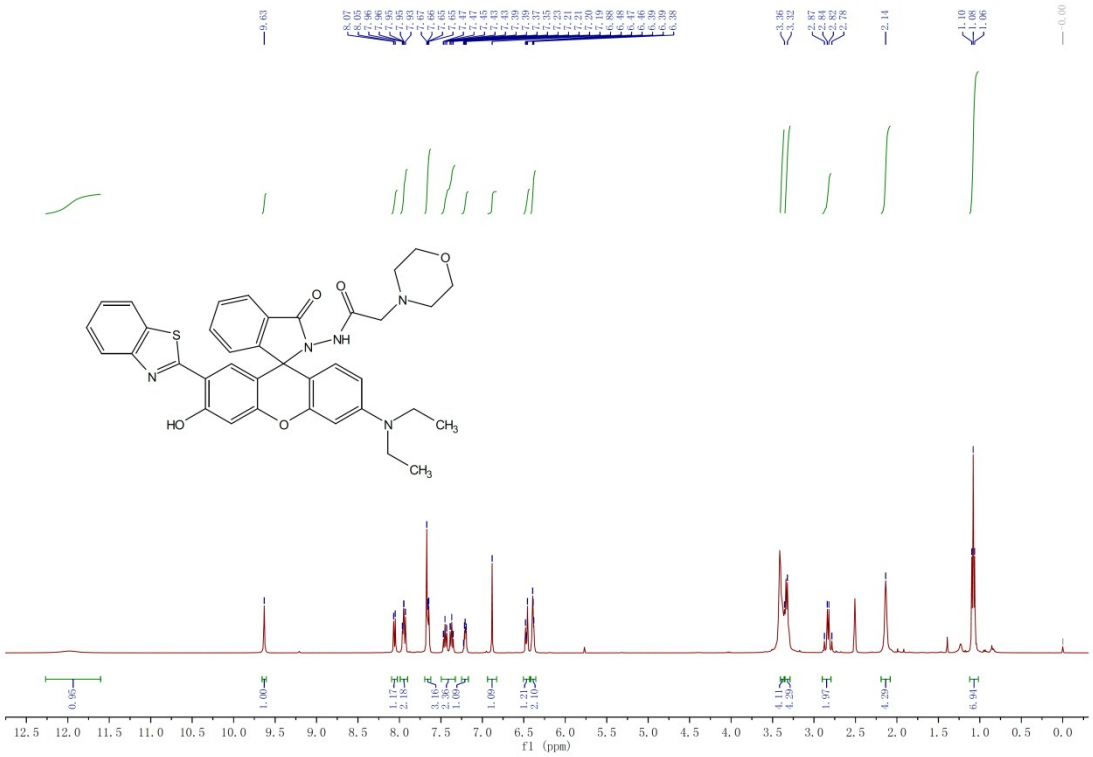

Figure S11 ^{1}H-NMR (DMSO-d_6) spectrum of compound **Lyso-HA**.

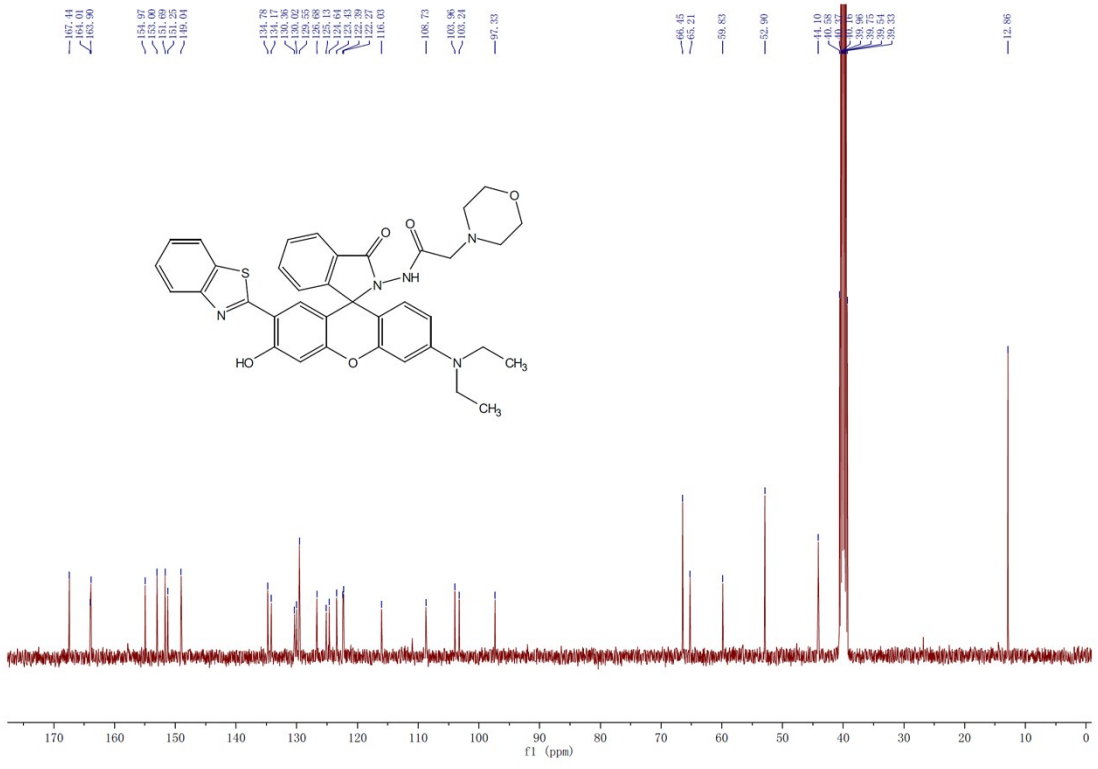

Figure S12 ^{13}C-NMR (DMSO-d_6) spectrum of compound **Lyso-HA**.