

Electronic Supplementary Information (ESI)

A novel pH probe based on rhodamine-rhodanine platform

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1. Part of optical spectroscopic data.

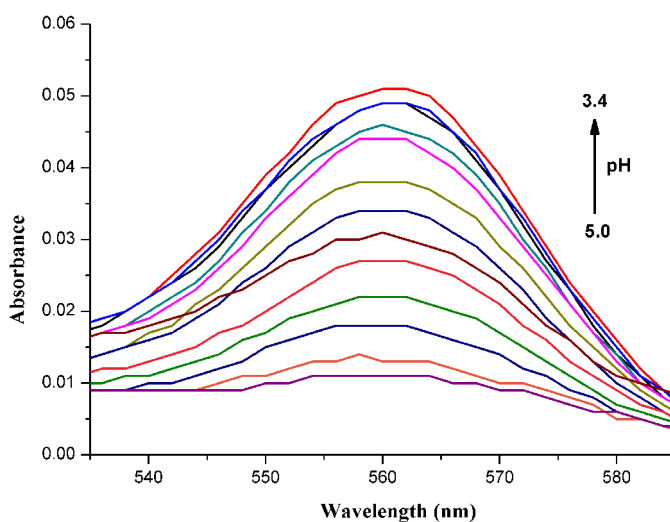


Fig. S1 UV-vis absorbance of **RER** (10 μM) to pH variation in aqueous solvents containing ethanol (B-R buffer-EtOH, v/v = 7:3)

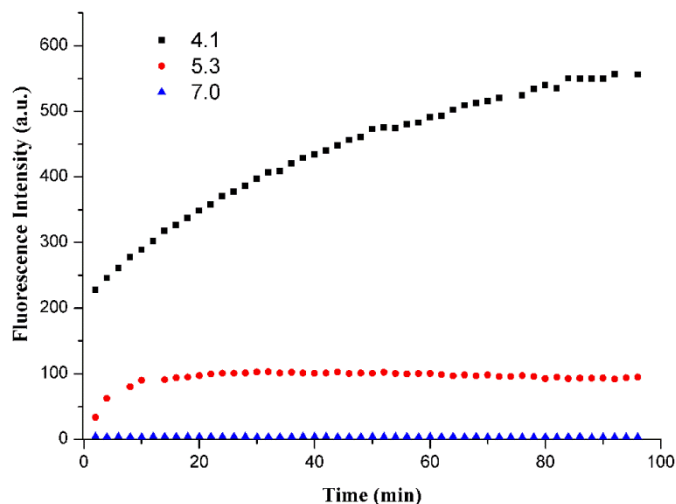


Fig. S2 The time courses of fluorescence intensity of **RER** in aqueous solvents containing ethanol (B-R buffer-EtOH, v/v = 8:2) at various pH values (4.1, 5.3 and 7.0, respectively). ($\lambda_{\text{ex}} = 561 \text{ nm}$, $\lambda_{\text{em}} = 583.5 \text{ nm}$)

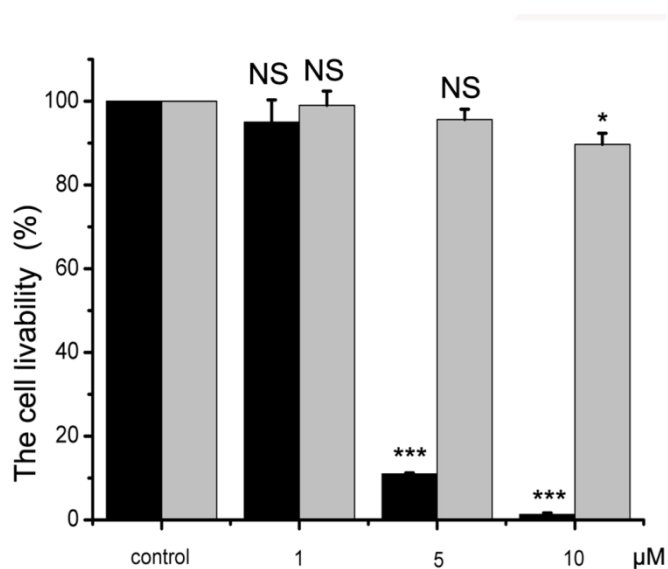


Fig. S3 Cytotoxicity of **RE** (■) and **RER** (□) to HeLa cells. HeLa cells were incubated with 1, 5 and 10 μM **RE** or **RER** respectively for 24 h. The cell viability was determined by SRB assays.

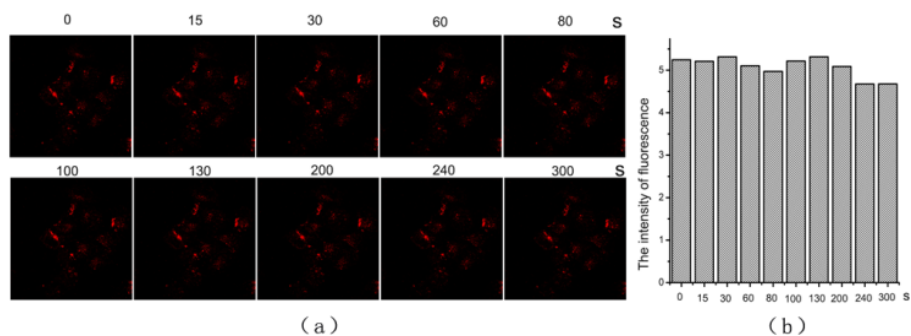


Fig. S4 Photostability of **RER** (5 μ M). (a) Fluorescence images (0-300 s) were achieved by means of time-sequential scanning of the HeLa cells. (b) Normalized fluorescence intensity of per cell of (a) from 0 to 300 s.

2. Characterization data (IR, ^1H & ^{13}C NMR and HRMS) of **RER**.

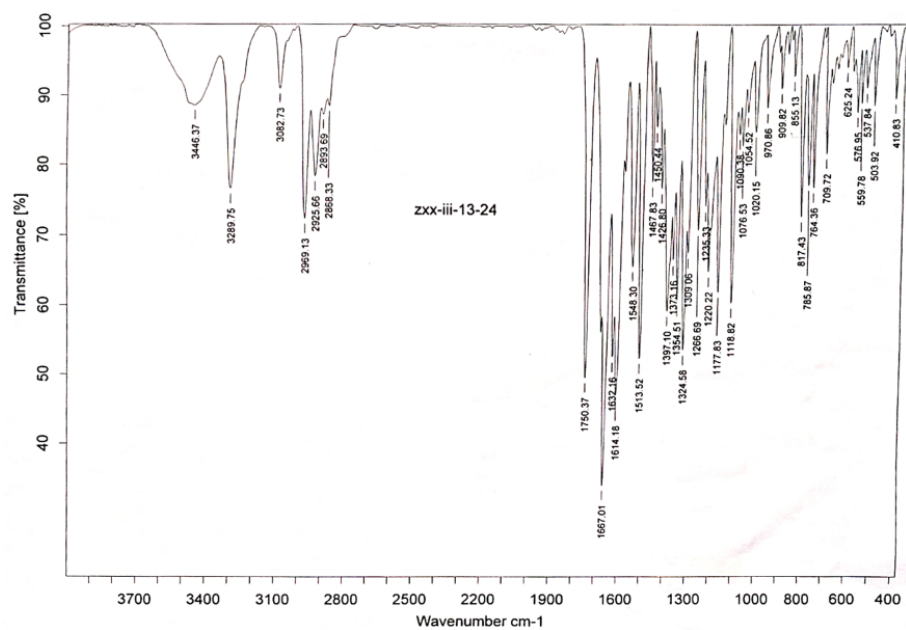


Fig. S5 IR spectrum of **RER**

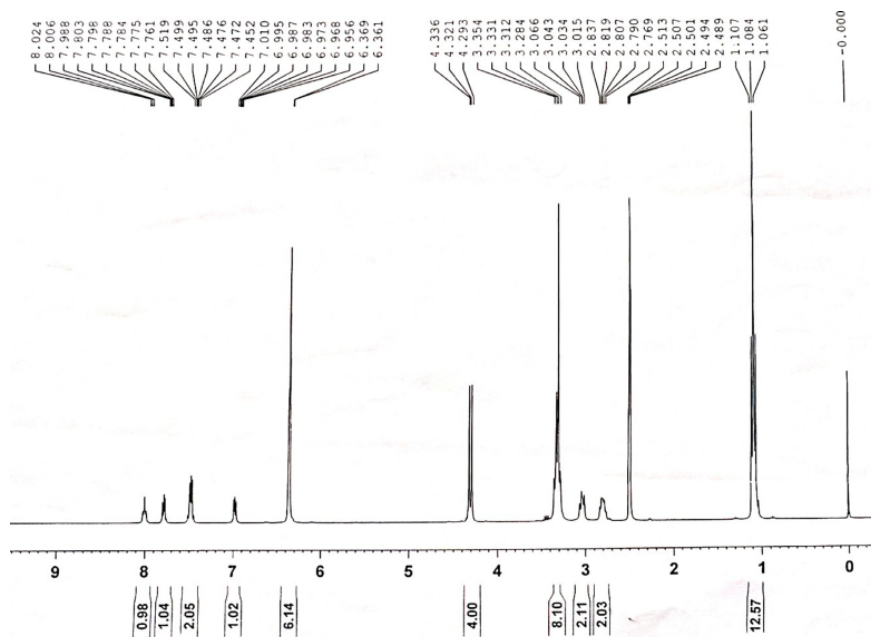


Fig. S6 ^1H NMR spectrum of **RER** in DMSO

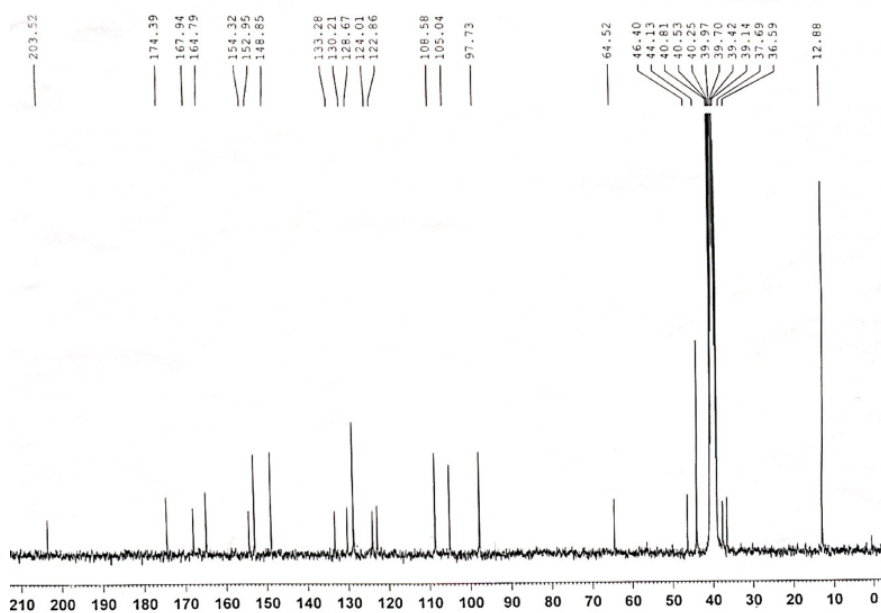


Fig. S7 ^{13}C NMR spectrum of **RER** in DMSO

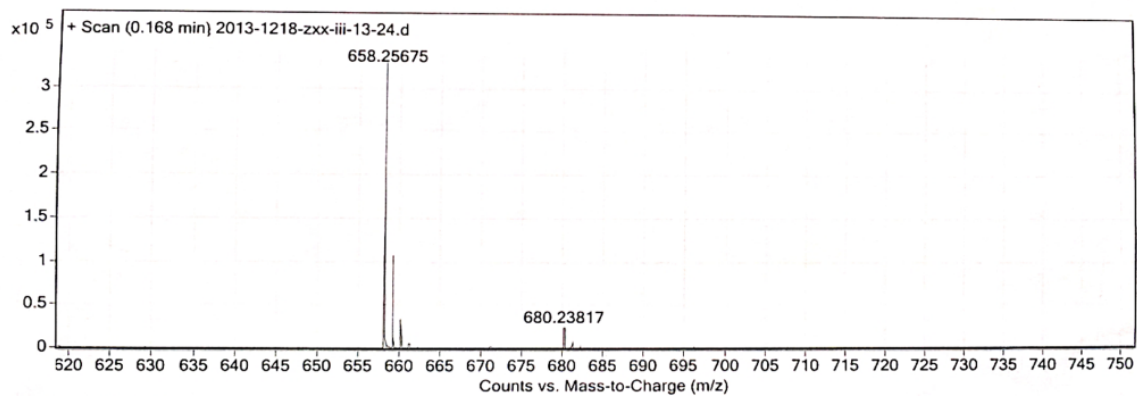


Fig. S8 HRMS spectrum of **RER**