

*Supporting information for*

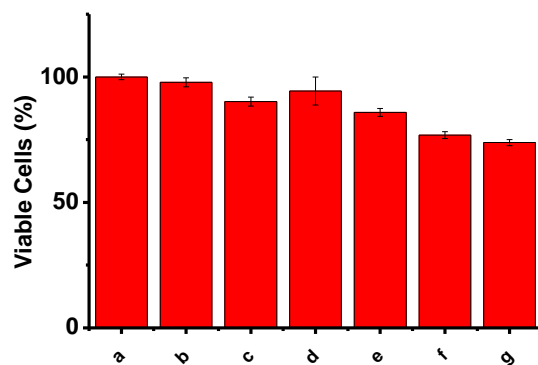
**Development of a New rhodamine-based FRET Platform and the  
Applications for Cu<sup>2+</sup> probe**

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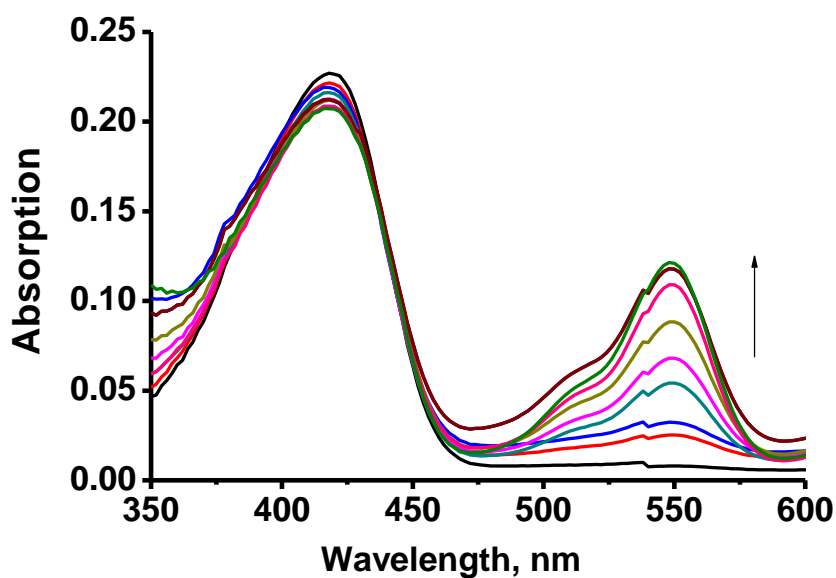
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**Fig. S1** Cytotoxicity assays of ratiometric probe **FRET-1** at different concentrations (a: 0  $\mu\text{M}$ ; b: 5  $\mu\text{M}$ ; c: 10  $\mu\text{M}$ ; d: 20  $\mu\text{M}$ ; e: 30  $\mu\text{M}$ ; f: 50  $\mu\text{M}$ ; f: 100  $\mu\text{M}$ ) for MCF-7 cells.



**Fig. S2** Absorption spectral changes of novel ratiometric **FRET-1** (1  $\mu\text{M}$ ) upon addition of  $\text{Cu}^{2+}$  (0- 40 equiv.) in HEPES buffer (pH 7.0, containing 20%  $\text{CH}_3\text{CN}$  as a co-solvent).



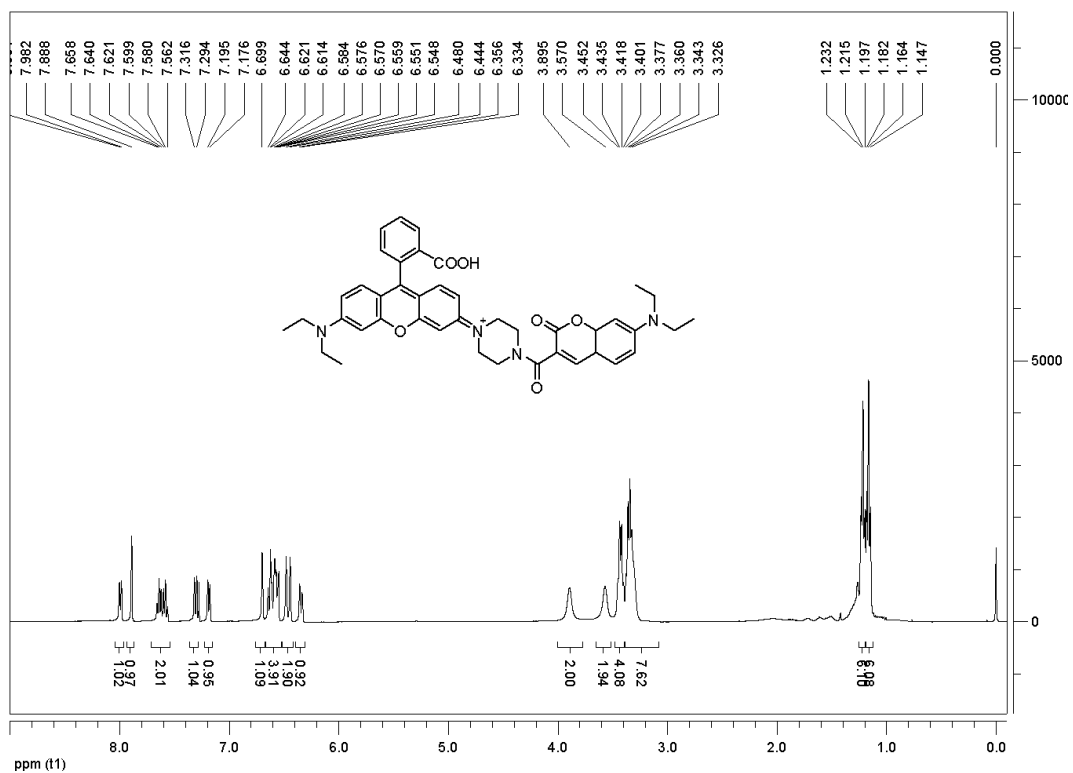


Figure S5. <sup>1</sup>H NMR spectrum of compound FRET-dyad.

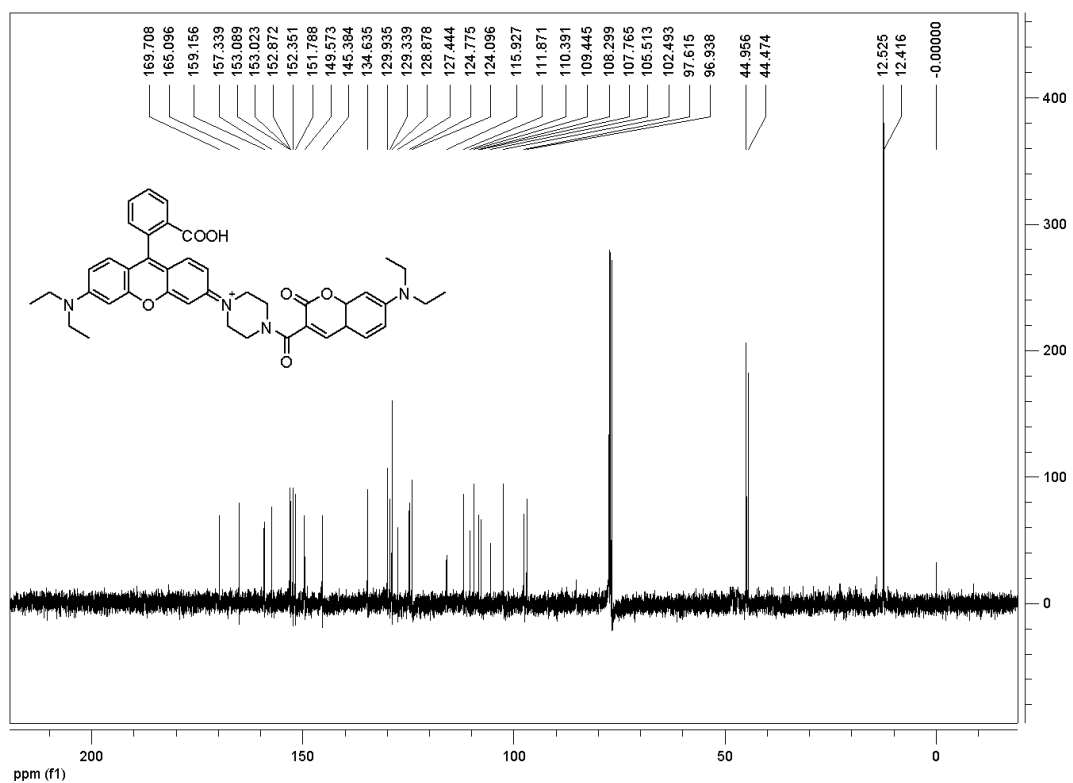


Figure S6. <sup>13</sup>C NMR spectrum of compound FRET-dyad.

