## A dual-channel responsive near-infrared fluorescent probe

## for multicolour imaging of cysteine in living cells

Zhuo Ye, ‡<sup>a</sup> Chong Duan,‡<sup>a,b</sup> Qiao Hu,<sup>a</sup> Yue Zhang,<sup>a</sup> Caiqin Qin,<sup>b</sup> Lintao Zeng\*<sup>a,b</sup> <sup>a</sup> Tianjin Key Laboratory of Organic Solar Cells and Photochemical Conversion, School of Chemistry and Chemical Engineering, Tianjin University of Technology, Tianjin 300384, P.R. China. E-mail: <u>zlt1981@126.com</u>.

<sup>b</sup> Department of Chemistry and Materials Science, Hubei Engineering University, Hubei Xiaogan 432100, P. R. China.

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Fig. S1. Changes in fluorescence intensity of BDY-OH (10 µM in DMSO) under the



Fig. S2. <sup>1</sup>H NMR spectrum of **BDY-OH** in DMSO- $d_6$  (400 MHz)



Fig. S3. <sup>13</sup>C NMR spectrum of **BDY-OH** in DMSO- $d_6$  (125 MHz)



Fig. S4. HR-MS (ESI) spectrum of BDY-OH



Fig. S6. <sup>13</sup>C NMR spectrum of **BDY-NBD** in DMSO- $d_6$ (125 MHz)











Fig. S9. <sup>1</sup>H NMR spectrum of NBD-SR in CDCl<sub>3</sub> (400 MHz)



Fig. S10. The UV-vis absorption spectra of model compounds NBD-NHR and NBD-SR in PBS containing 30% DMSO.



Fig. S11. (a) The UV-vis absorption spectra and (b) Fluorescence spectra of BDY-OH (10  $\mu$ M) and BDY-NBD (10  $\mu$ M) in the presence of Cys or GSH, respectively.



Fig. S12. HR-MS (ESI) spectrum of probe BDY-NBD in the presence of Cys



Fig. S13. HR-MS (ESI) spectrum of probe BDY-NBD in the presence of GSH