## **Supplementary Information**

## A Novel Ratiometric Fluorescent Probe for Mercury (II)

## ions and Application in Bio-imaging

Qianmiao Gao, <sup>1</sup> Yang Jiao, <sup>1,2,\*</sup> Cheng He,<sup>1</sup> Chunying Duan<sup>1</sup>

1. State Key Laboratory of Fine Chemicals, Dalian University of Technology, Dalian 116024, China;

2. School of Chemical Engineering, Dalian University of Technology, Dalian 116024, China

E-mail: jiaoyang@dlut.edu.cn

Figure S1. <sup>1</sup>H NMR of compound 1

Figure S2. ESI-MS spectrum of compound 1

Figure S3. <sup>1</sup>H NMR of PMH

Figure S4. ESI-MS spectrum of PMH

Figure S5. Confocal microscopy images of A549 with PMH and Hg<sup>2+</sup> ions

Figure S6. Confocal microscopy images of Hela with PMH and Hg<sup>2+</sup> ions



Figure S1. <sup>1</sup>H NMR of compound 1



Figure S2. ESI-MS spectrum of compound 1.



Figure S3. <sup>1</sup>H NMR of PMH.



Figure S4. ESI-MS spectrum of PMH.



**Figure S5.** Confocal microscopy images of A549 cells treated with **PMH** (1  $\mu$ M) and different concentration of Hg<sup>2+</sup> ions (0  $\mu$ M, 5  $\mu$ M, 10  $\mu$ M, 15  $\mu$ M) (excited at 405 nm), Green Chanel: fluorescent image of emission between 430–460 nm; Red Channel: fluorescent image of emission between 490–550 nm.



**Figure S6.** Confocal microscopy images of Hela cells treated with **PMH** (1  $\mu$ M) and different concentration of Hg<sup>2+</sup> ions (0  $\mu$ M, 5  $\mu$ M, 10  $\mu$ M, 15  $\mu$ M) (excited at 405 nm), Green Chanel: fluorescent image of emission between 430–460 nm; Red Channel: fluorescent image of emission between 490–550 nm.