Supporting Information

Construction of an effective far-red fluorescent and colorimetric platform containing a merocyanine core for specific and visual detection of thiophenol in both aqueous medium and living cells

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Contents

Figure S1 1 H NMR of FRP-Thio .......................................................................................................................... S2
Figure S2 13 C NMR of FRP-Thio ........................................................................................................................ S2
Figure S3 HRMS of FRP-Thio .......................................................................................................................... S3
Figure S4 Time-dependent fluorescence changes of FRP-Thio to thiophenol .................................................. S3
Figure S4 Color changes of FRP-Thio without or with competing analytes .............................................................. S4
Figure S6 pH effect of FRP-Thio toward PhSH .................................................................................................. S4
Figure S7 HRMS of FRP-Thio with thiophenol .................................................................................................. S5
Figure S8 MTT assay of FRP-Thio with SH-SY5Y cells .................................................................................. S5
Figure S1. $^1$H NMR spectrum of FRP-Thio (DMSO-$d_6$, 600 MHz).

Figure S2. $^{13}$C NMR spectrum of FRP-Thio (DMSO-$d_6$, 600 MHz).
Figure S3. HRMS of FRP-Thio (DMSO-d$_6$, 600 MHz).

Figure S4. Time-dependent fluorescence changes of FRP-Thio (10 μM) at 645 nm upon addition of thiophenol (0, 20, 50, 100, and 200 μM) in DMF aqueous solution (2:8, v/v, PBS buffer 20 mM, pH 7.4).
Figure S5. Color changes of FRP-Thio without or with competing analytes and PhSH in DMF-H_{2}O (2:8, v/v, PBS buffer 20 mM, pH 7.4). a1 and b1) FRP-Thio. a2) Addition of various amino acids into a1). a3) Addition of PhSH into a2). b2) Addition of various anions and cations into b1). b3) Addition of PhSH into b2).

Figure S6. pH effect of FRP-Thio toward PhSH in DMF-H_{2}O (2:8, v/v).
Figure S7. HRMS of FRP-Thio with thiophenol.

Figure S8. MTT assay of SH-SY5Y cells with FRP-Thio at different concentration (0-20 μM) for 24 hours.