A novel FRET-based fluorescent material for the selective detection of hydrogen sulfide (H$_2$S) in vivo

Contents:

Figure S1: UV-vis absorption spectra.
Figure S2: Selectivity over H$_2$S.
Figure S3: $^1$H NMR of Compound 1.
Figure S4: $^1$H NMR and $^{13}$C NMR of Compound 2.
Figure S5: $^1$H NMR and $^{13}$C NMR of Compound Flu-N$_3$.
Figure S6: The ESI-MS of Flu-N$_3$.
Figure S7: The ESI-MS of product obtained by reaction of Flu-N$_3$ and H$_2$S.
Figure S8: Cell viability estimated by CCK-8 assay with HepG-2 cells, which were cultured in the presence of 0–50 μM Flu-N$_3$ for 5 and 10 h.
**Figure S1:** UV-vis absorption spectra of Flu-N$_3$ (5 μM) upon the addition of H$_2$S (0-110 μM) in MeCN: PBS (9:1 v/v, PBS buffer, pH 7.4) solution.

**Figure S2:** The ratio of emission intensities at 538nm of Flu-N$_3$ (5 μM) to various analytes.
Figure S3: $^1$H NMR and $^{13}$C NMR of Compound 1.

The $^1$H NMR (600MHz) spectra of Compound 1 in MeOD.

The $^{13}$C NMR (150 MHz) spectra of Compound 1 in DMSO-$d_6$. 
Figure S4: $^1$H NMR and $^{13}$C NMR of Compound 2.

The $^1$H NMR (600MHz) spectra of Compound 2 in DMSO-$d_6$.

The $^{13}$C NMR (150 MHz) spectra of Compound 2 in DMSO-$d_6$. 
Figure S5: $^1$H NMR and $^{13}$C NMR of Compound Flu-N$_3$. 

The $^1$H NMR (600MHz) spectra of Compound Flu-N$_3$ in DMSO-d$_6$.

The $^{13}$C NMR (150 MHz) spectra of Compound Flu-N$_3$ in DMSO-d$_6$. 

5
**Figure S6:** The ESI-MS of the probe.

ESI-MS \( m/z \): Calcd for \([\text{C}_{35}\text{H}_{25}\text{N}_{5}\text{O}_{7}+\text{H}]^+\): 628.17, found: \( m/z \) 628.18.

**Figure S7:** The ESI-MS of product obtained by reaction of probe and \( \text{H}_2\text{S} \).

ESI-MS \( m/z \): Calcd for [Compound 1+ H]\(^+\): 602.18, found: \( m/z \) 602.19.
Figure S8: Cell viability estimated by CCK-8 assay with HepG-2 cells, which were cultured in the presence of 0–50 μM Flu-N$_3$ for 5 h and 10 h.