Supporting information for

A PET and ESIPT-based fluorescent probe for the imaging of hydrogen sulfide (H_2S) in living cells and zebrafishes

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Materials and instruments

The chemical reagents used in the experiments were all commercially available and could be used directly. The water in the experiment was double distilled water. Column chromatography used the silica gel (screen 200-300) purchased from Qingdao Ocean Chemicals Company. NMR spectra were recorded using an AVANCE III 400 MHz digital NMR spectrometer with tetramethylsilane as a standard compound. High resolution mass spectra (HRMS) were obtained using a Bruker APEX IV-FTMS 7.0 T mass spectrometer. The UV absorption spectrum was recorded using a Shimadzu UV-2600 spectrophotometer. The fluorescence emission spectrum was obtained using a Hitachi F4600 fluorescence spectrophotometer with a voltage of 500 V and an excitation slit and an emission slit width of 5 nm.

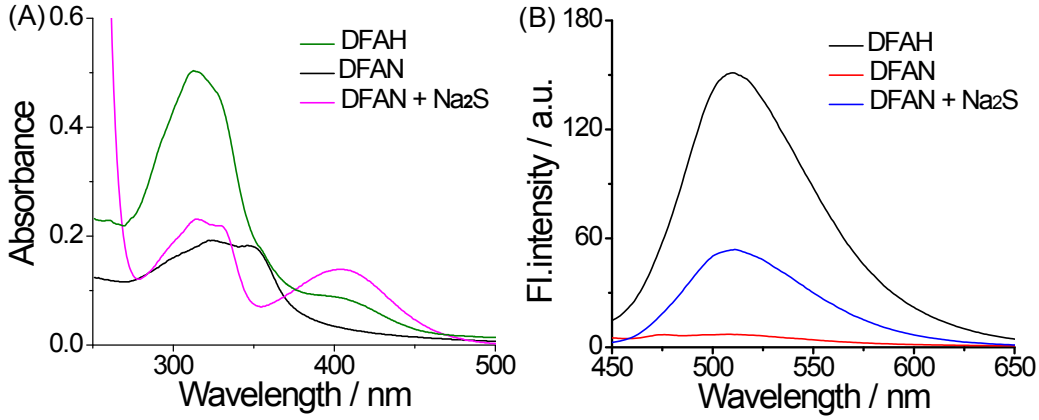

Fig. S1 (A) UV-vis absorption spectra of 5 μM DFAH, 5 μM DFAN with the addition of 100 μM Na_2S and 5 μM DFAH in PBS solution (pH = 7.4). (B) Fluorescence spectra of 5 μM DFAH, 5 μM DFAN and 5 μM DFAN with the addition of 100 μM Na_2S in PBS solution (pH = 7.4).

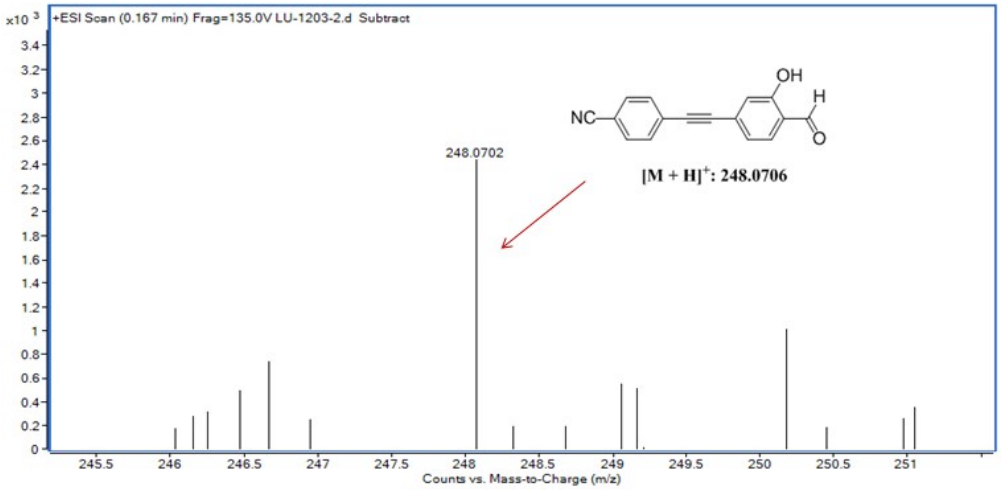

Fig. S2 HRMS data of the response product of the probe **DFAN** to Na_2S.

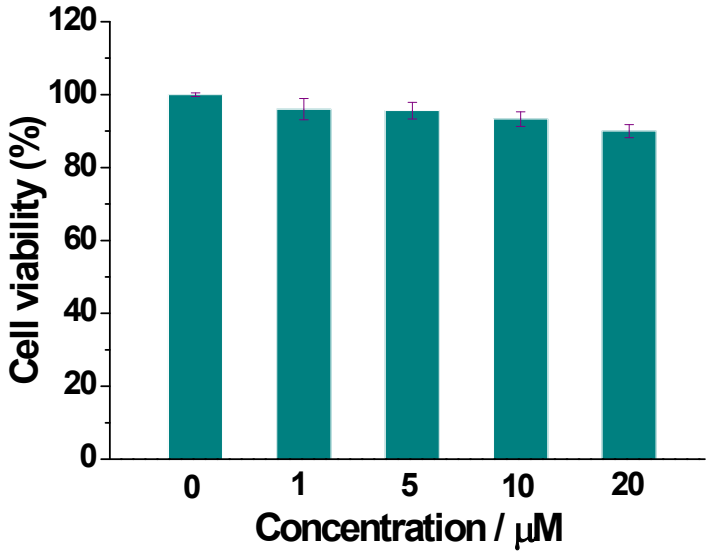

Fig. S3 Viability of HeLa cells treated with different concentrations of the probe **DFAN** for 8 h.

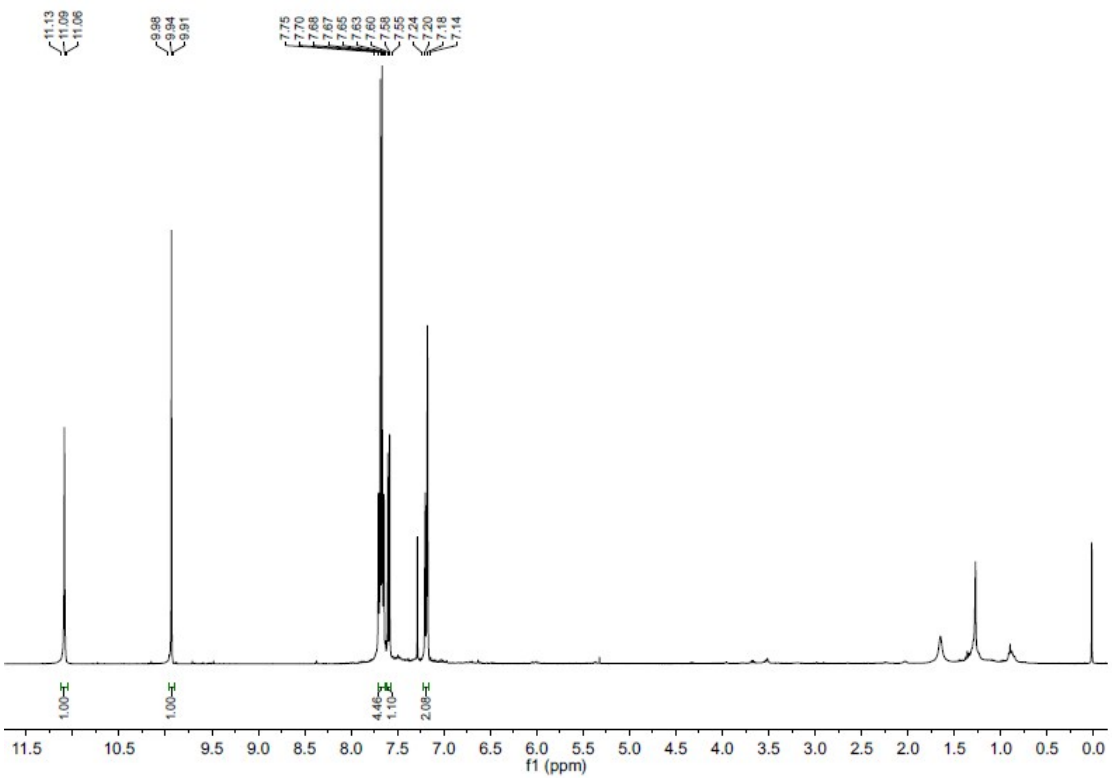

Fig. S4. ^{1}H NMR spectrum of **DFAH** ($CDCl_3$, 400 MHz)

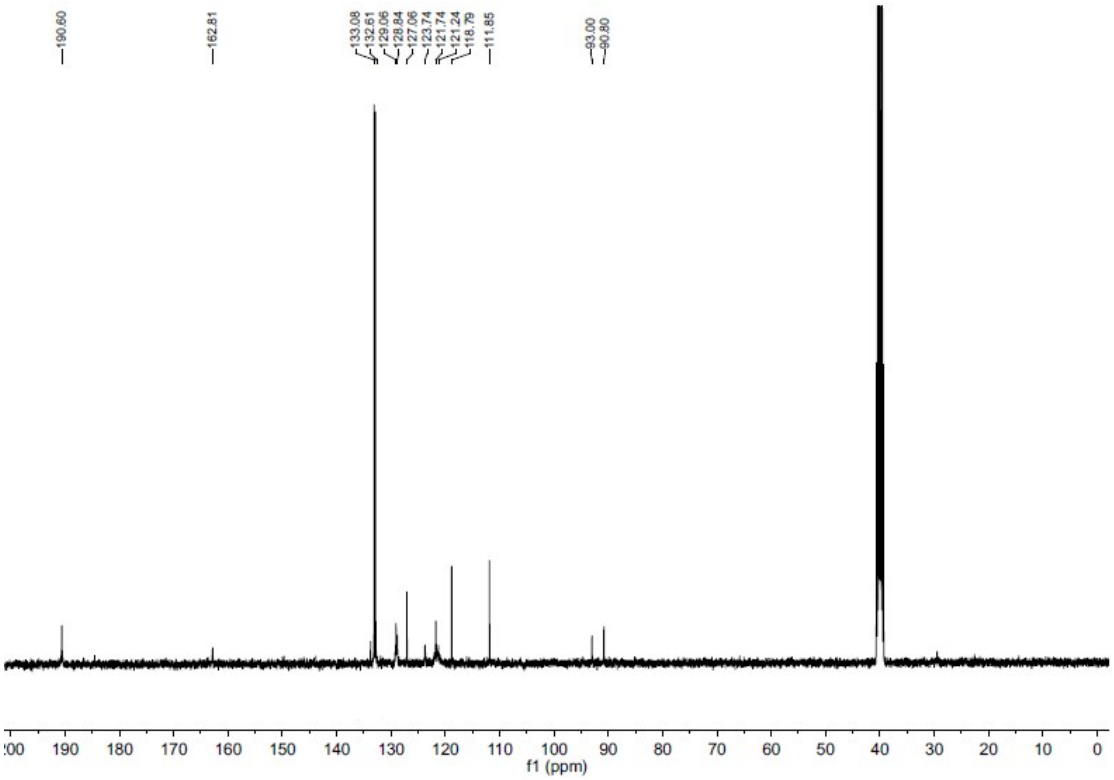

Fig. S5. ^{13}C NMR spectrum of **DFAH** (DMSO-d_6, 100 MHz)

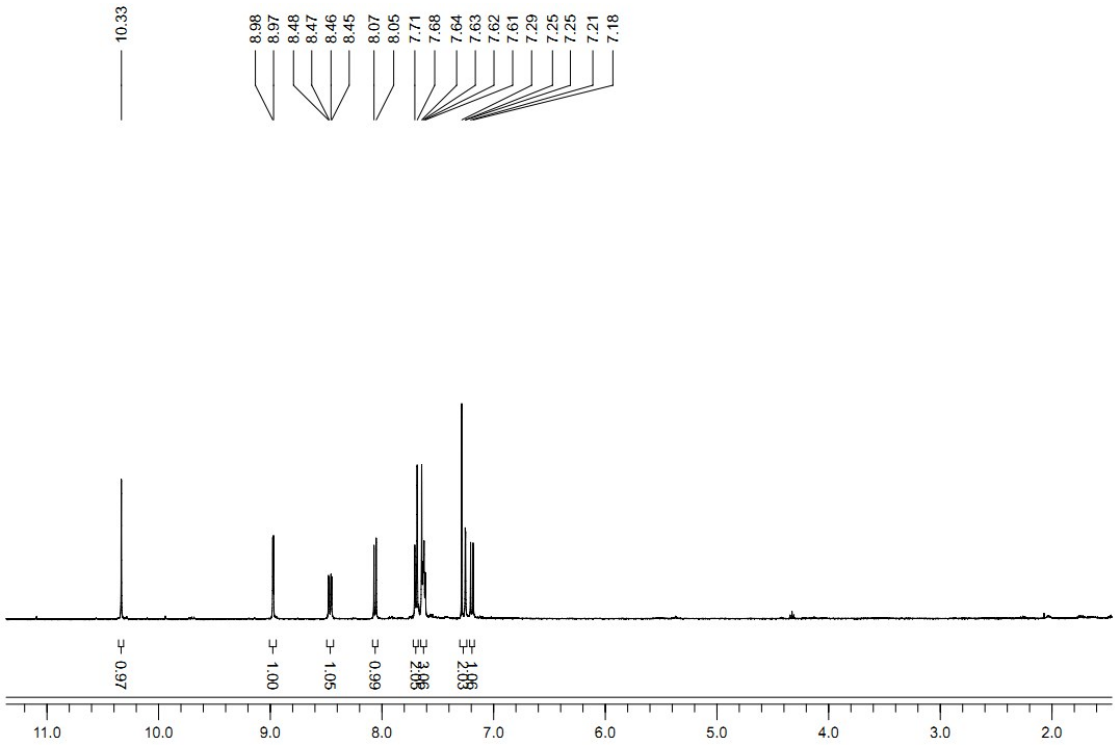

Fig. S6. ^{1}H NMR spectrum of **DFAN** ($CDCl_3$, 400 MHz)

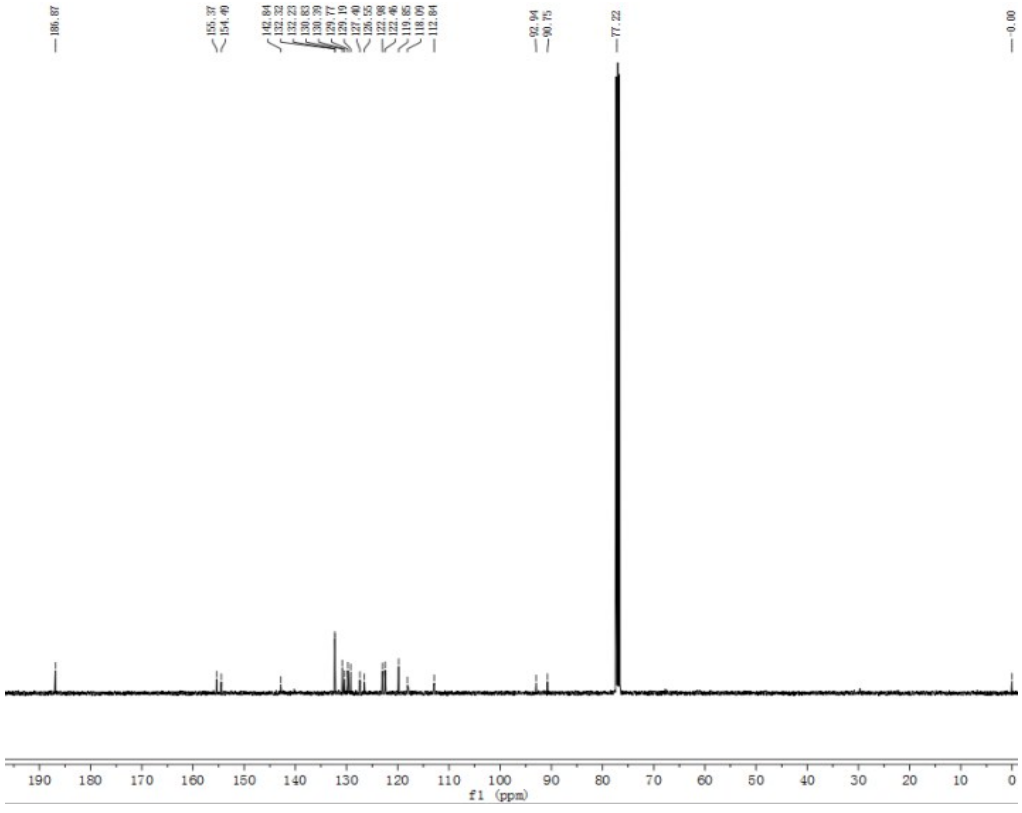

Fig. S7. ^{13}C NMR spectrum of **DFAN** ($CDCl_3$, 100 MHz).