Reaction-Based Fluorescent Probes for rapid detection of hydrogen sulfide in vivo

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1. Spectroscopic properties of probe 1-2

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Figure S2. Fluorescence responses of probe 1a (5.0 μM) upon addition of different esterases in PBS buffer (20.0 mM, pH 7.4, 1 % CH₃COCH₃) solution. Carboxylesterase 1 (CE1, 10.0 μg/mL), carboxylesterase 2(CE2, 10.0 μg/mL), acetylcholinesterase (AChE, 0.1 μg/L), butyrylcholinesterase (BChE, 20.0 U/L), paraoxonase 1 (PON1, 10.0 μg/mL), paraoxonase 2 (PON2, 10.0 μg/mL) and human serum albumin (HAS, 0.5 mg/L), bovine serum albumin (BSA, 0.5 mg/L). The pillars in the front row: probe 1a (5.0 μM) + various biologically relevant species. The pillars in the back row: probe 1a (5.0 μM) + NaHS (10.0 μM) + other biologically relevant species. λex = 400 nm.
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2. $^1$H NMR, $^{13}$C NMR and MS spectra

Figure S21. $^1$H NMR spectrum of 3 in DMSO

Figure S22. $^1$H NMR spectrum of 1a in DMSO
Figure S23. $^{13}$C NMR spectrum of 1a in DMF.

Figure S24. $^1$H NMR spectrum of 1b in DMSO
Figure S25. $^{13}$C NMR spectrum of 1b in DMF.

Figure S26. $^1$H NMR spectrum of 2a in CDCl$_3$
Figure S27. $^{13}$C NMR spectrum of 2a in DMF.

Figure S28. $^1$H NMR spectrum of 2b in CDCl$_3$
Figure S29. $^{13}$C NMR spectrum of 2b in DMF.

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**Mass Spectrum SmartFormula Report**

**Analysis Info**
- **Analysis Name**: C:\Users\Lenovo\Desktop\1
- **Method**: tune_low 50-500.m
- **Sample Name**: 
- **Comment**: 
- **Acquisition Date**: 2017/6/7 9:38:46
- **Operator**: NWU
- **Instrument / Ser#:** microTOF-Q II 10280

**Acquisition Parameter**
- **Source Type**: ESI
- **Focus**: Not active
- **Scan Begin**: 50 m/z
- **Scan End**: 1000 m/z
- **Ion Polarity**: Positive
- **Set Capillary**: 4500 V
- **Set End Plate Offset**: -500 V
- **Set Collision Cell RF**: 116.0 Vpp
- **Set Nebulizer**: 0.4 Bar
- **Set Dry Heater**: 180°C
- **Set Dry Gas**: 4.0 l/min
- **Set Divert Valve**: Source

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Figure S30. Mass spectrum of 1a
Figure S31. Mass spectrum of 1b

Figure S32. Mass spectrum of 2a
Figure S33. Mass spectrum of 2b

Figure S34. Mass spectrum of 4
Figure S35. $^1$H NMR spectrum of 4 in DMSO

Figure S36. $^1$H NMR spectrum of 5 in DMSO