

Supporting Information

A Highly sensitive fluorescent probe for bioimaging Zinc Ion in Living Cells and Zebrafish Models

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Contents

Figure S1 ¹ H NMR of 5-phenylsalicylaldehyde in CDCl ₃	S2
Figure S2 ¹³ C NMR of 5-phenylsalicylaldehyde in CDCl ₃	S2
Figure S3 ¹ H NMR of Sen-OH in Acetone- <i>d</i> ₆	S3
Figure S4 ¹³ C NMR of Sen-OH in Acetone- <i>d</i> ₆	S3
Figure S5 ESI-HRMS of Sen-OH	S4
Figure S6 Job's plot for Sen-OH and Zn ²⁺	S4
Figure S7 Reversibility of Sen-OH with Zn ²⁺ and EDTA.....	S5
Figure S8 Time dependent fluorescence changes of Sen-OH with Zn ²⁺	S5
Figure S9 Photostability of Sen-OH with or without a 365 nm UV light.....	S6
Figure S10 pH effect of Sen-OH sensing Zn ²⁺	S6
Scheme S1 Proposed mechanism of Sen-OH sensing Zn ²⁺	S6
Figure S11 HRMS spectrum of Sen-OH +Zn ²⁺	S7
Figure S12 Fluorescence responses of Ref-OH-NH2 and Ref-OH with or without Zn ²⁺	S7
Figure S13 MTT assays of Sen-OH with HeLa cells.....	S8

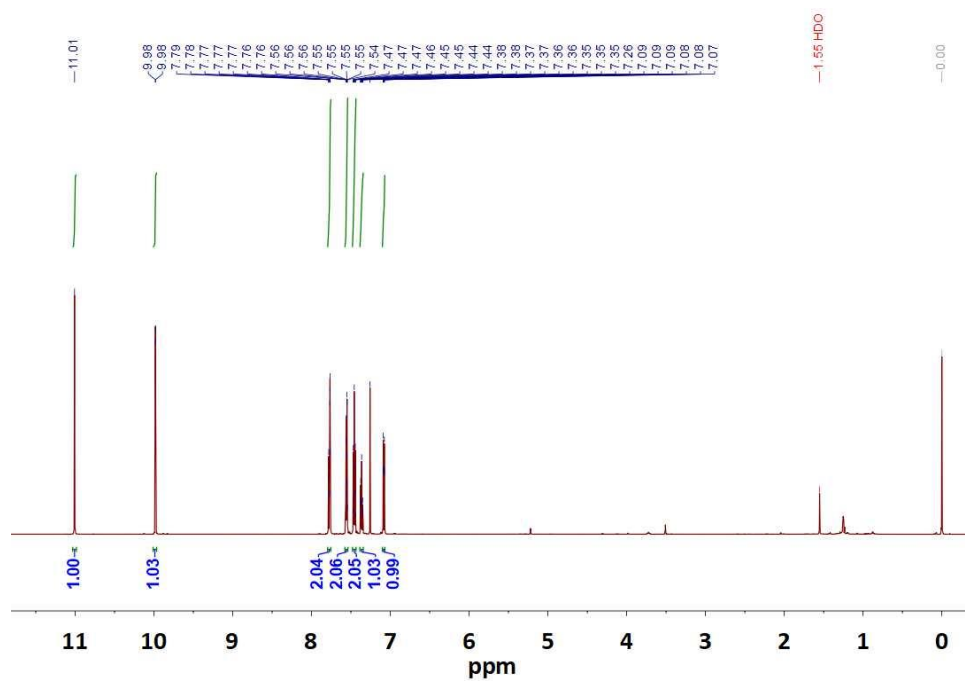


Figure S1. ¹H NMR of 5-phenylsalicylaldehyde in CDCl₃.

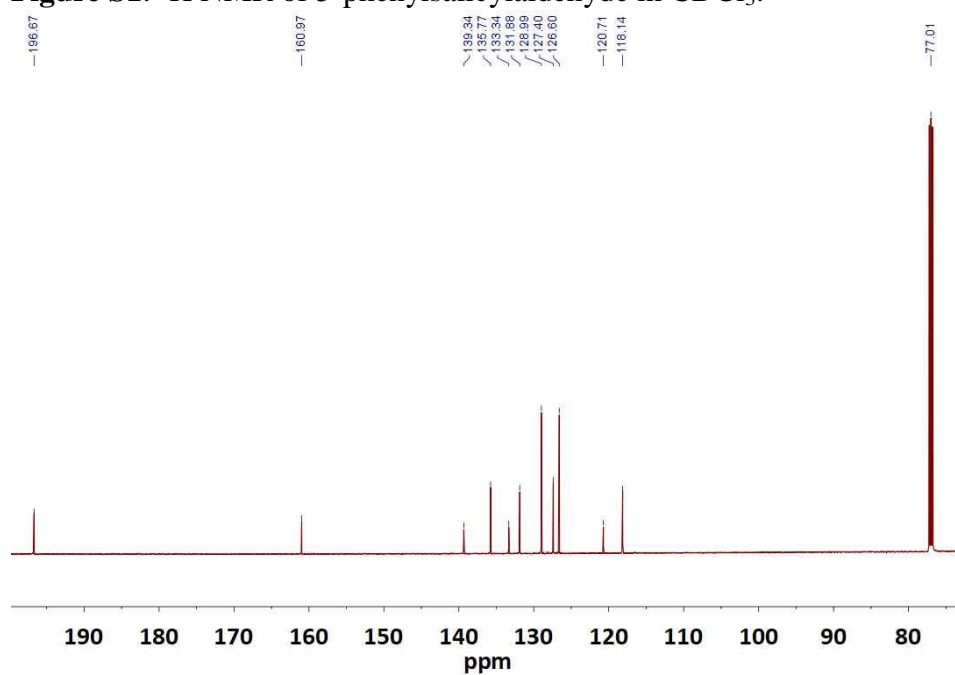


Figure S2. ¹³C NMR of 5-phenylsalicylaldehyde in CDCl₃.

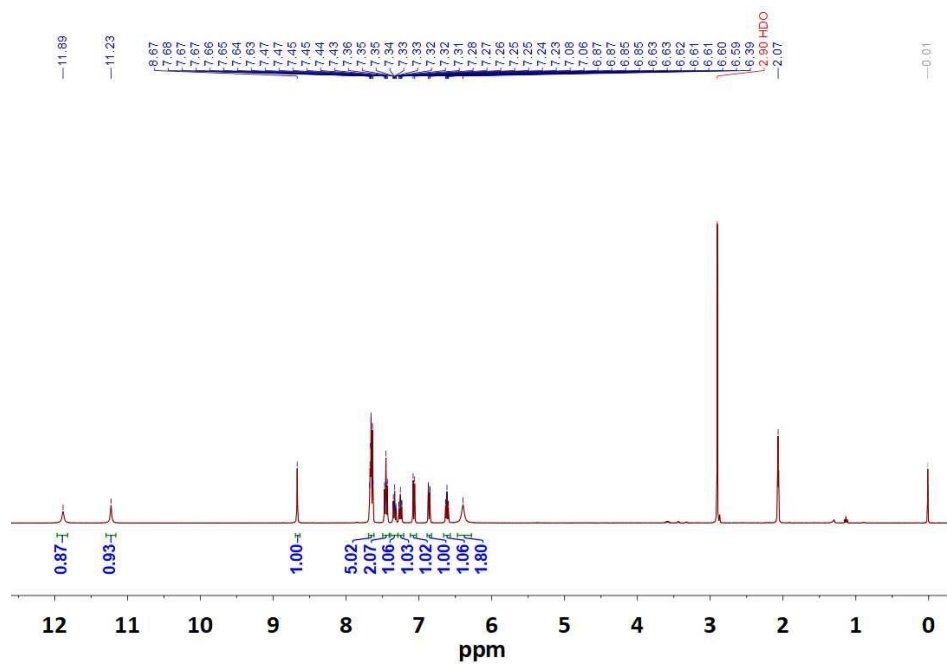


Figure S3. ^1H NMR of Sen-OH in Acetone- d_6 .

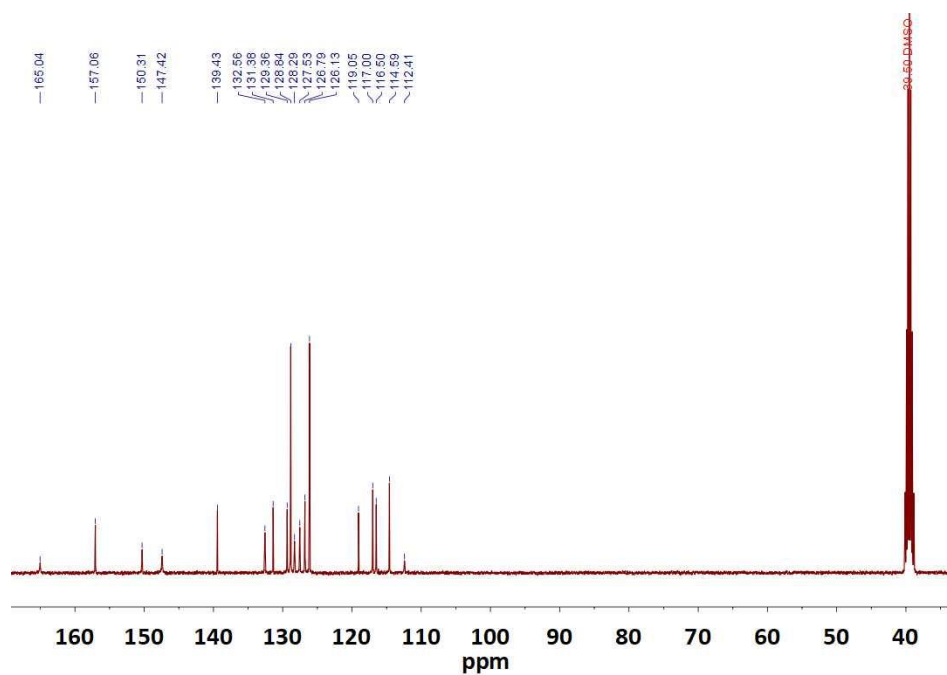


Figure S4. ^{13}C NMR of Sen-OH in Acetone- d_6 .

Analysis Info

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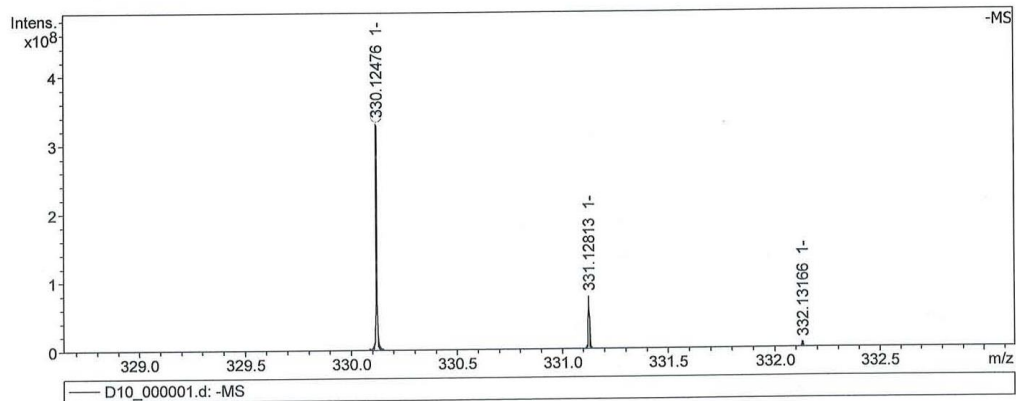
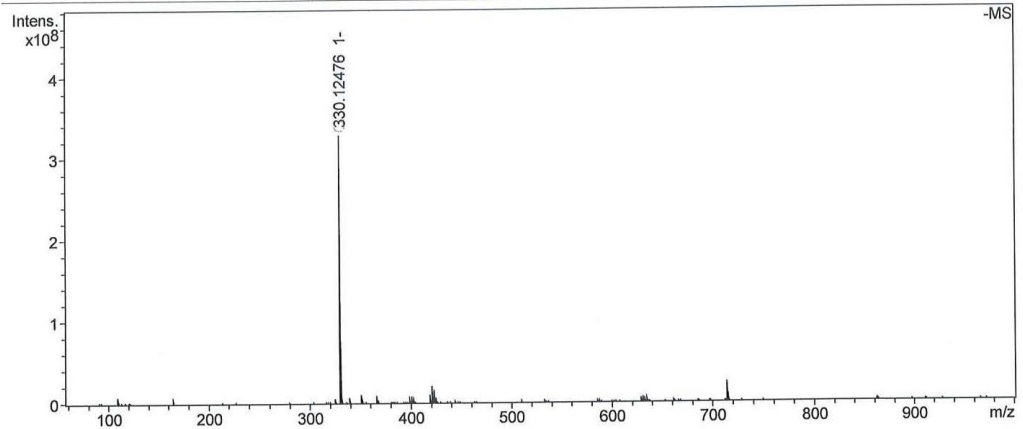
Operator
Instrument solariX

Acquisition Parameter

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Broadband High Mass 1000.0 m/z

Calibration Date Fri Jun 2 09:14:23 2017

Acquired Scans 10



Meas. m/z	#	Ion Formula	Score	m/z	err [ppm]	Mean err [ppm]	mSigma	rdb	e ⁻ Conf	N-Rule
330.124758	1	C20H16N3O2	100.00	330.124800	-0.1	-0.1	3.4	14.5	even	ok

Figure S5. ESI-HRMS of Sen-OH.

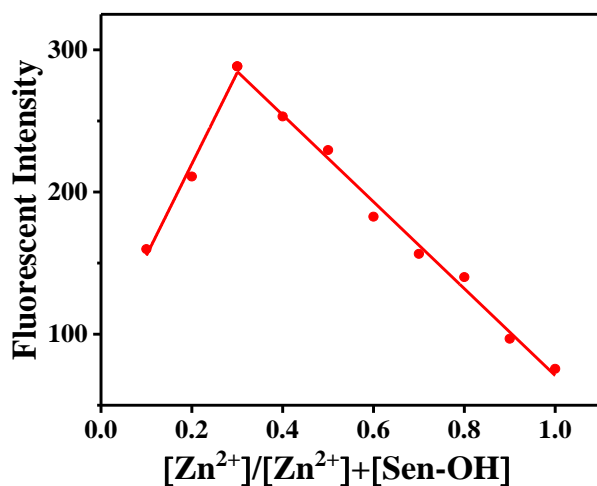


Figure S6. Job's plot for determining the stoichiometry of **Sen-OH** and Zn^{2+} in CH_3CN aqueous solution (HEPES 10 mM, pH 7.4).

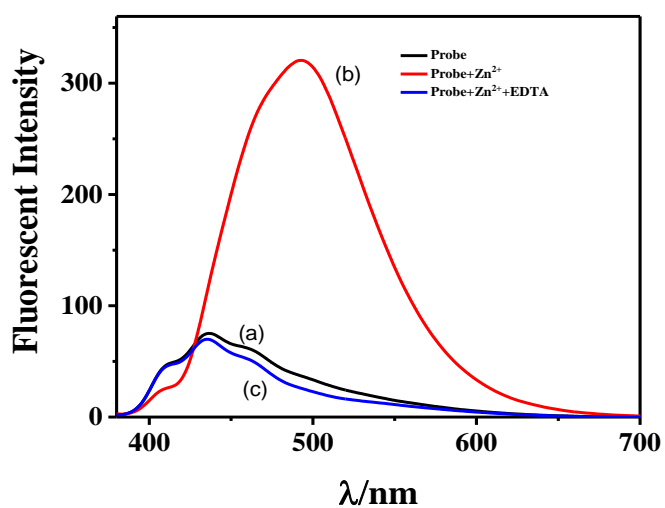


Figure S7. Reversibility of fluorescence intensity at 485 nm of (a) **Sen-OH** (10 μM), (b) **Sen-OH** (10 μM) with Zn^{2+} (70 μM), and (c) **Sen-OH** (10 μM) with Zn^{2+} (70 μM) and then with addition of EDTA (140 μM).

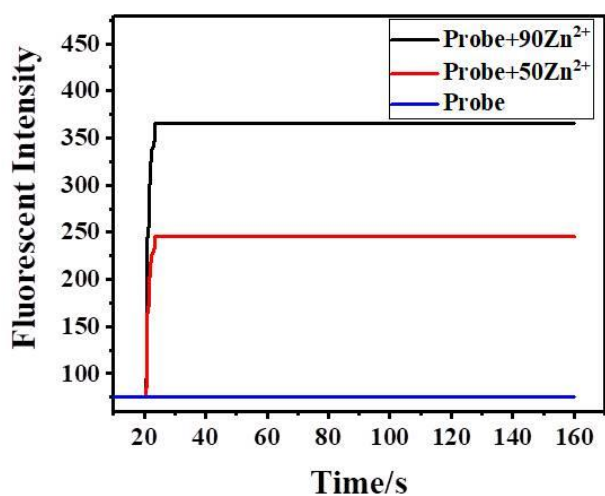


Figure S8. Time-dependent fluorescence changes of **Sen-OH** ($10 \mu\text{M}$) at 485 nm upon addition of Zn^{2+} ($0, 20,$ and $60 \mu\text{M}$) in CH_3CN aqueous solution (HEPES 20 mM , $\text{pH } 7.4$).

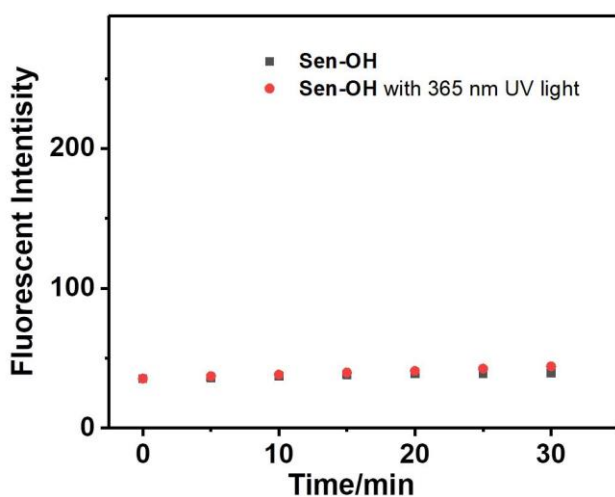


Figure S9. Photostability profiles of the **Sen-OH** ($10 \mu\text{M}$) in the absence or presence of UV-irradiation at 365 nm . The fluorescence intensities at 485 nm were continuously monitored from 0 to 30 minutes for every five minutes in CH_3CN aqueous solution ($3:7, \text{v/v}$, HEPES 20 mM , $\text{pH } 7.4$).

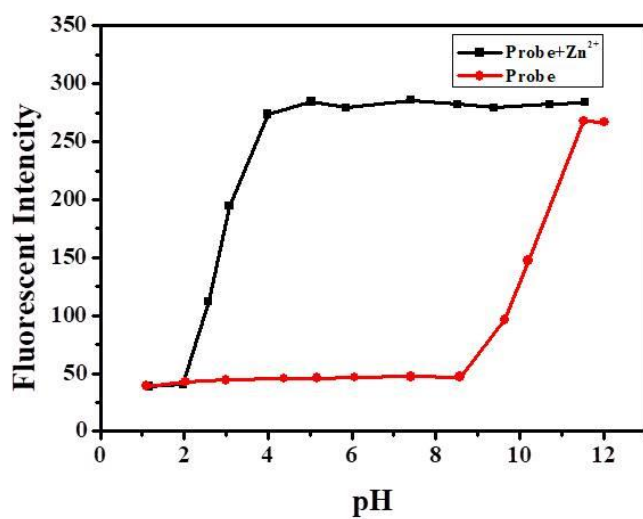
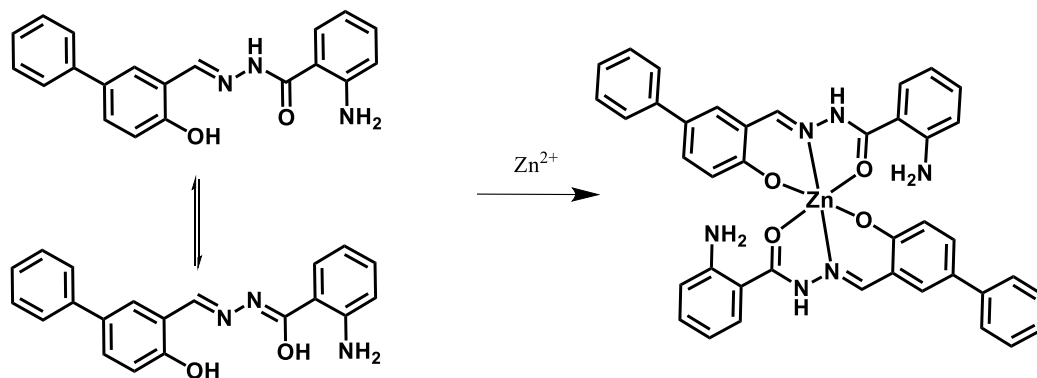


Figure S10. Fluorescence responses at 485 nm of **Sen-OH** ($5 \mu\text{M}$) toward different pH values in the presence and absence of Zn^{2+} ($60 \mu\text{M}$) in CH_3CN aqueous solution at $25 \text{ }^\circ\text{C}$. $\lambda_{\text{ex}} = 360 \text{ nm}$.

Scheme S1. The proposed mechanism of **Sen-OH** with Zn^{2+} and structural transformation in different solvents.



ESI(P),D10-Zn,20170602

Analysis Info
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 Instrument solarix

Acquisition Parameter
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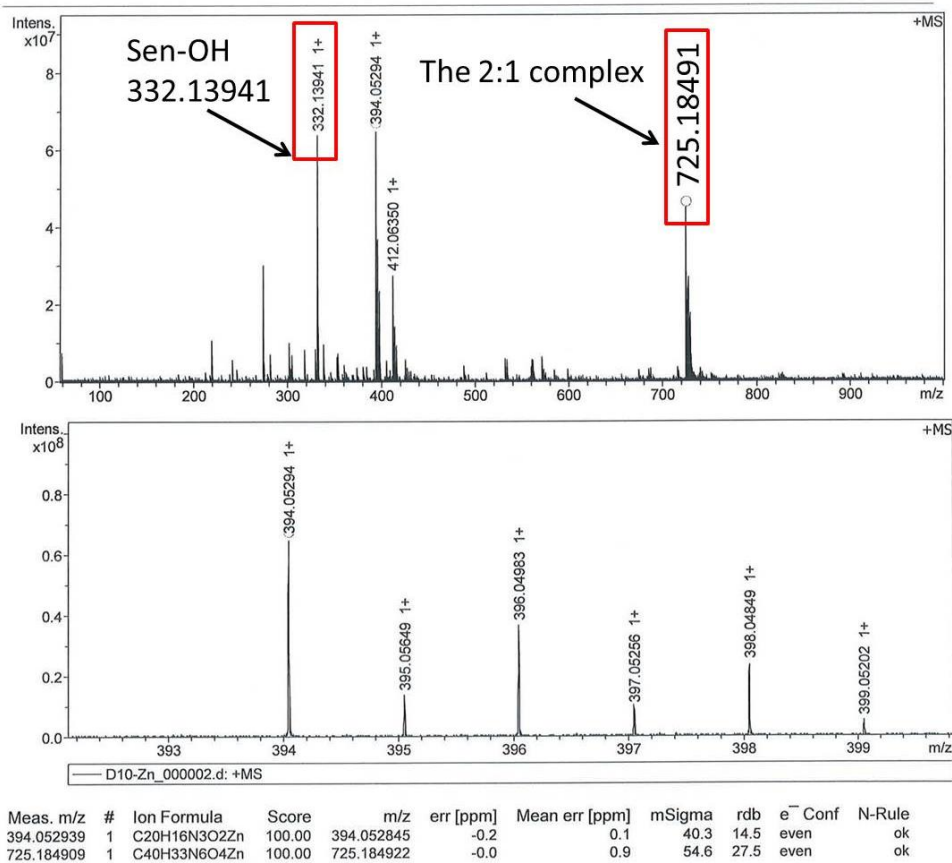


Figure S11. ESI-HRMS of Sen-OH-Zn²⁺.

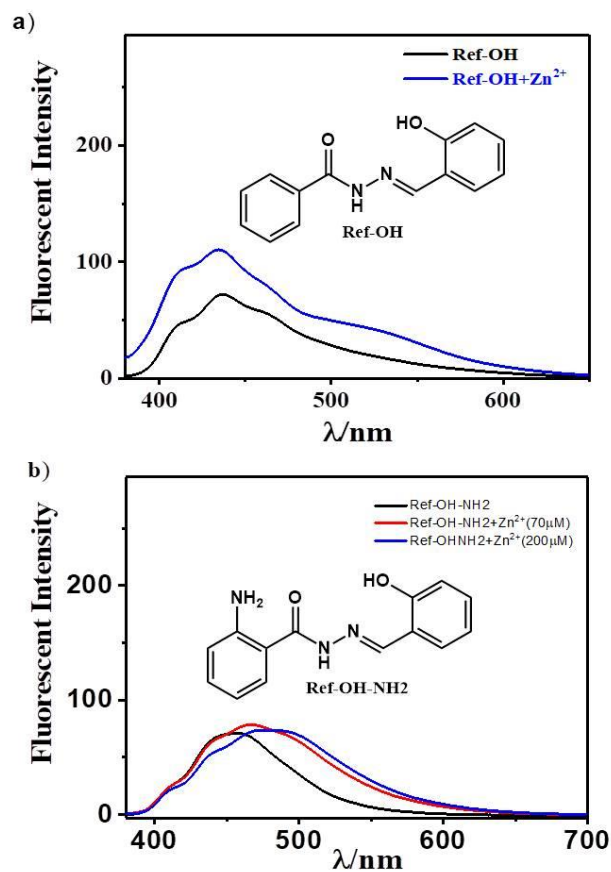


Figure S12. Fluorescence emission spectra of **Ref-OH** (10 μ M) (a) and **Ref-OH-NH₂** (10 μ M) (b) with or without Zn^{2+} in CH_3CN aqueous solution (HEPES 10 mM, pH 7.4). $\lambda_{ex} = 360$ nm.

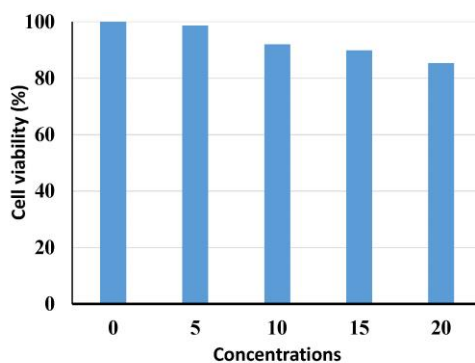


Figure S13. MTT assay of HeLa cells incubated with **Sen-OH** at different concentrations (0, 5, 10, 15, 20 μ M) for 24 hours.