Supporting Information

2-(2'-Hydroxyphenyl)-benzothiazole (HBT)-quinoline conjugate: Highly specific fluorescent probe for Hg^{2+}based on ESIPT and its application in bioimaging

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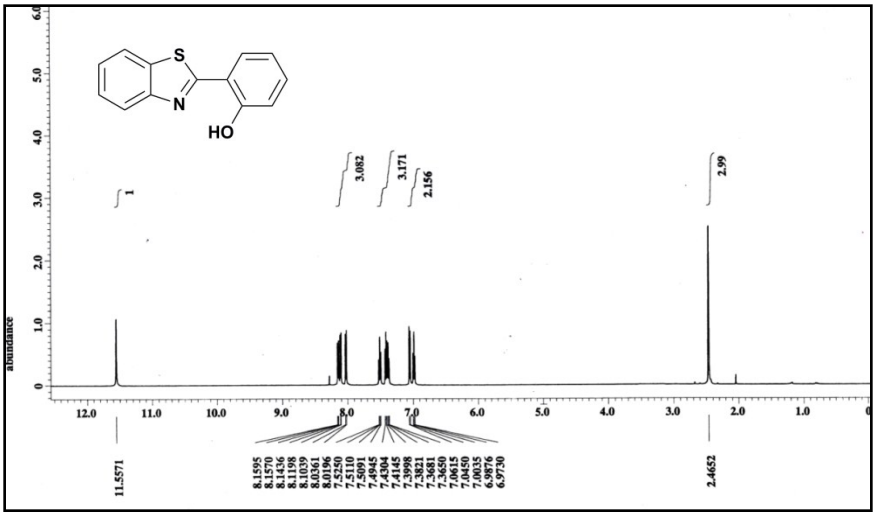

Fig.S1 ^{1}H NMR spectrum of A

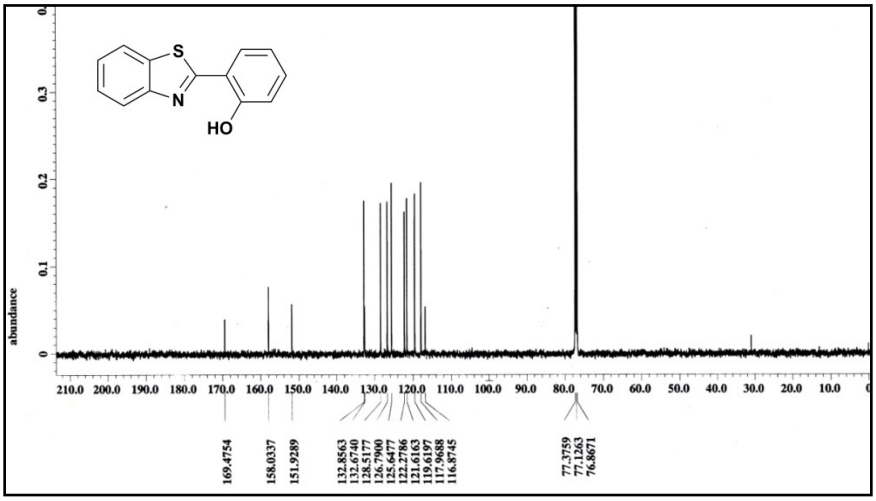

Fig.S2 ^{13}C NMR spectrum of A

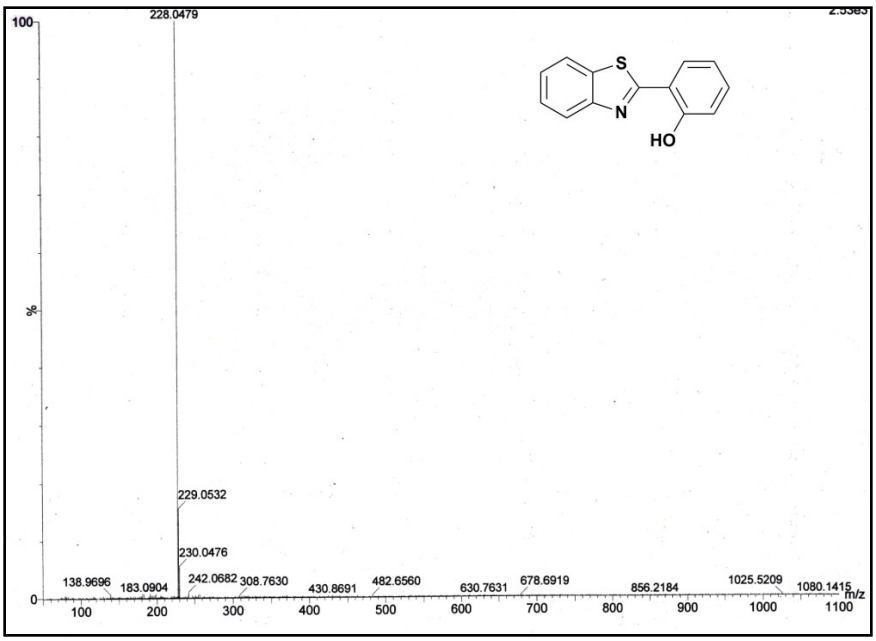

Fig. S3 ESI MS spectrum of the A

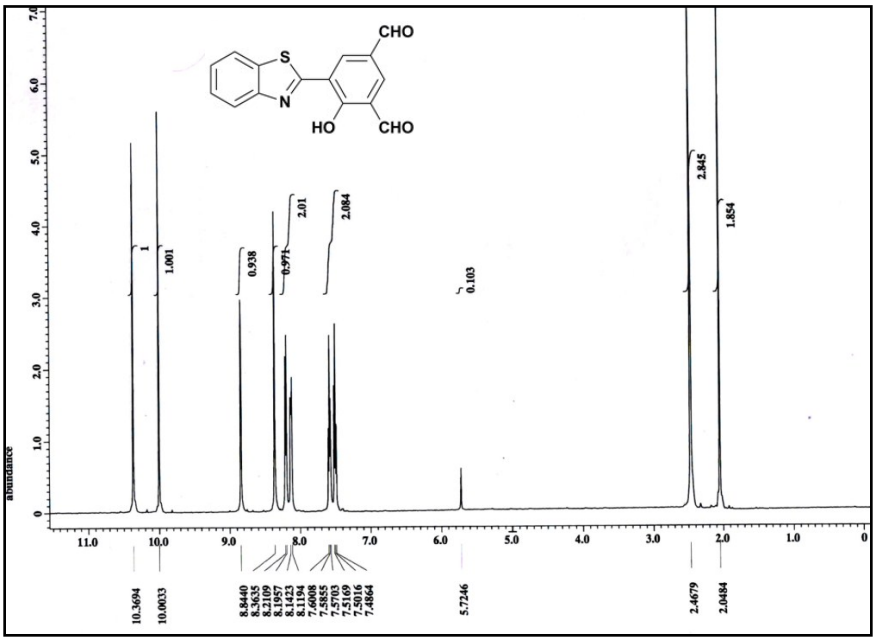

Fig. S4 ^{1}H NMR spectrum of B

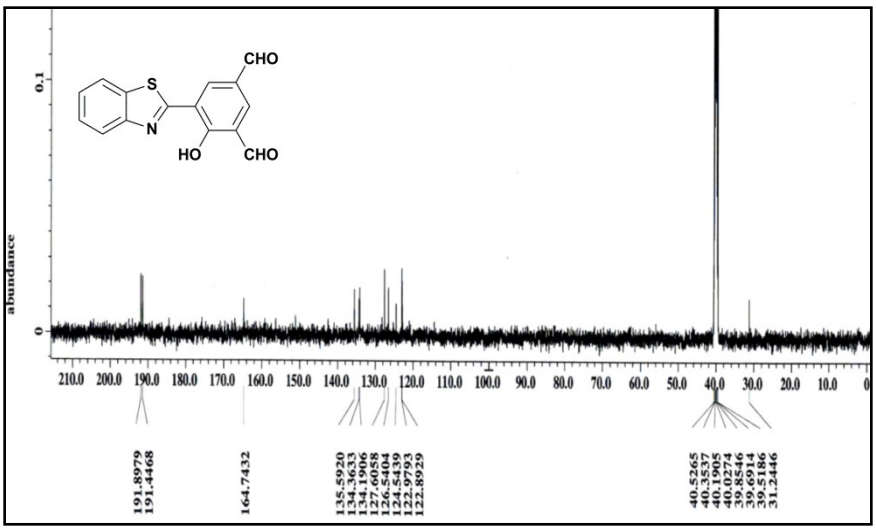

Fig. S5 ^{13}C NMR spectrum of B

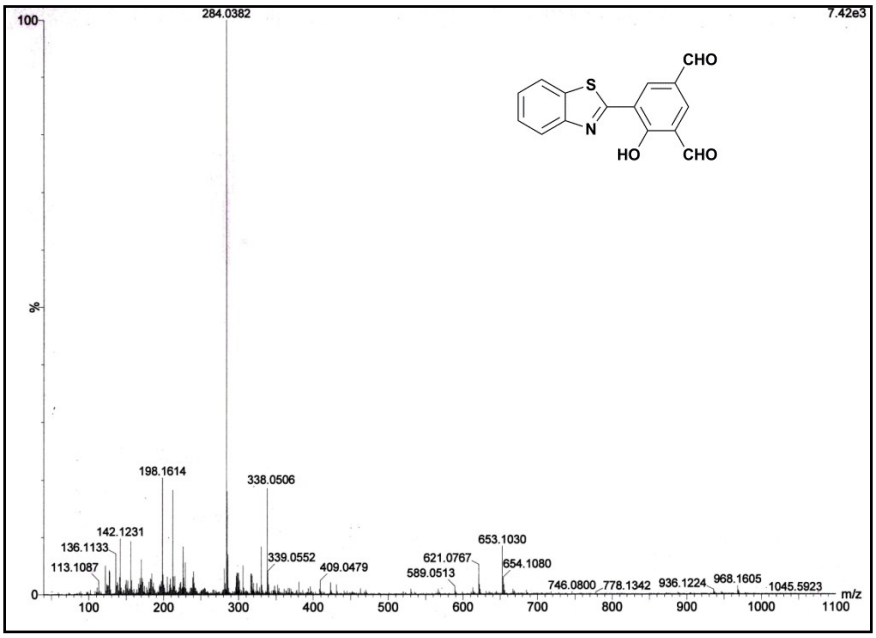

Fig. S6 ESI MS spectrum of the B

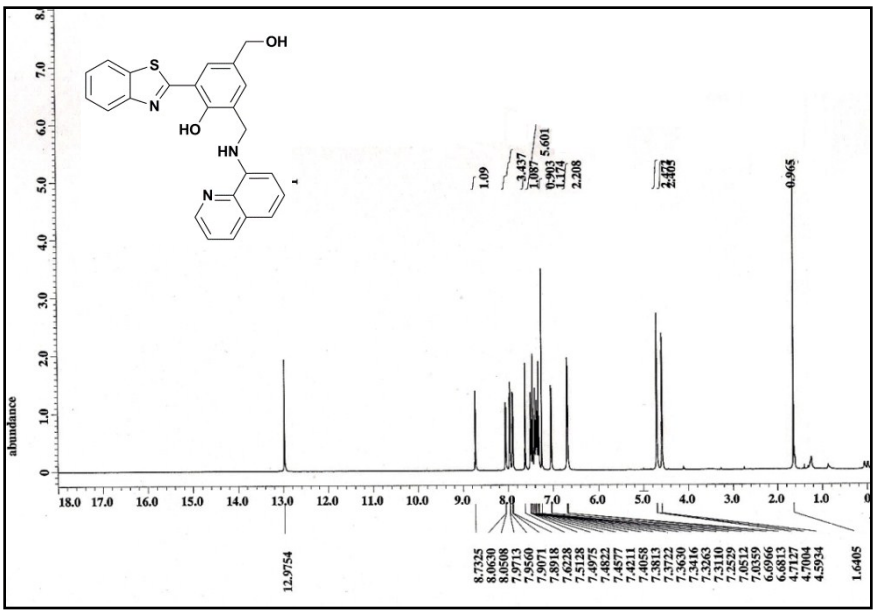

Fig. S7 ^{1}H NMR spectrum of **L**

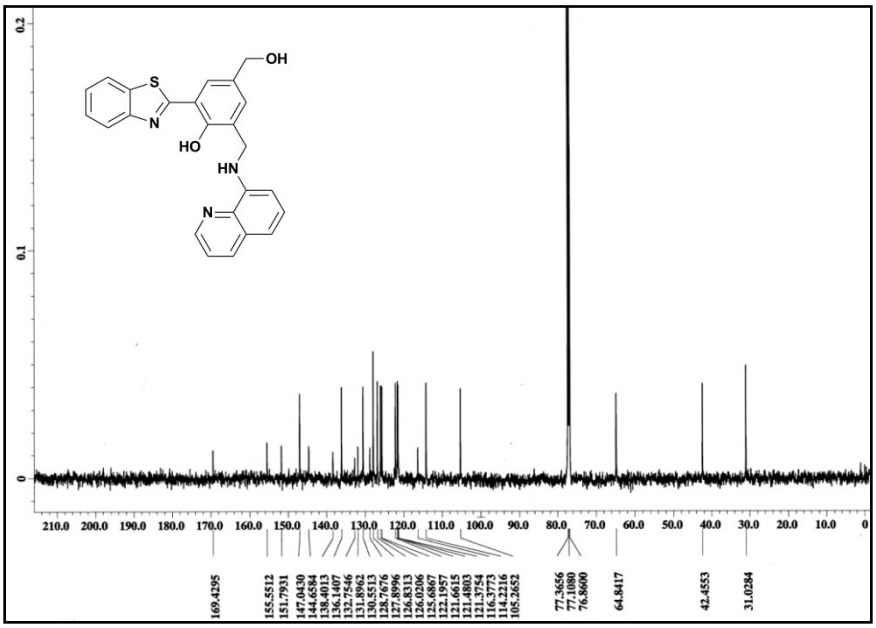

Fig. S8 ^{13}C NMR spectrum of **L**

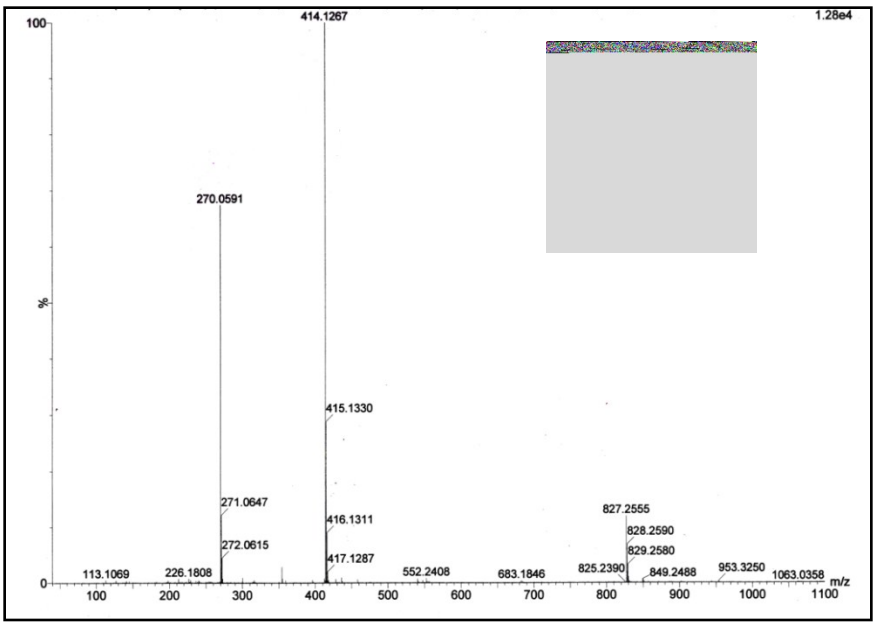

Fig. S9 ESI MS spectrum of the **L**

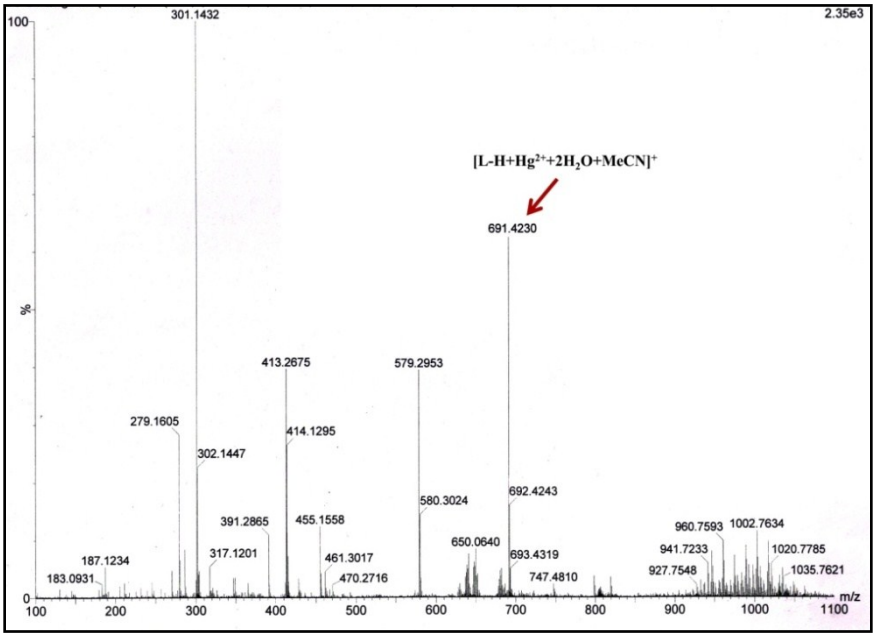

Fig. S10 ESI MS spectrum of the **L** – Hg^{2+} complex

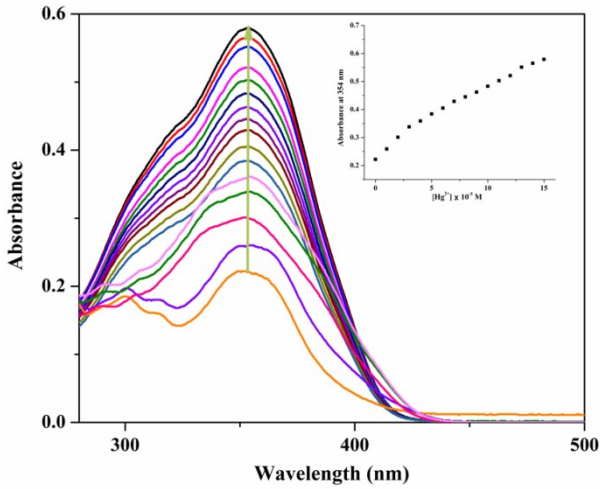

Fig. S11 Absorbance titration of **L** with increasing Hg^{2+} ion concentration in MeCN: H_2O (3:2, v/v, 10 mM HEPES Buffer, pH = 7). λ_{exc} = 340 nm,. Arrow indicates the increasing trend in Hg^{2+} ion concentration.

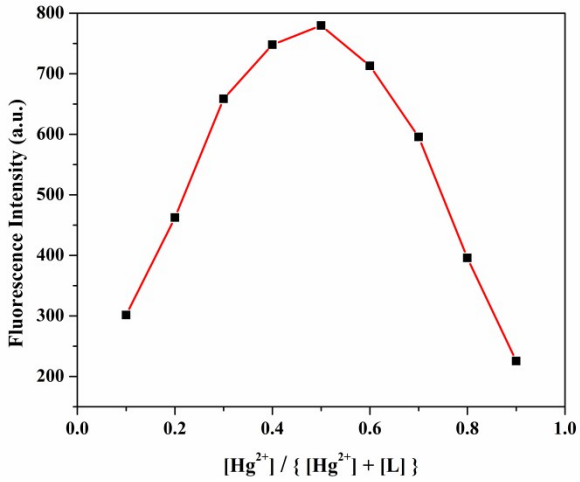

Fig. S12 Job's plot for determination of binding stoichiometry between **L** and Hg^{2+}

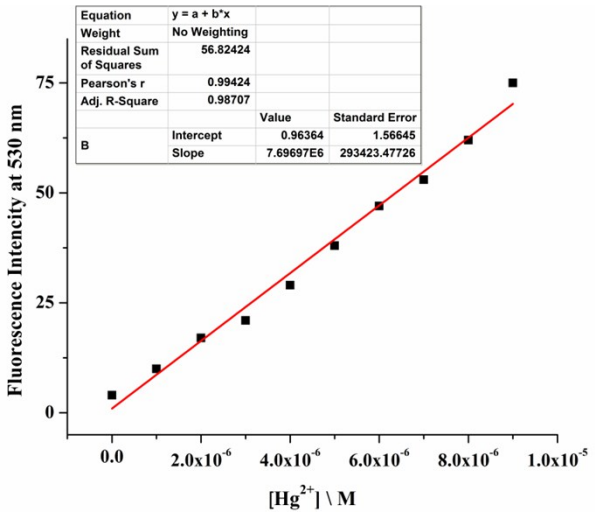

Fig.S13 Linear response curve of **L** at 590 nm depending on the Hg^{2+} ion concentration for determination of lowest detection limit

Entry	Probe	Solvent system	Detection limit	Binding constant	Stoichiometry (Ligand:Hg^{2+})	Imaging applied on cells	References
1	2	CH_3CN/H_2O (1:1; V/V)	-	1.04×10^5 M^{-2}	2:1	-	1
2	1	PBS buffer (~1% CH_3CN)	20 ppb	-	2:1	-	2
3	1	PBS buffer (0.5% CH_3CN)	5.1 nM	-	1:1	*HeLa* cells	3
4	2	PBS buffer (0.5% CH_3CN	3.8 nM	-	1:1	*HeLa* cells	3
5	PDP	CH_3CN/ H_2O (1 : 1;V/V)	4.9 µM	7.5×10^3 M^{-1}	1:1	lung cancer cell line (NCI-H460)	4
6	Pvi	PBS buffer (1% CH_3CN)	7.8 nM	-	-	*HeLa* cells	5
7	**L**	CH_3CN: H_2O (3:2; V/V)	0.11 µM	1.24×10^4 M^{-1}	1:1	*HeLa* cells	Present Study

Table 1: Comparison of some ESIPT based Hg^{2+} sensors

References

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