

A turn-on fluorescent probe with high selectivity for Hg²⁺ and its applications in living cells

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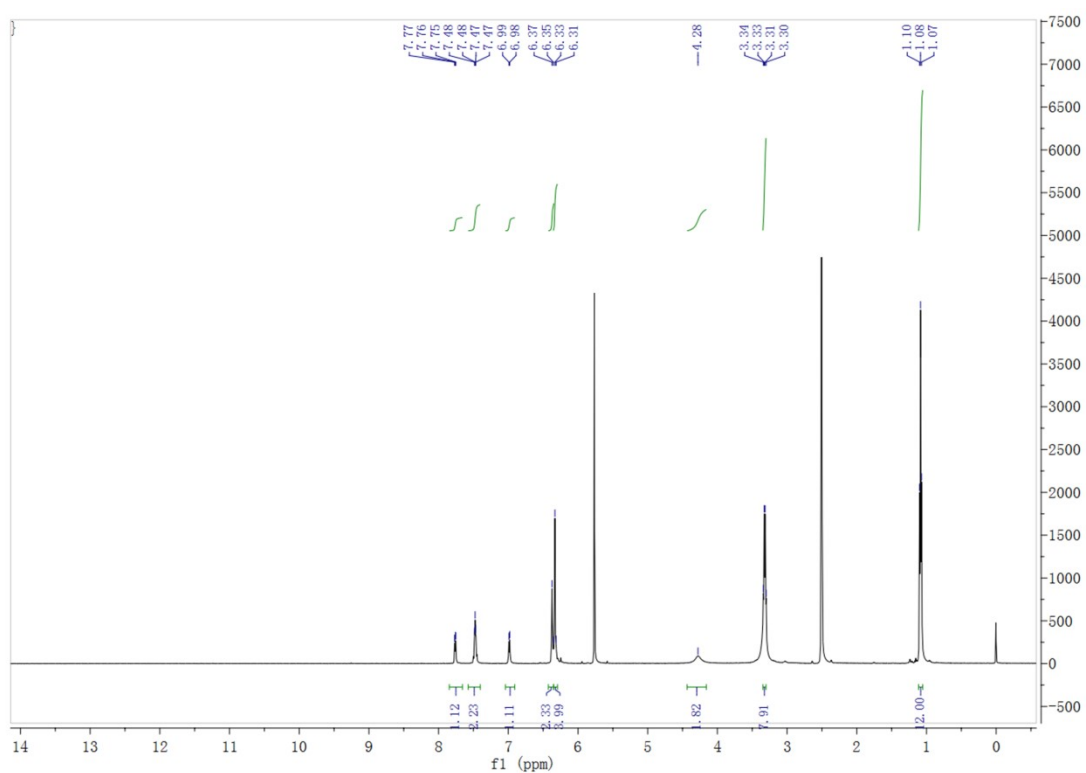


Fig. S1 The ¹H NMR of compound 1.

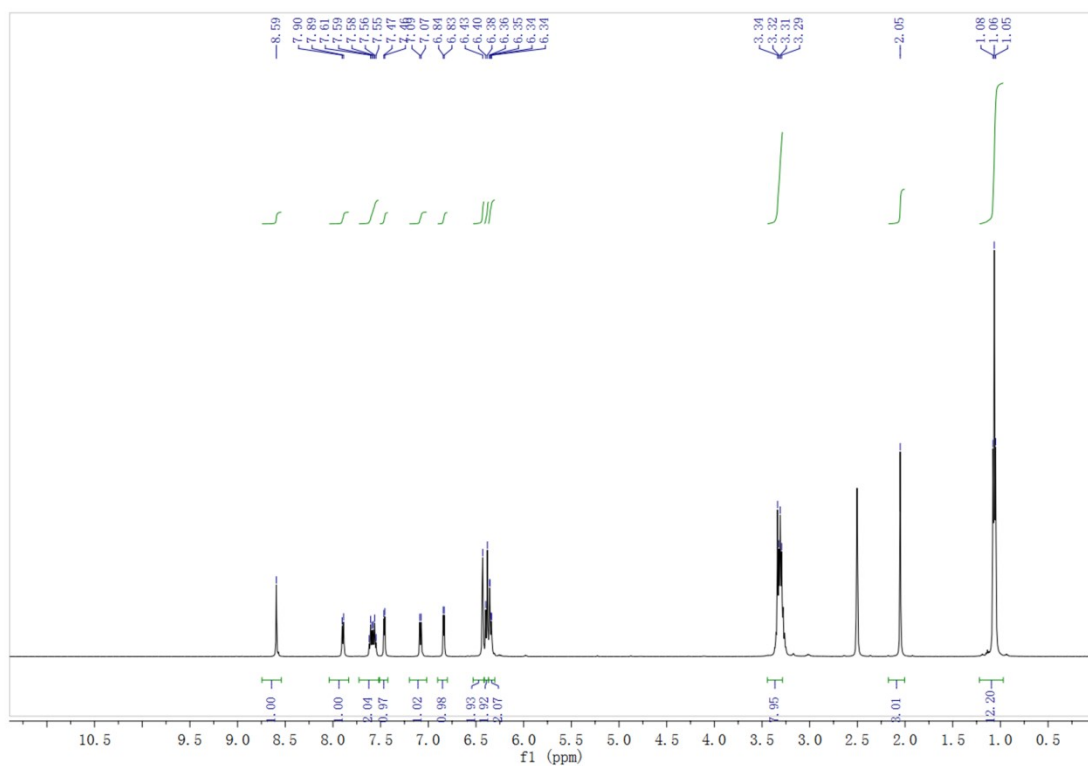


Fig. S2 The ^1H NMR of probe L.

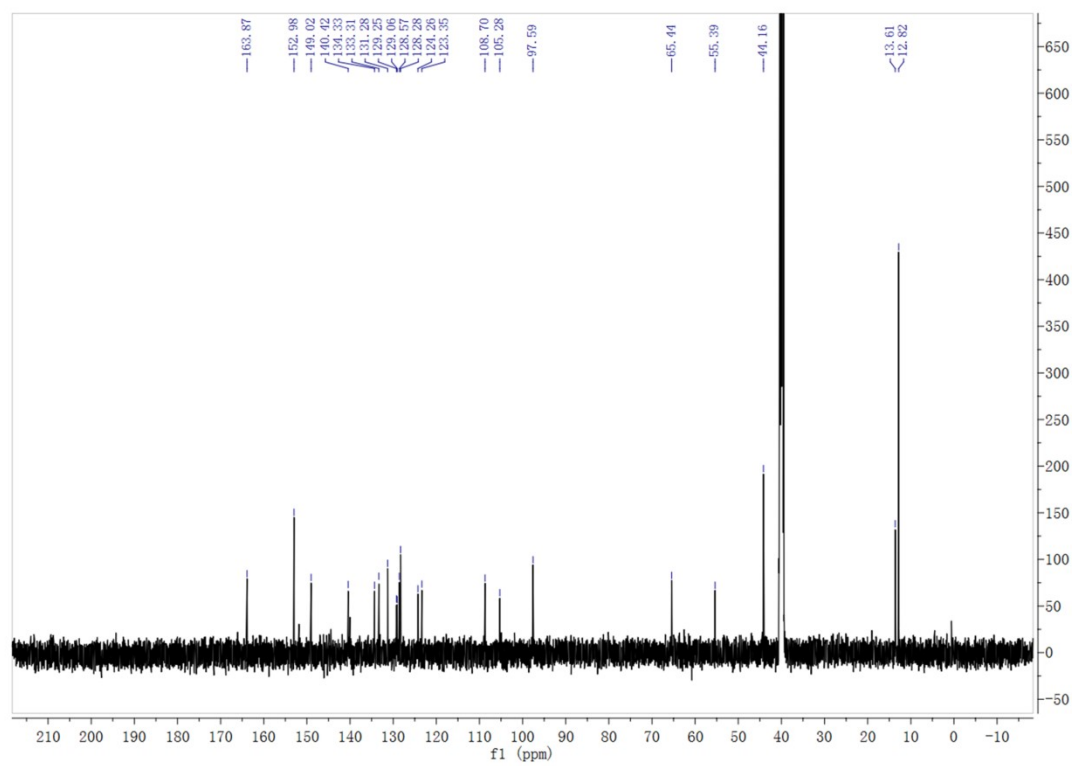


Fig. S3 The ^{13}C NMR of probe L.

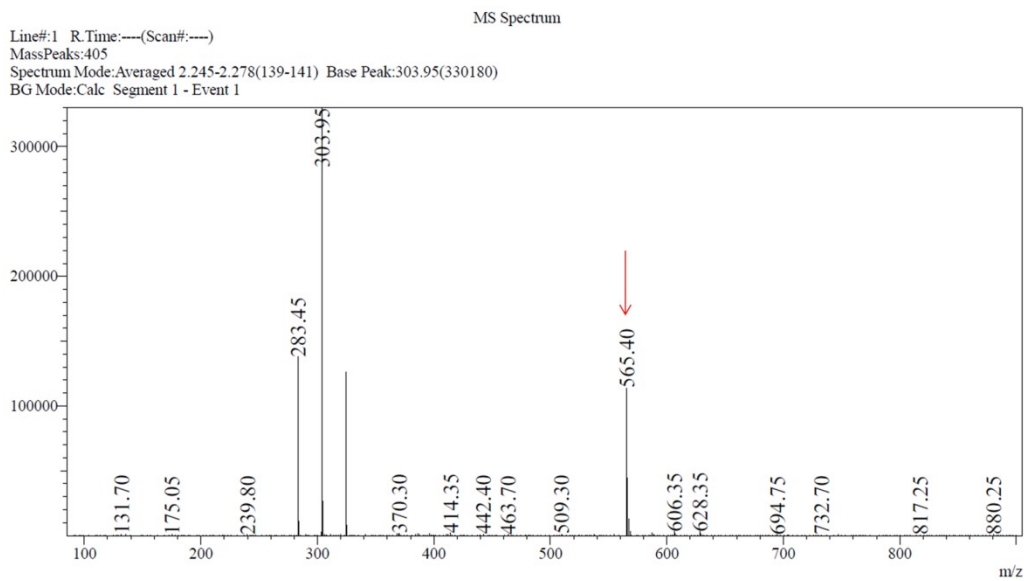


Fig. S4 The mass spectrum of probe L.

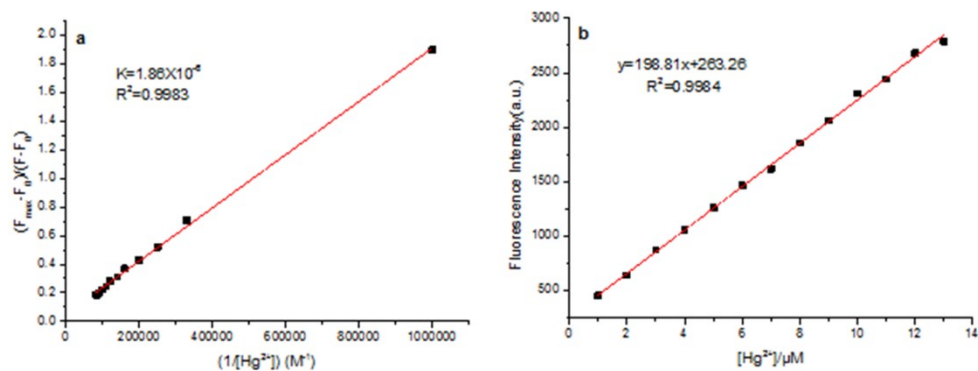


Fig. S5 Analysis for fluorescent data (a) Benesi-Hildebrand plot of L-Hg²⁺ complexation. (b) The linear plot between fluorescence intensity and different concentration of Hg²⁺ in CH₃OH-H₂O (4 :1, v/v, Tris-HCl buffer pH=8.0).

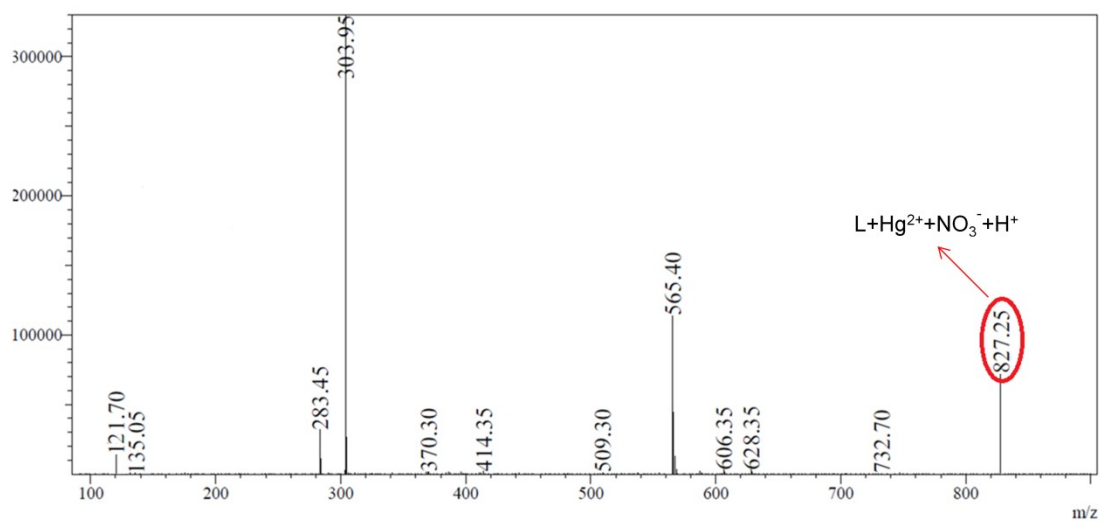


Fig. S6 Ms analysis of the L-Hg²⁺ complex

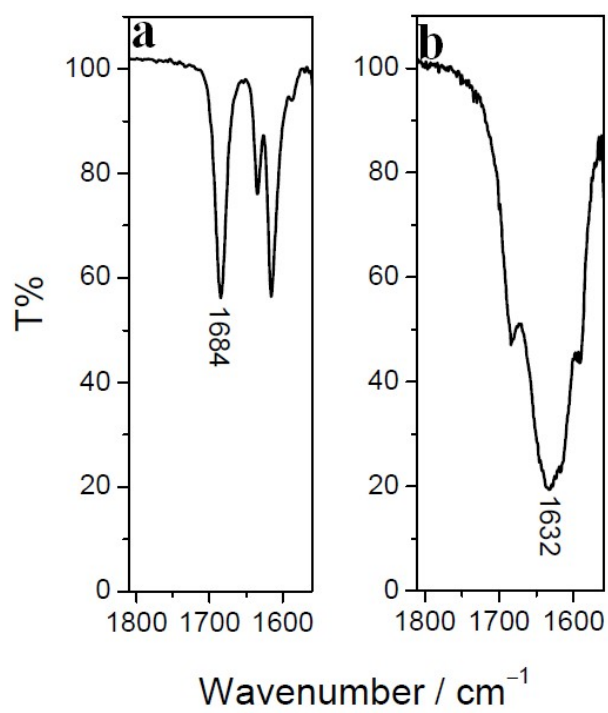


Fig. S7 (a) the IR spectrum for the C=O amide bond of probe L. (b) the IR spectrum for the C=O amide bond of probe L, when existence of 1.0 equiv. Hg²⁺.

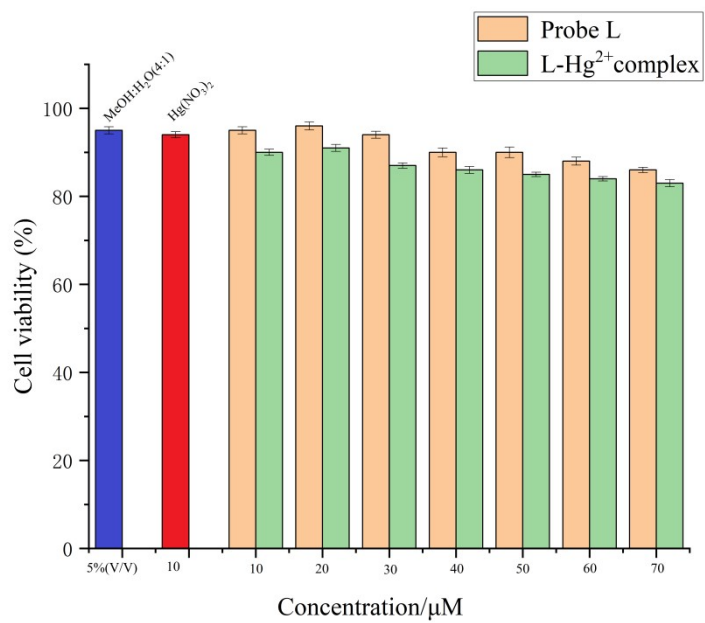


Fig. S8 MTT assay to determine the cytotoxicity of the CH₃OH-H₂O(4:1) solution, Hg(NO₃)₂, probe L and L-Hg²⁺ complex in MCF-7 cells. MCF-7 cells were treated with 5% (v/v) CH₃OH-H₂O(4:1) solution, 10 μM Hg(NO₃)₂ in CH₃OH-H₂O(4:1) solution, probe L and the L-Hg complex (10, 20, 30, 40, 50, 60 and 70 μM) in CH₃OH-H₂O(4:1) solution respectively.