Supporting Information

Naphthylthiourea-Modified Permethylcyclodextrin as a Highly Sensitive and Selective Turn-On Fluorescent Chemosensor for Hg^{2+} in Water and Living Cells

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Figure S1. ^{1}H NMR spectrum (400 MHz) of **1** in D_2O.

Figure S2. ^{13}C NMR spectrum (100 MHz) of **1** in $CDCl_3$.

Figure S3. FT-IR spectrum of **1**.

Figure S4. ESI-MS of **1**.

Figure S5. ^{1}H NMR spectrum (400 MHz) of **2** in D_2O.

Figure S6. ^{13}C NMR spectrum (75 MHz) of **2** in $CDCl_3$.

Figure S7. HR-MS of **2**.

Figure S8. FT-IR spectrum of **2**.

Figure S9. ESI-MS after addition of Hg^{2+} ion into the aqueous solution of probe **1**.

Figure S10. ROESY spectrum between **1** and liposome.

Figure S11. Fluorescence spectra of **1** and free 1-naphthyl isothiocyanate (5 μM in

H_2O/MeCN) with and without the addition of Hg^{2+} (200 equiv).

Figure S12. Fluorescence spectra of **1** (5 μM in H_2O) with the addition of Ag^{+} (200 equiv) within 72h.

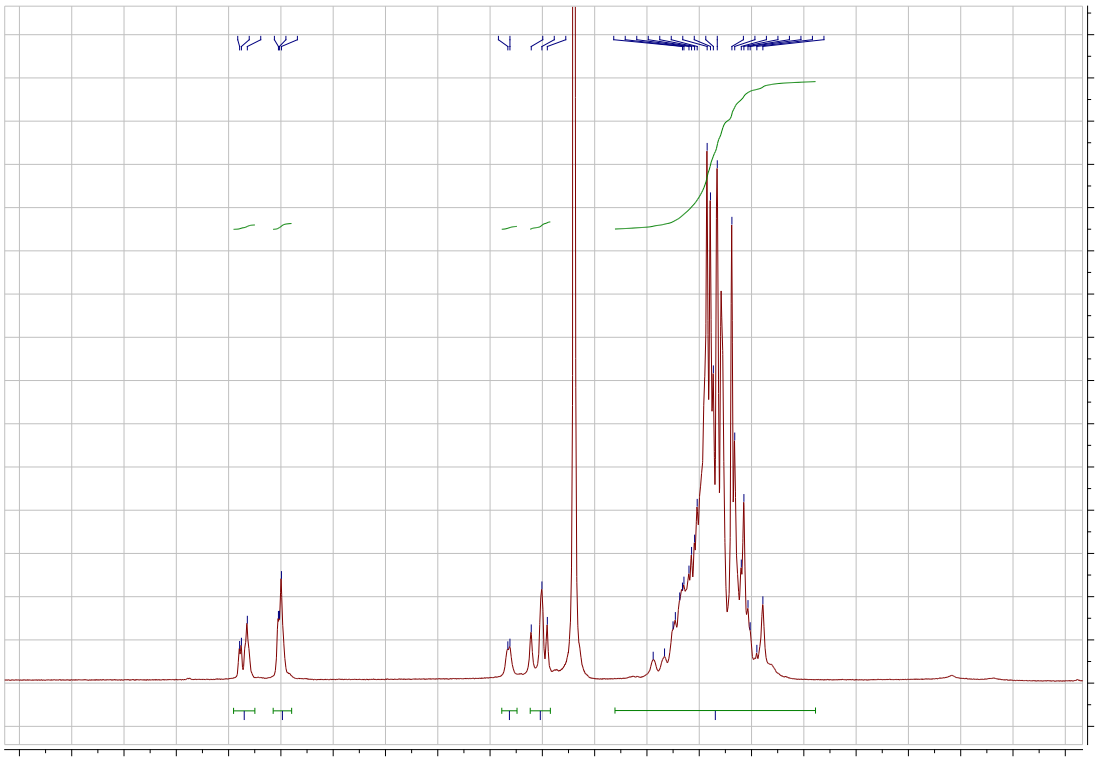

Figure S1. ^{1}H NMR spectrum (400 MHz) of **1** in D_2O.

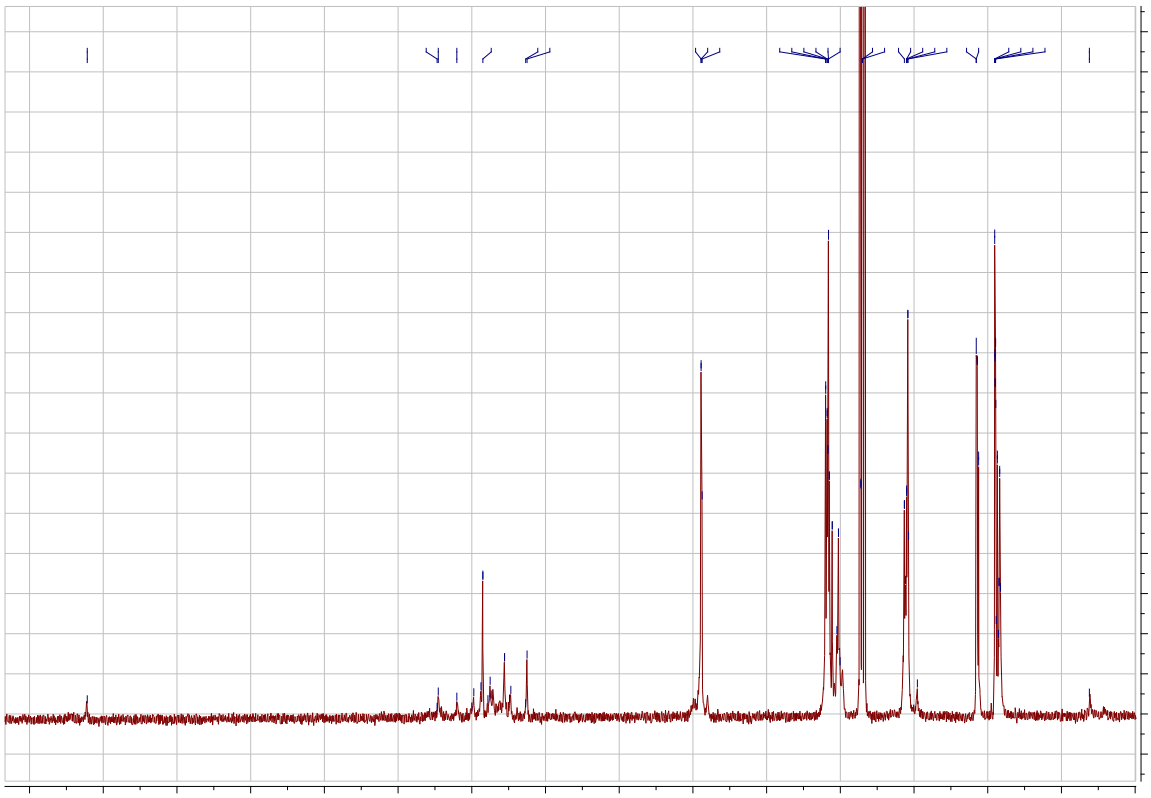

Figure S2. ^{13}C NMR spectrum (100 MHz) of **1** in $CDCl_3$.

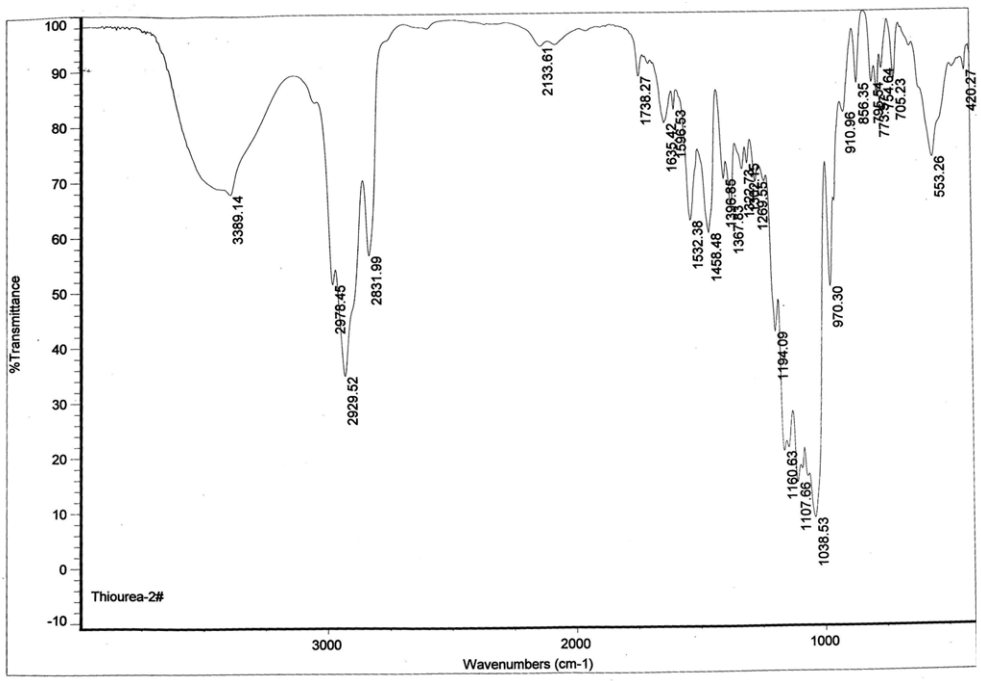

Figure S3. FT-IR spectrum of **1.**

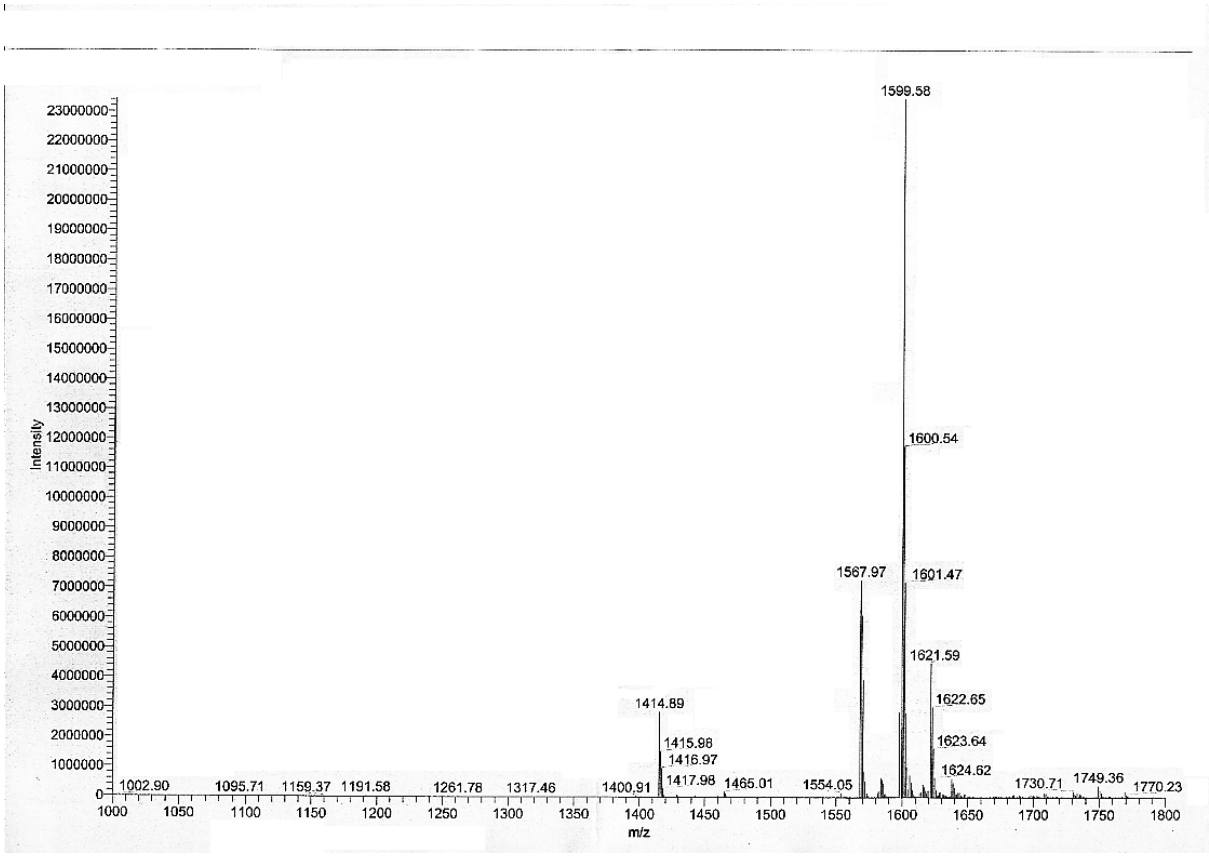

Figure S4. ESI-MS of **1**.

Figure S5. ^{1}H NMR spectrum (400 MHz) of **2** in D_2O.

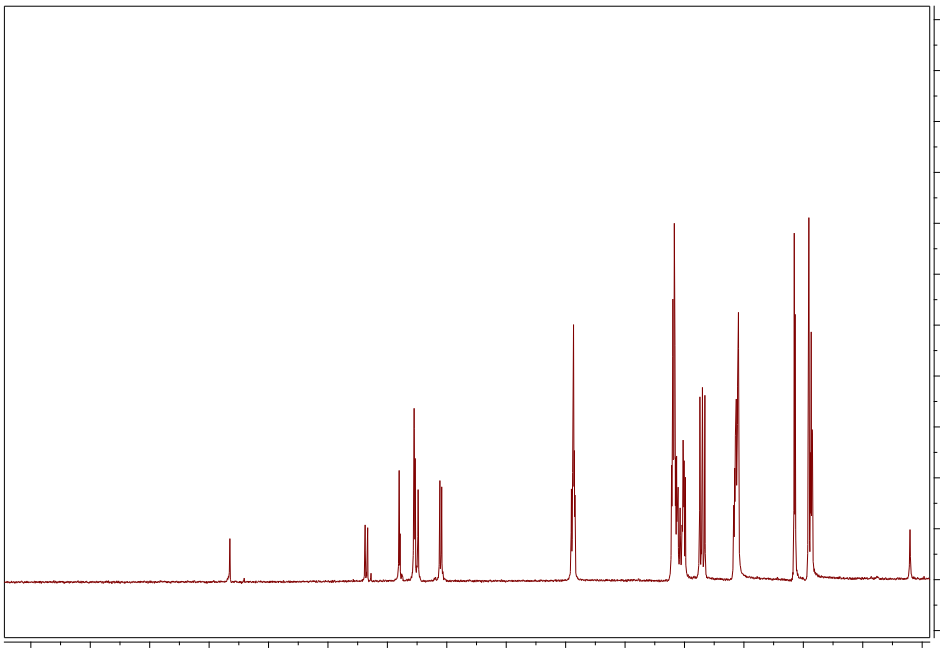

Figure S6. ^{13}C NMR spectrum (75 MHz) of **2** in $CDCl_3$.

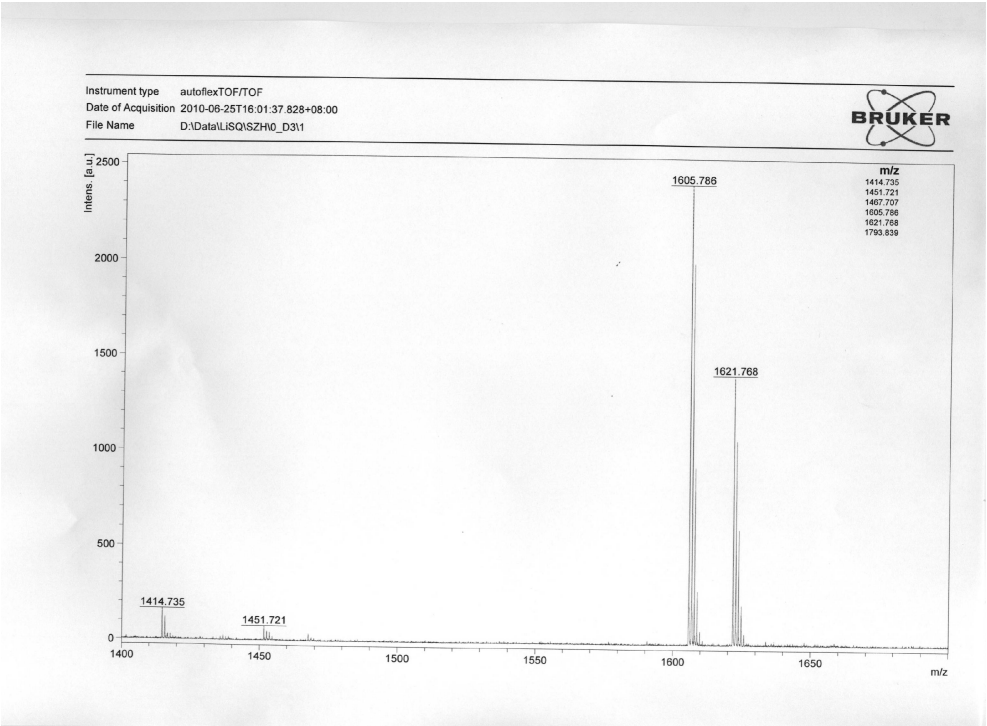

Figure S7. HRMS (MALDI-TOF) of **2**.

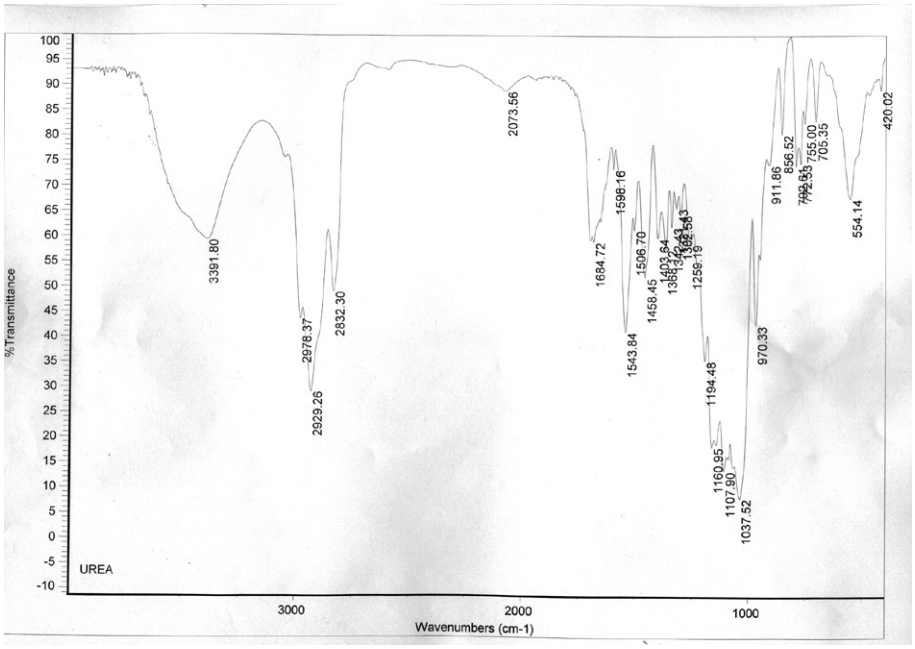

Figure S8. FT-IR spectrum of **2.**

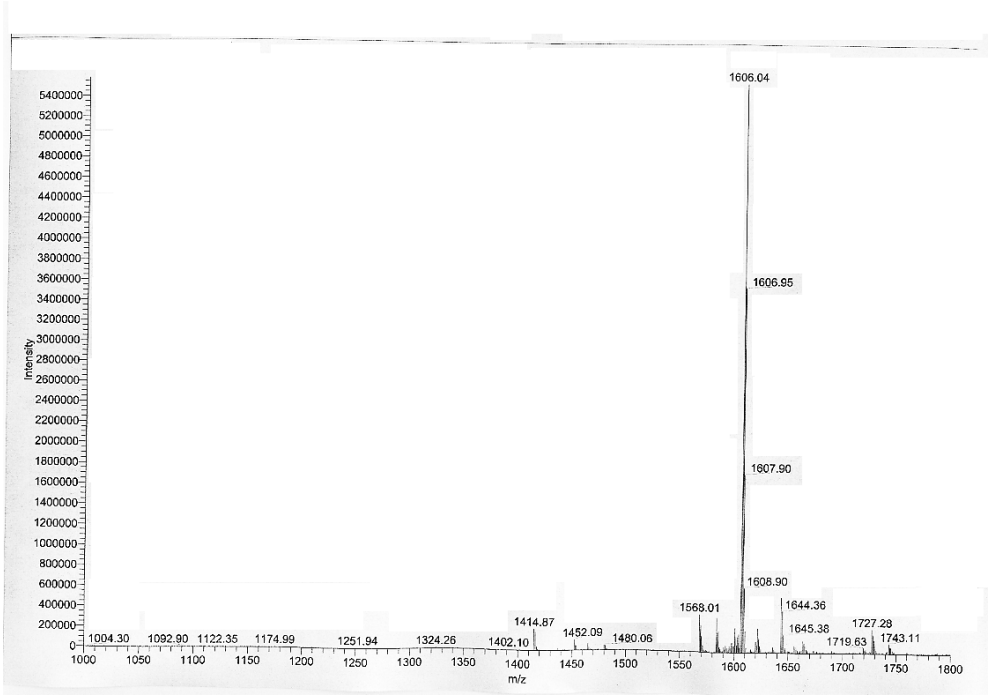

Figure S9. ESI-mass spectrum of **1** after the addition of Hg^{2+} ion.

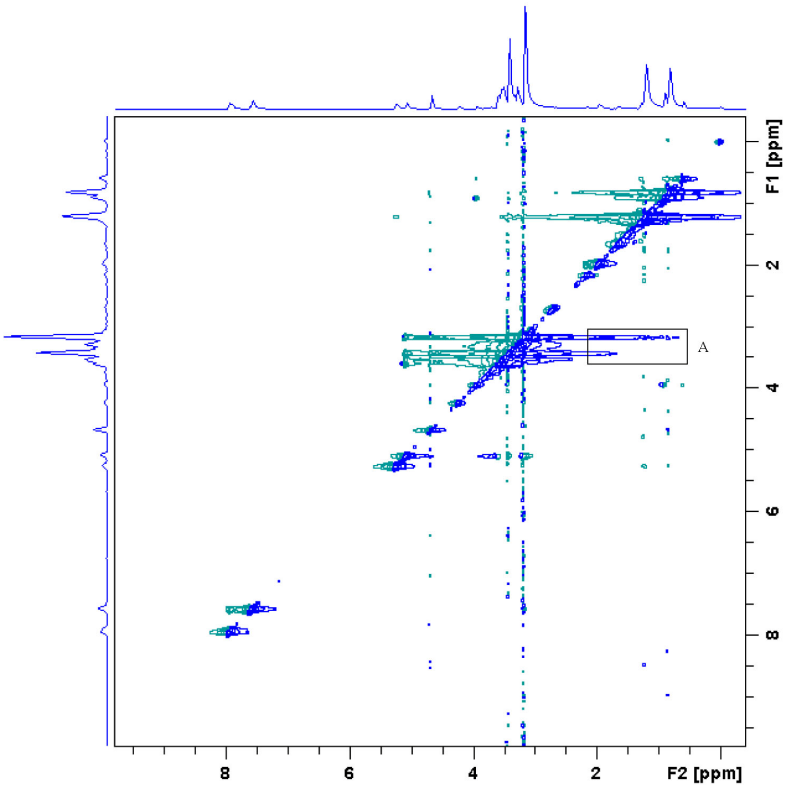

Figure S10. ROESY spectrum of **1** in the presence of liposome, where the peaks A were assigned to the NOE correlations between the cholesterol or lecithin protons in liposome and

the interior protons (H3/H5/H6) of PMCD.

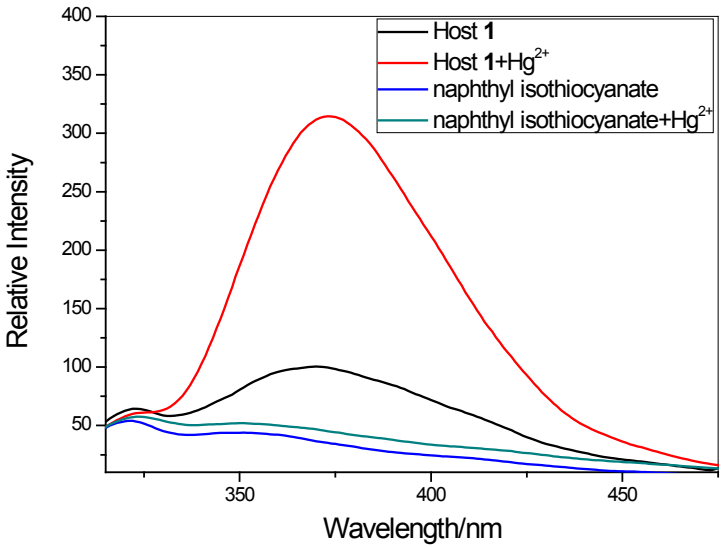

Figure S11. Fluorescence spectra of **1** and free 1-naphthyl isothiocyanate (5 μM in H_2O/MeCN) with and without the addition of Hg^{2+} (200 equiv).

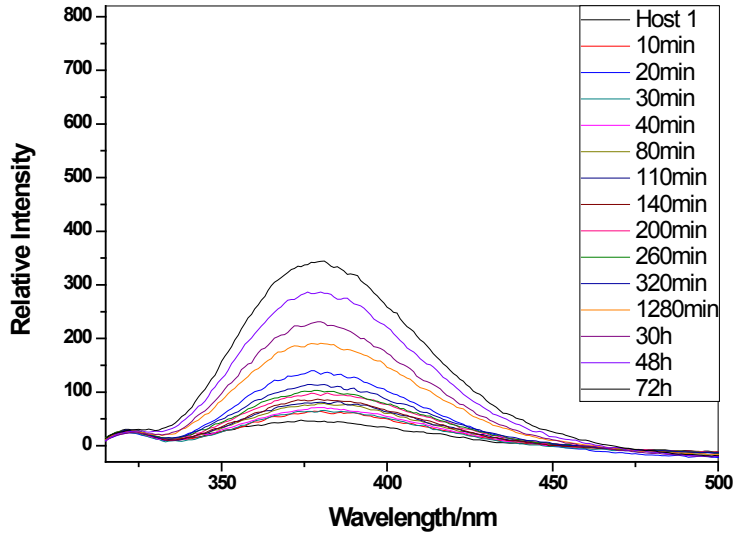

Figure S12. Fluorescence spectra of **1** (5 μM in H_2O) with the addition of Ag^{+} (200 equiv) within 72h.