*Supporting Information for:*

# Highly sensitive and selective lighting-up fluorescent probe for monitoring gallium and chromium ions in *vitro and in vivo*

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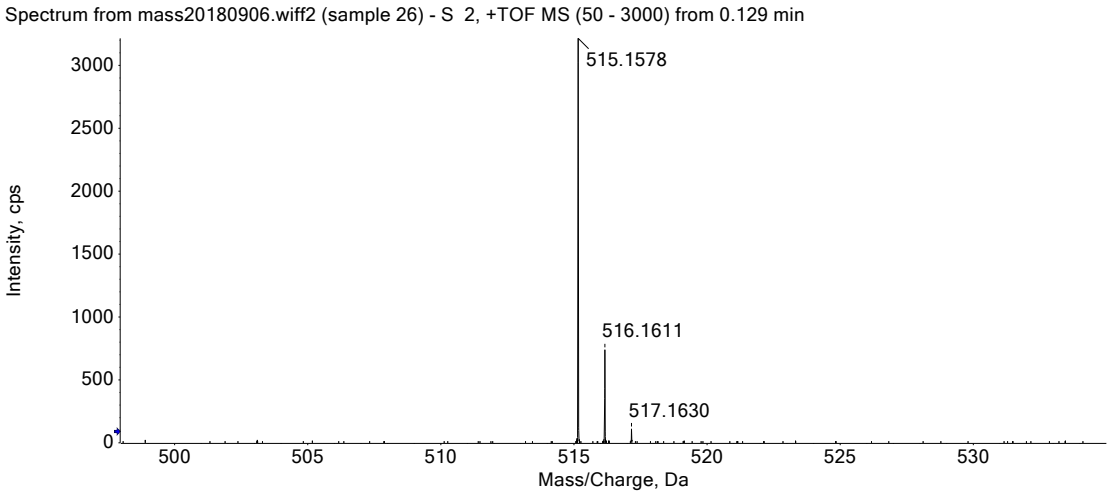


**Fig. S1** The high resolution mass spectrum (HRMS) of free **NBDT**.

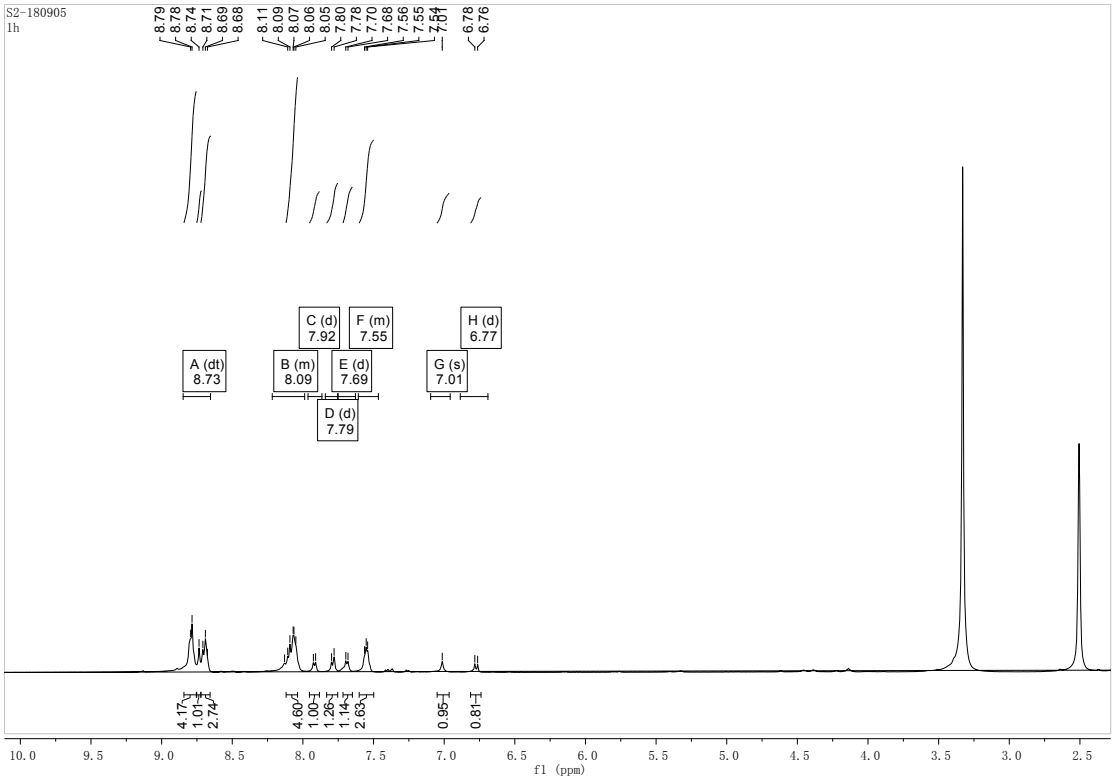


**Fig. S2** The $^{1}$H NMR of **NBDT** dissolved in DMSO-d6 at room temperature.

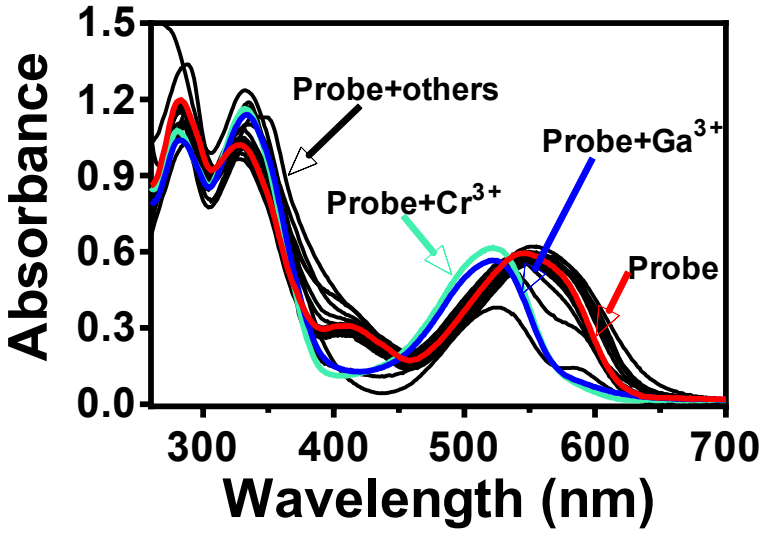


**Fig. S3** The absorption spectra of **NBDT** recognizing various metal ions (1.0 eq.) ($Eu^{3+}$, $Dy^{3+}$, $Er^{3+}$, $Fe^{3+}$, $Zn^{2+}$, $Ni^{2+}$, $Co^{2+}$, $Mg^{2+}$, $Ca^{2+}$, $Cd^{2+}$, $Mn^{2+}$, $Cu^{2+}$, $Ag^{+}$, $Li^{+}$, $Na^{+}$, $Cr^{3+}$ and $Ga^{3+}$) in DMSO/$H_2O$ (v/v=9:2) solution.

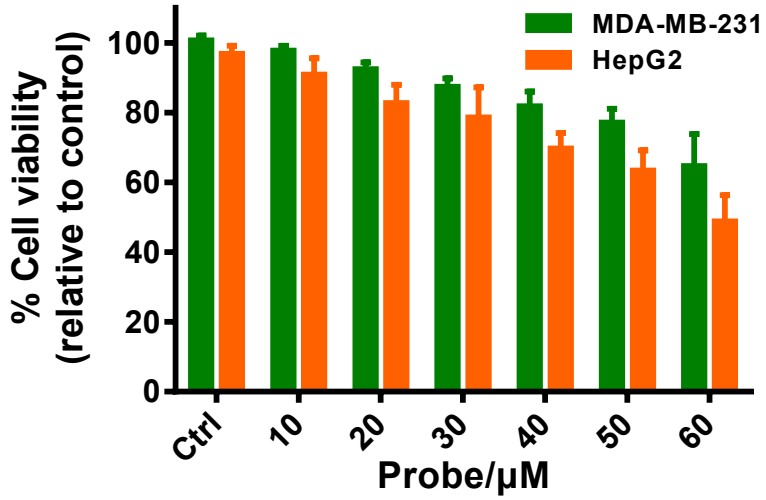


**Fig. S4** Evaluation of the cell viability using the MTT assay in MDA-MB-231 (A), and HepG2 (B) cells at 24 h. PBS treatment as a control group. The concentration of **NBDT** varied from 10 to 60 μM. Results are presented as the mean of the three measurements ± standard deviation. (n = 3)