Supporting Information

"One Stone, Two Birds" - A Mitochondria-Targeted Fluorescent Probe for Detection of Viscosity and HSO_3^- in Living Cells

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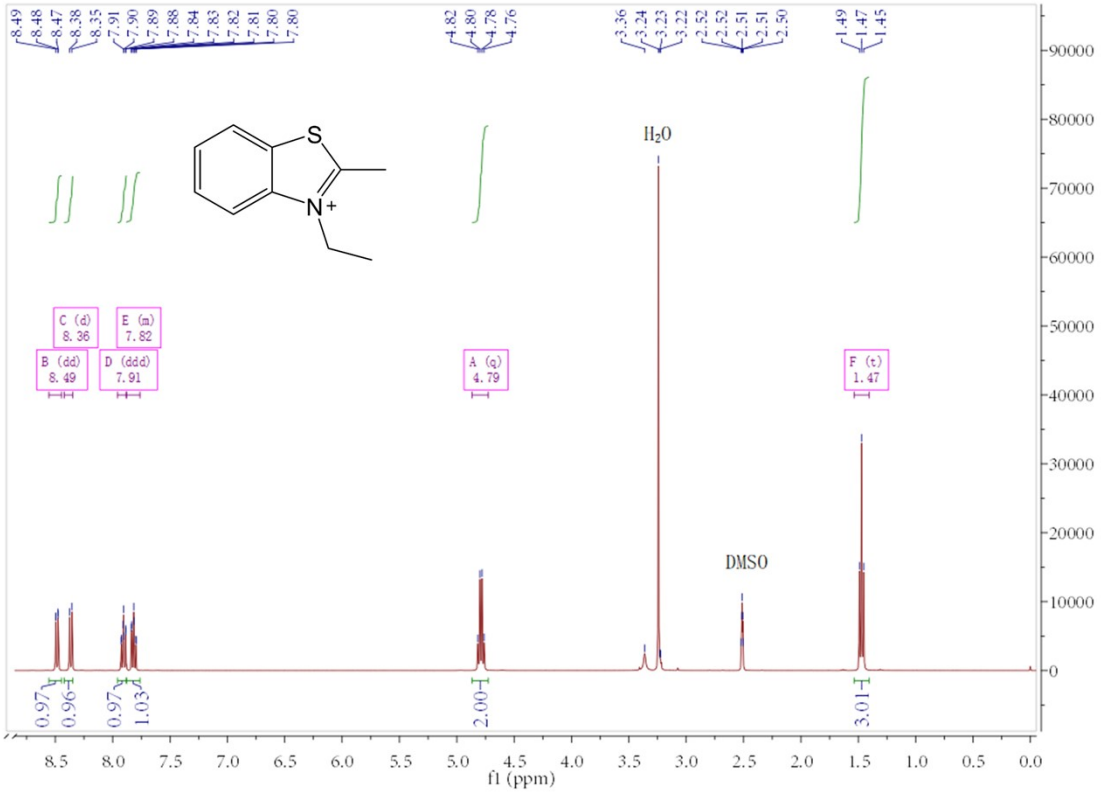

Fig. S1. ^{1}H NMR of the intermediate.

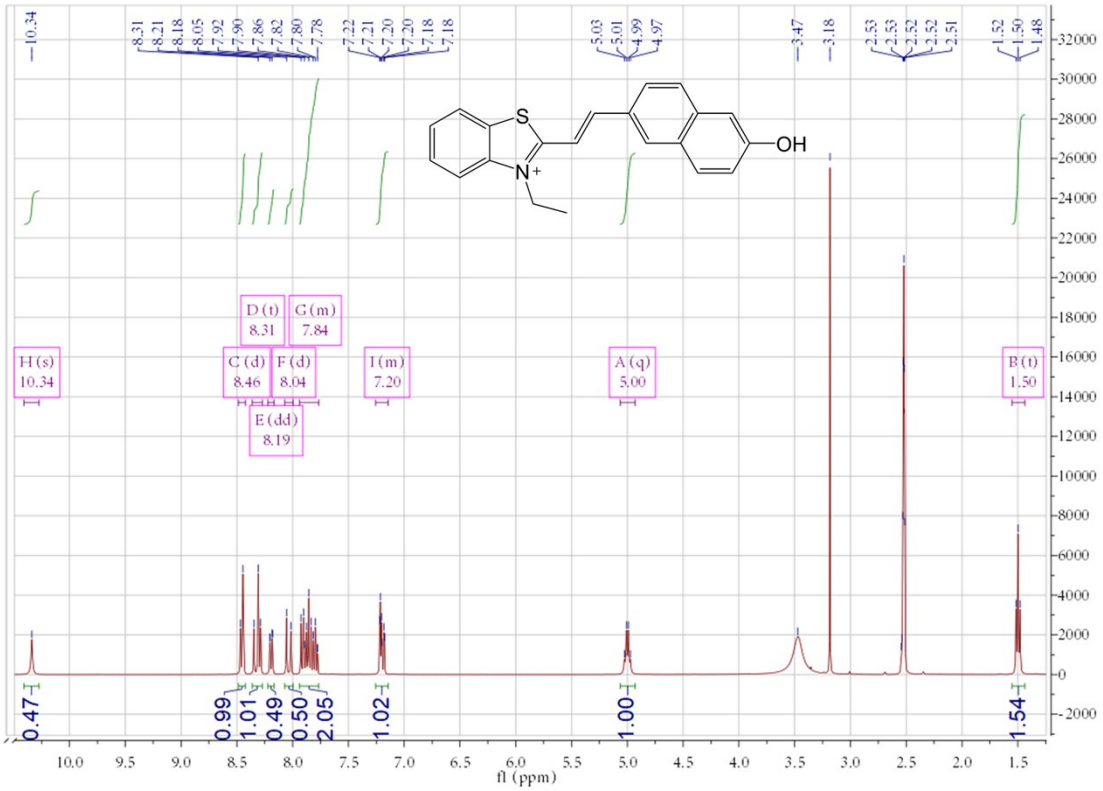

Fig. S2. ^{1}H NMR of **Hcy-NT**.

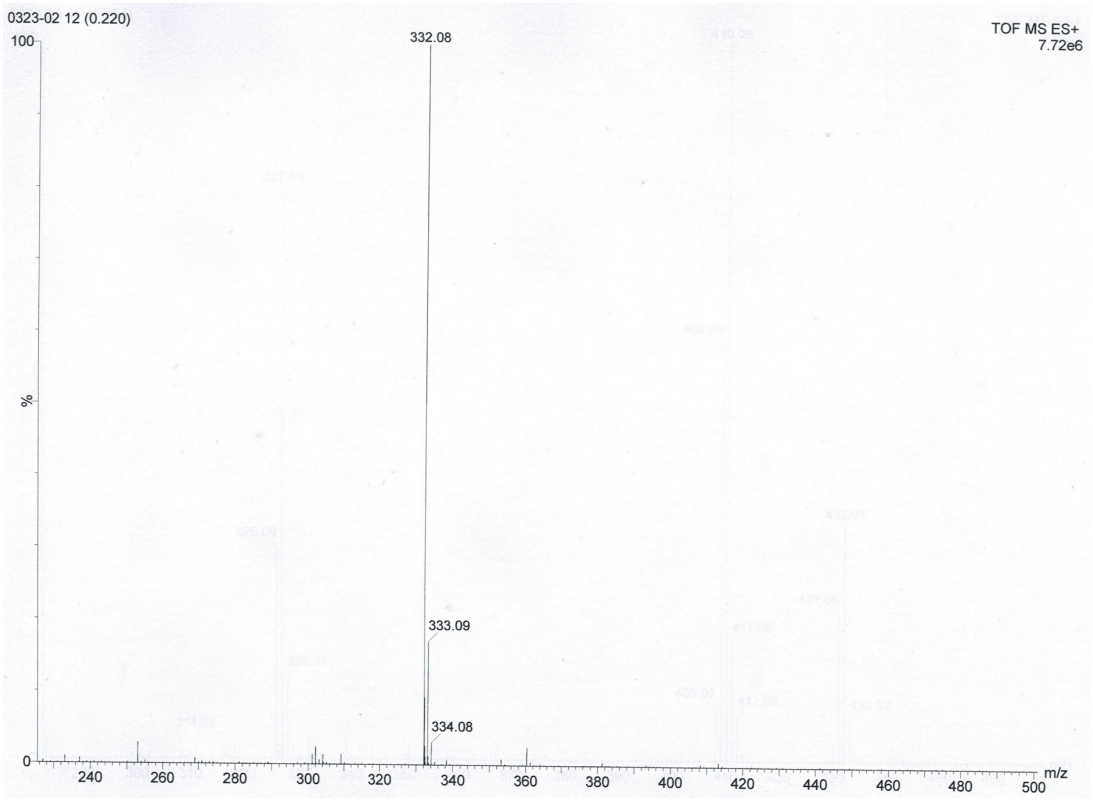

Fig. S3. MS of **Hcy-NT**.

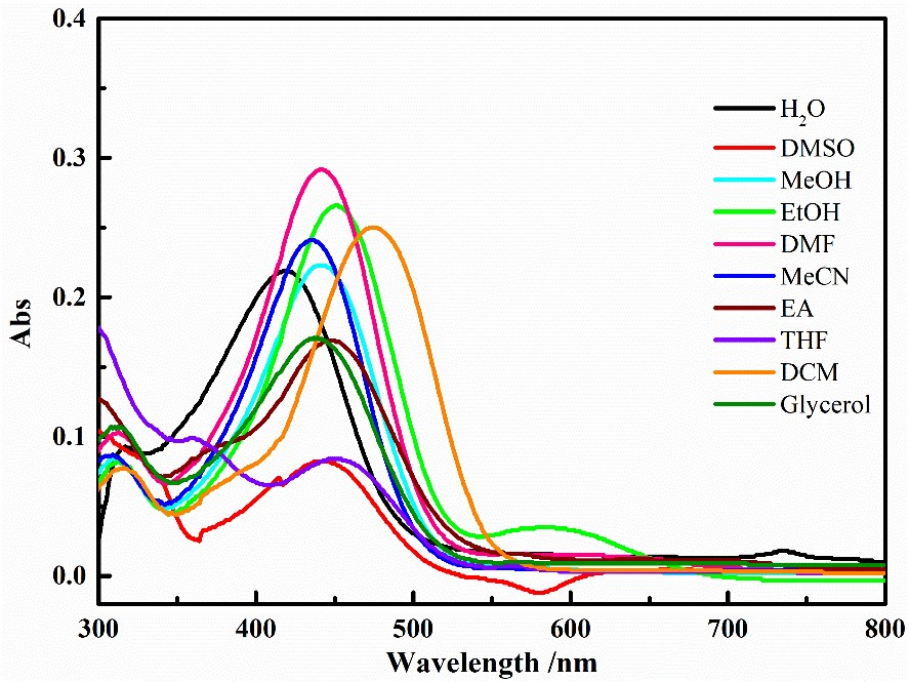

Fig. S4. The absorption spectra of **Hcy-NT** (10 μM) in different solvents.

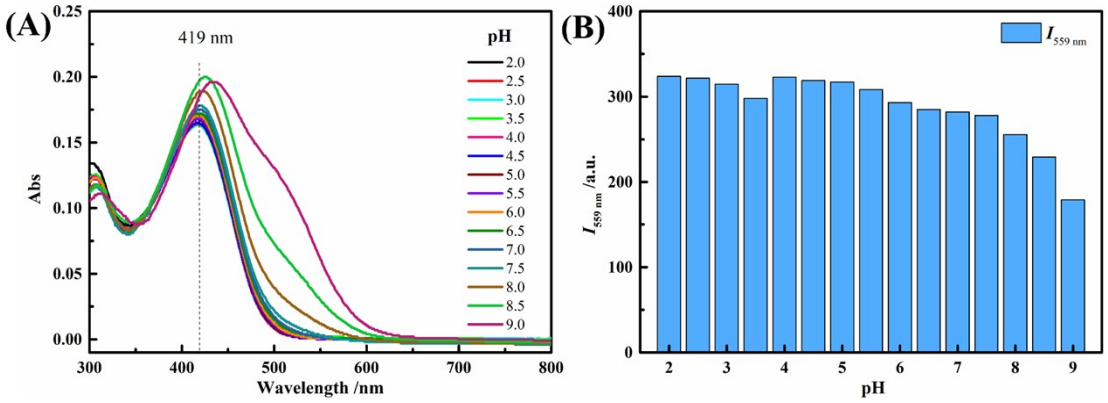

Fig. S5. (A) The absorption spectrum and (B) fluorescence intensity of **Hcy-NT** (10 μM) in different pH buffers. λ_{ex}=419 nm.

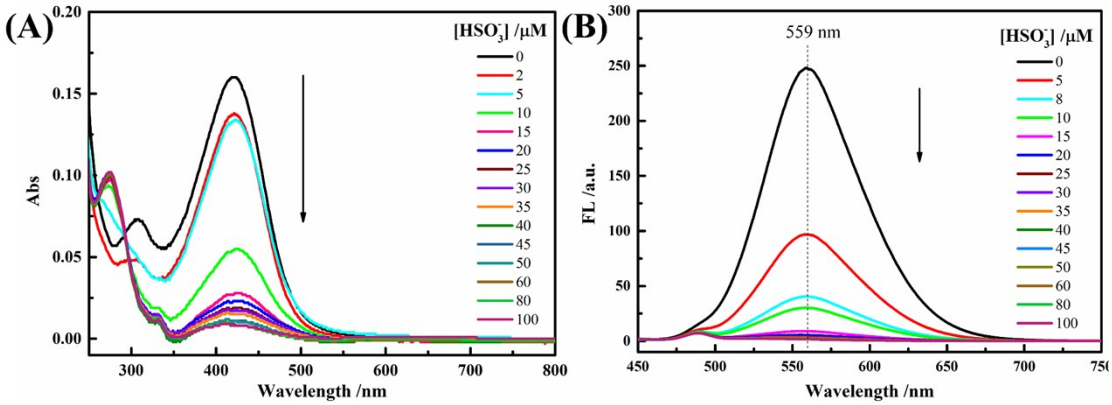

Fig. S6. (A) The absorption and (B) fluorescence spectra of **Hcy-NT** (10 μM) with HSO_3^- in DMSO/PBS (V/V=1/99, pH=7.2). λ_{ex}=419 nm.

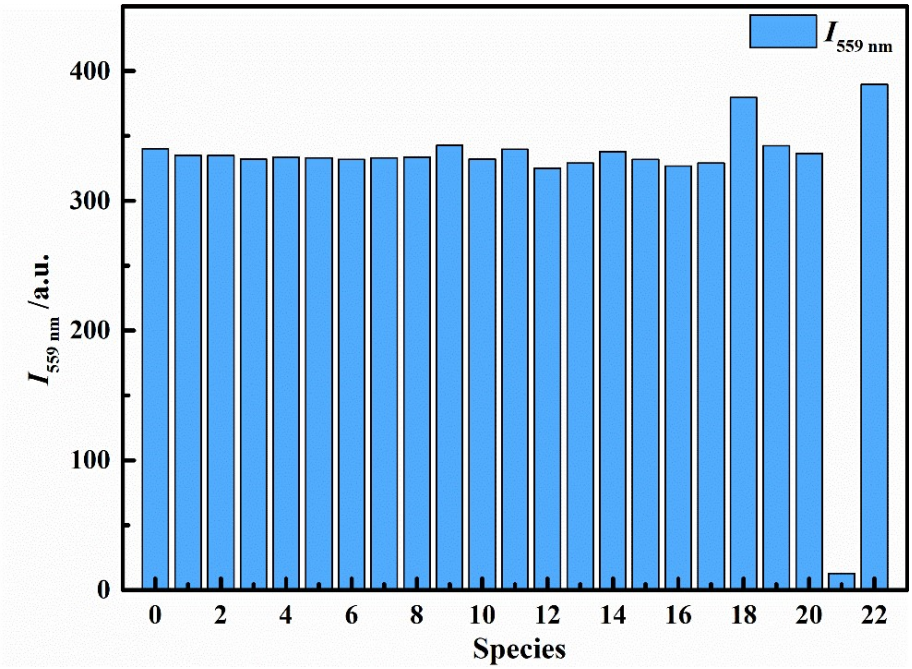

Fig. S7. The specificity of **Hcy-NT** (10 μM) to HSO_3^- (80 μM) against other species (100 μM) in DMSO/PBS (V/V=1/99, pH=7.2). 0. Control; 1. NaCl; 2. KCl; 3. KI; 4. $NaHCO_3$; 5. KNO_3; 6. Na_2HPO_4; 7. Na_2CO_3; 8. Na_2SO_4; 9. $Na_2S_2O_3$; 10. AcONa; 11. $CaCl_2$; 12. $FeSO_4$; 13. $MgSO_4$; 14. $BaCl_2$; 15. $ZnCl_2$; 16. $AlCl_3$; 17. Cys; 18. GSH; 19. Glucose; 20. ATP; 21. $NaHSO_3$; 22. $Na_2S_2O_3$+GSH. λ_{ex}=419 nm.

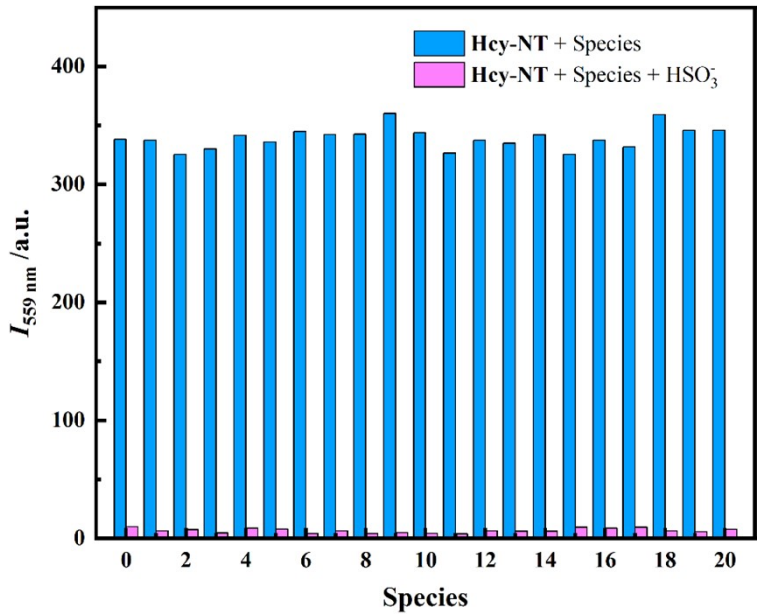

Fig. S8. The competition of **Hcy-NT** (10 μM) to HSO_3^- (80 μM) with other species (100 μM) in DMSO/PBS (V/V=1/99, pH=7.2). 0. Control; 1. NaCl; 2. KCl; 3. KI; 4. $NaHCO_3$; 5. KNO_3; 6. Na_2HPO_4; 7. Na_2CO_3; 8. Na_2SO_4; 9. $Na_2S_2O_3$; 10. NaOAc; 11. $CaCl_2$; 12. $FeSO_4$; 13. $MgSO_4$; 14. $BaCl_2$; 15. $ZnCl_2$; 16. $AlCl_3$; 17. Cys; 18. GSH; 19. Glucose; 20. ATP. λ_{ex}=419 nm.

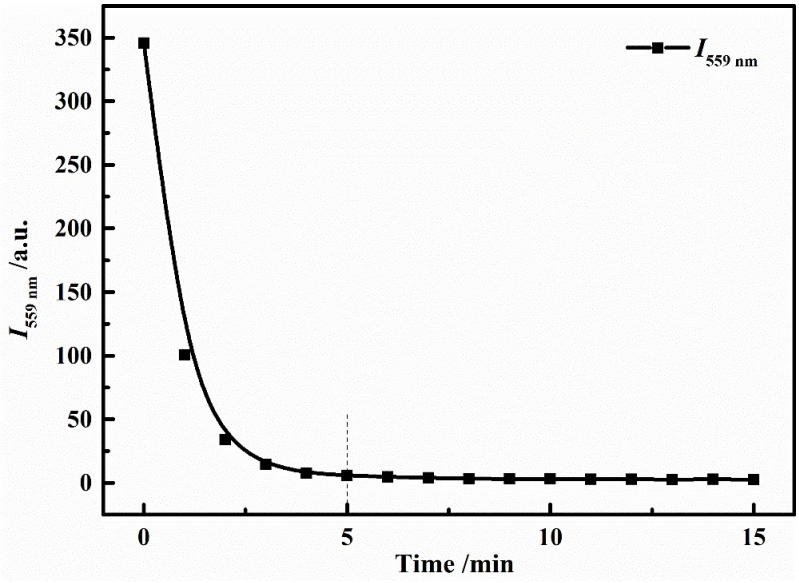

Fig. S9. The time-dependent curve of **Hcy-NT** (10 μM) to HSO_3^- (80 μM) in

DMSO/PBS (V/V=1/99, pH=7.2). λ_{ex}=419 nm.

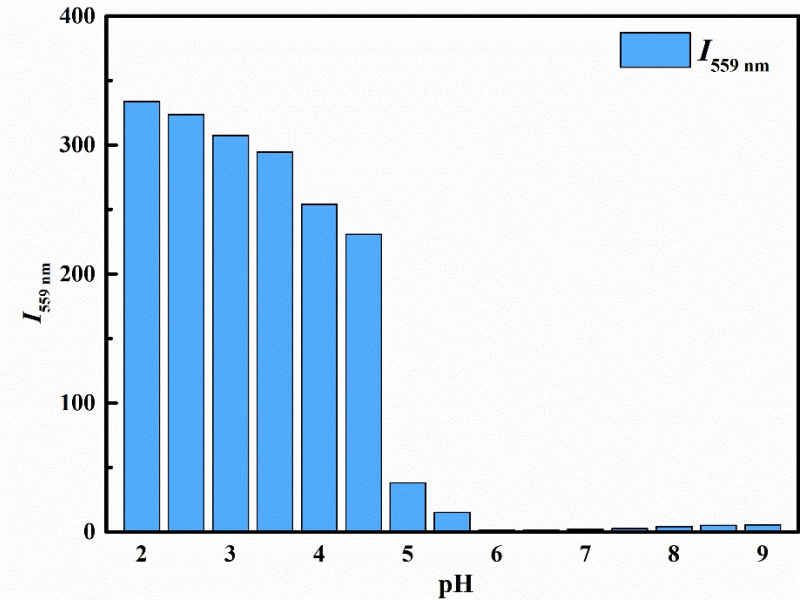

Fig. 10. Response effect of **Hcy-NT** (10 μM) with HSO_3^- (80 μM) under different pH buffer. DMSO/Britton-Robinson buffer (V/V=1/99). λ_{ex}=419 nm.

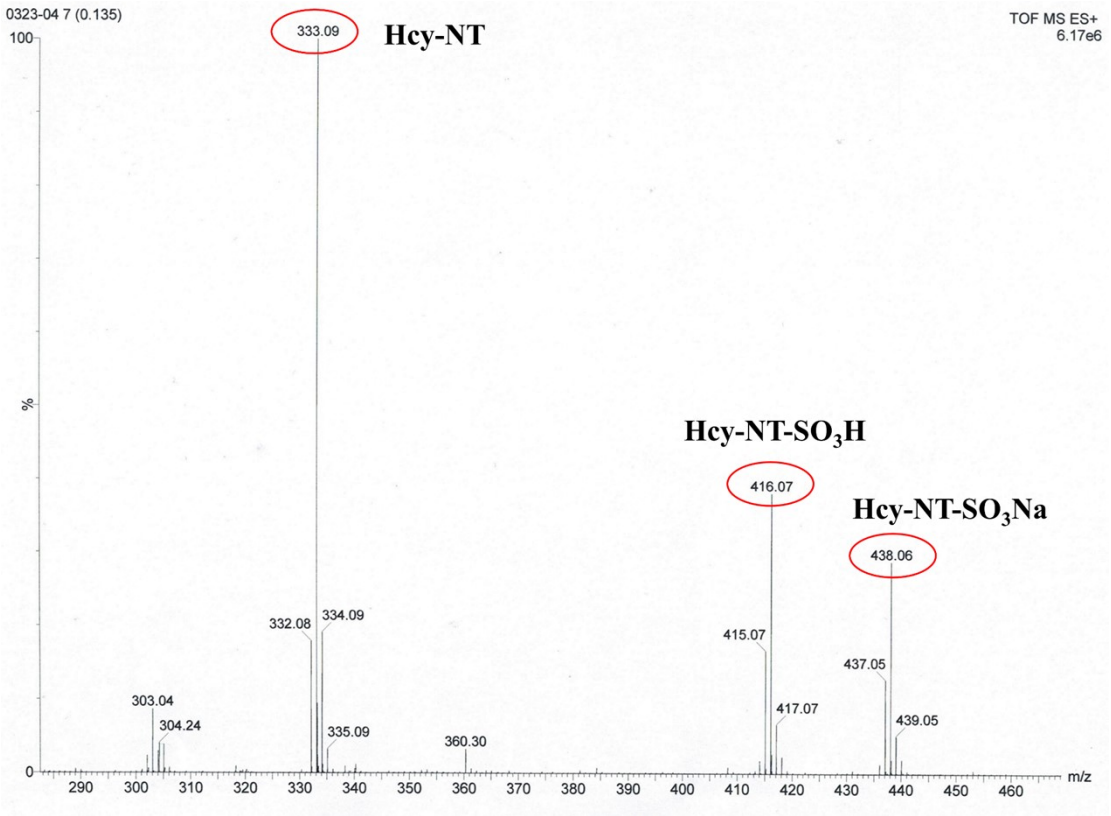

Fig. S11. MS of **Hcy-NT** with HSO_3^-.

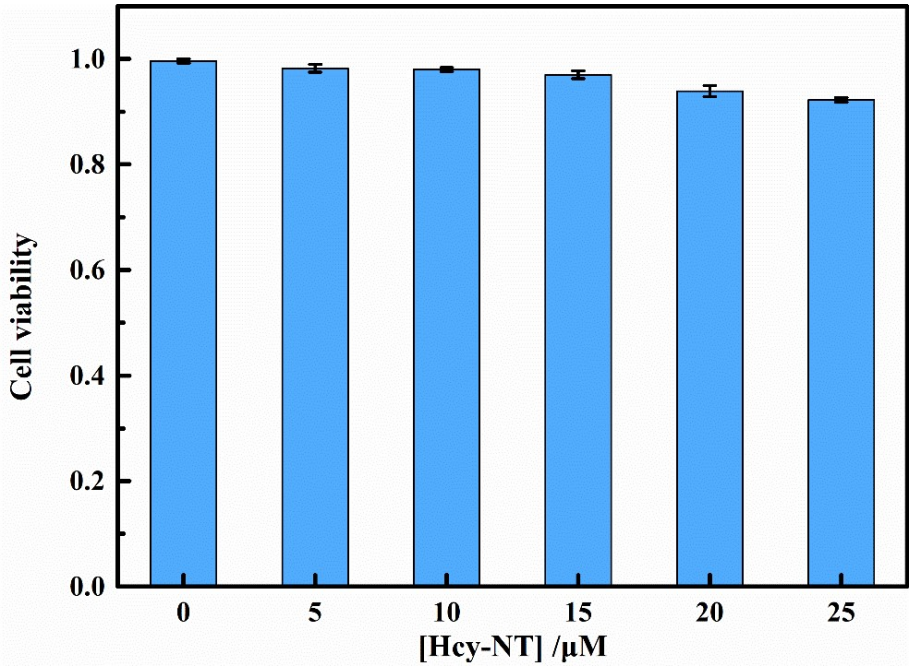

Fig. S12. Cytotoxicity of **Hcy-NT**.

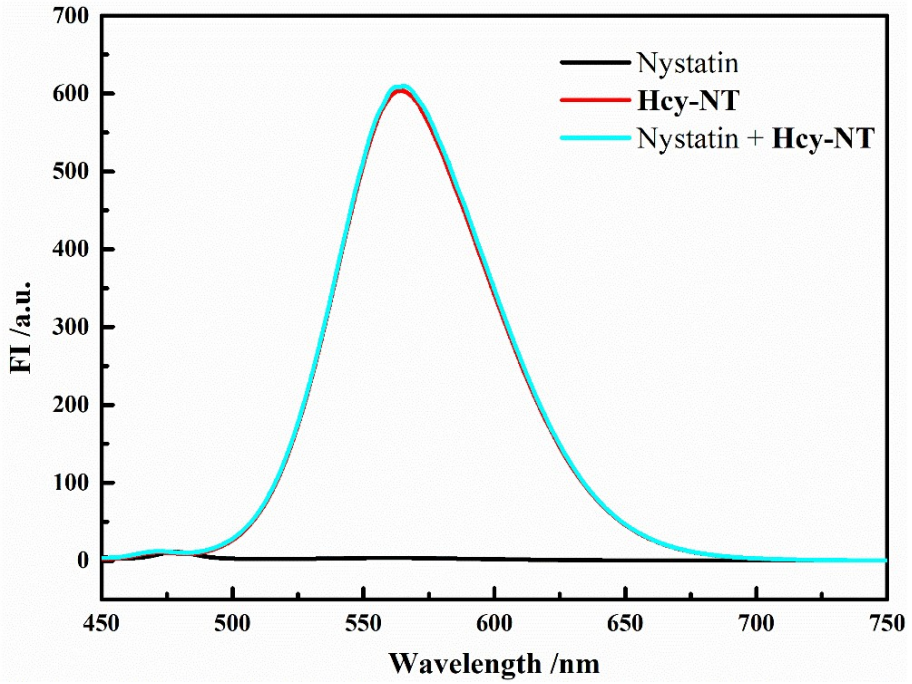

Fig. S13. The fluorescence spectrum of **Hcy-NT** (5 μM) co-incubated with nystatin (10 μM) in 37℃ in DMSO/PBS (V/V=1/99, pH=7.2). λ_{ex}=419 nm.