

## Electronic Supporting Information Materials

Two hydrazone Copper (II) complexes: Synthesis, crystal structure, cytotoxicity, and action mechanism

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Fig. S1. IR (KBr) spectra of H-L1.

Fig. S2. HRMS(ESI) spectra of H-L1. Calcd. for  $C_{18}H_{16}N_3O_3$   $[M+H]^+$  322.11917, found 322.11743.

Fig. S3 NMR spectra of H-L1 in DMSO. A)  $^1H$ ; B)  $^{13}C$ .

Fig. S4. IR (KBr) spectra of H-L2.

Fig. S5. HRMS(ESI) spectra of H-L2. Calcd. for  $C_{17}H_{14}N_3O_2$   $[M+H]^+$  292.10860, found 292.10674.

Fig. S6 NMR spectra of H-L1 in DMSO. A)  $^1H$ ; B)  $^{13}C$ .

Fig. S7. IR (KBr) spectra of complex **1**.

Fig. S8. HRMS (ESI) spectra of complex **1**. Calcd. for  $C_{18}H_{14}N_3O_3Cu$   $[M-NO_3]^+$  383.03312, found 383.03246.

Fig. S9. IR (KBr) spectra of complex **2**.

Fig. S10. HR-ESI-MS spectra of complex **2**. HRMS (ESI): Calcd. for  $C_{17}H_{12}N_3O_2Cu$   $[M-NO_3]^+$  353.02255, found 353.02136.

Fig. S11. LC-MS spectra for **1** and **2** ( $2.0 \times 10^{-6}$  M) monitored at 370 nm in TBS buffer (0.1 %) with 0 h and 48 h. Column: Phenyl-Hexyl (150mm $\times$ 5.0  $\mu$ m I.D.). Column temperature: 25  $^\circ$ C. Mobile phase: A) methol, B)  $H_2O$ . Gradient: 70% to 100% in 20 min. Flow rate: 0.3 mL/min. Injection volume: 5. 0  $\mu$ L. Complex **1**:  $[M-NO_3]^+=383.03236$ ; Complex **2**:  $[M-NO_3]^+=353.02133$ ,  $[M-NO_3+CH_3OH]^+=385.04775$ .

Fig. S1

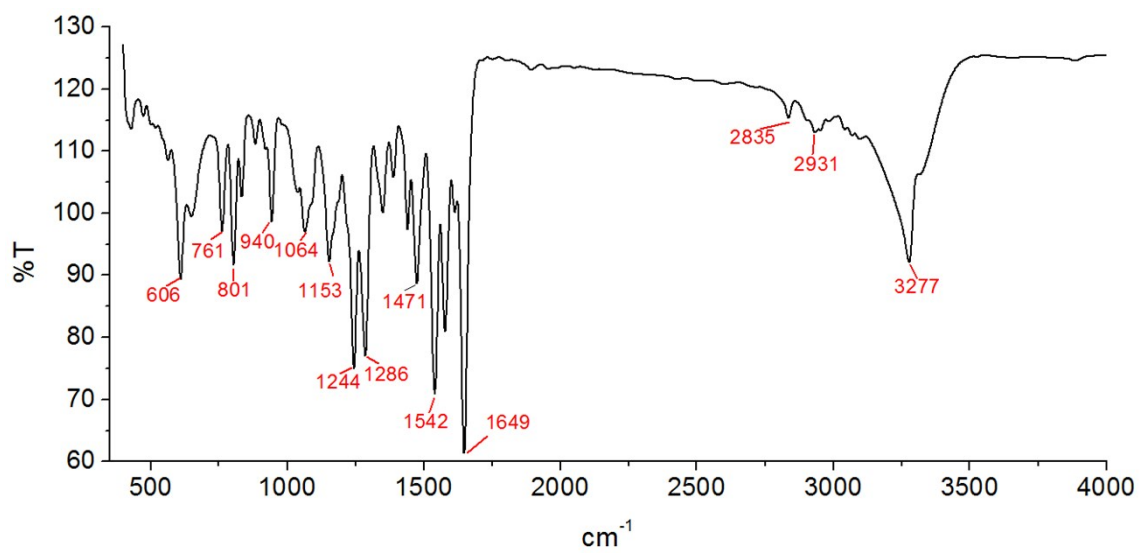


Fig. S2

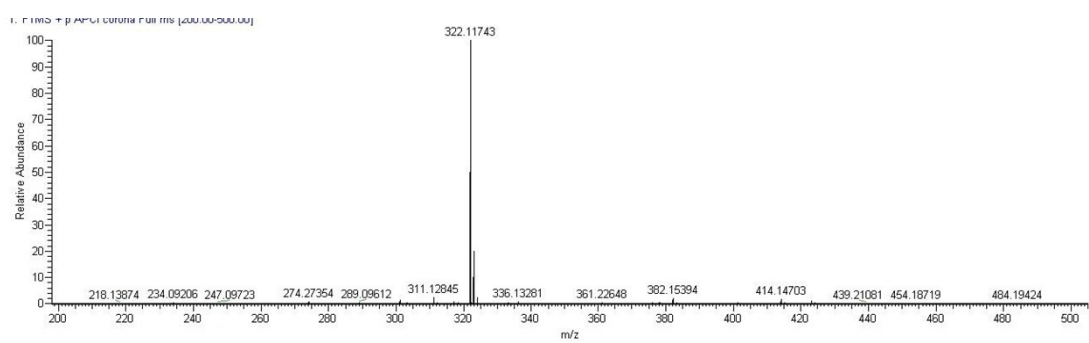
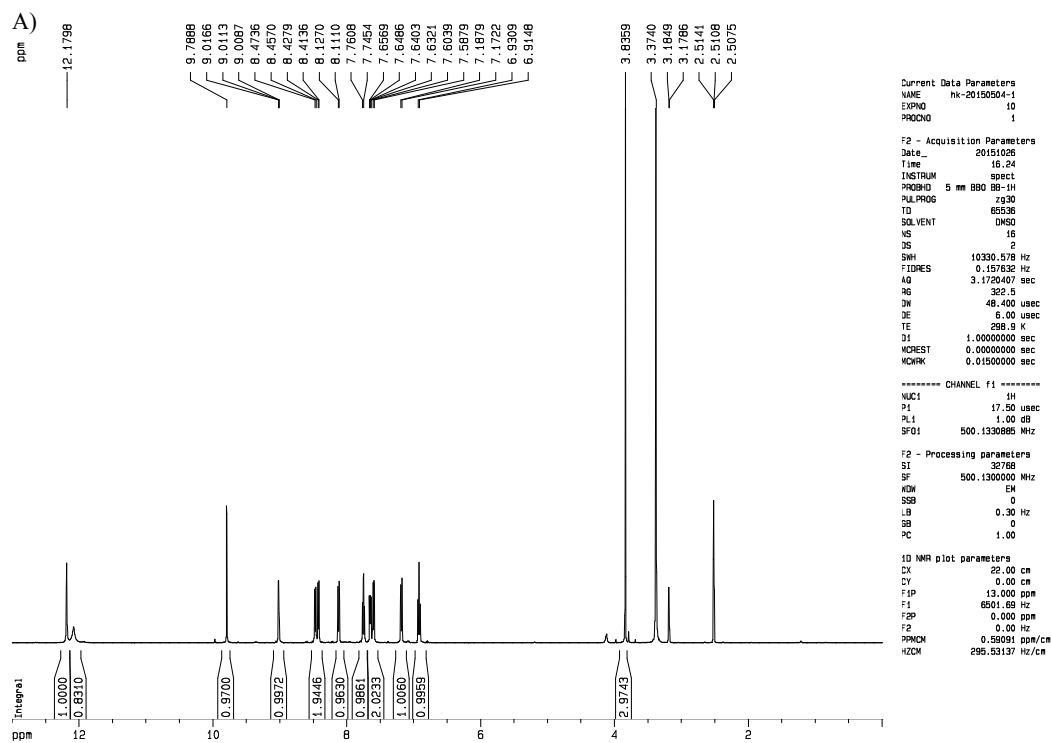


Fig. S3



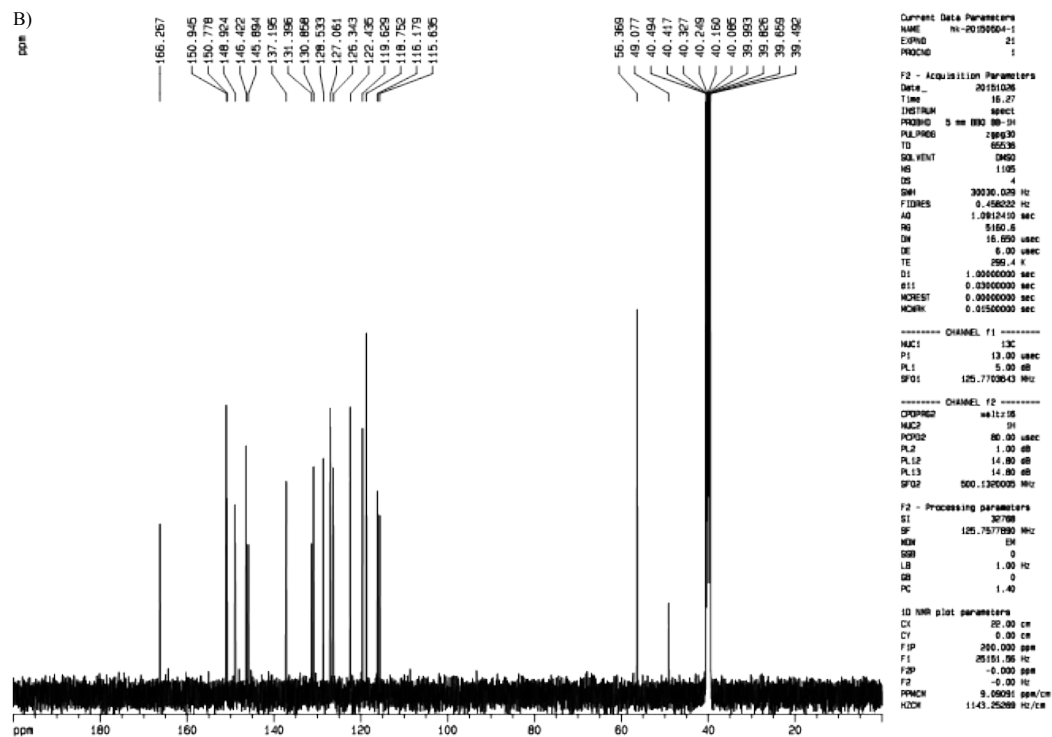


Fig. S4

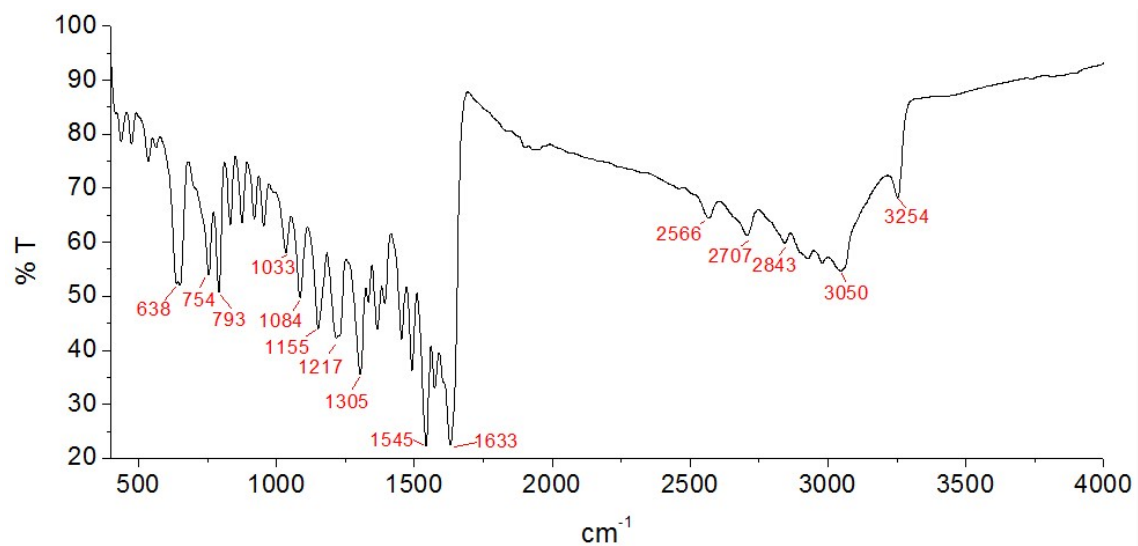


Fig. S5

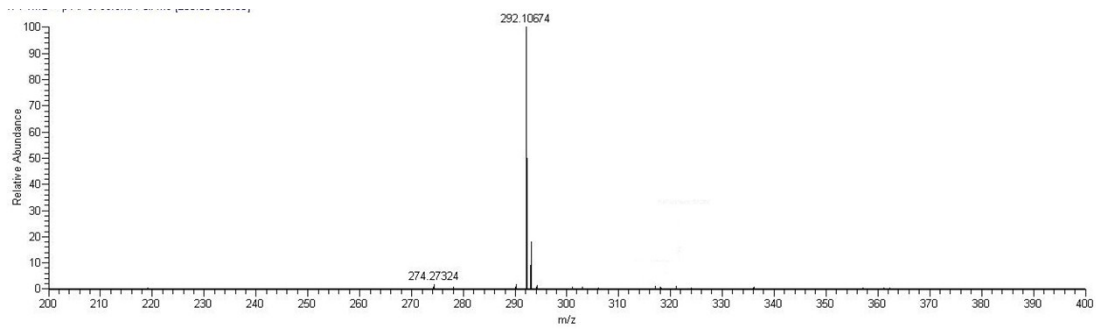
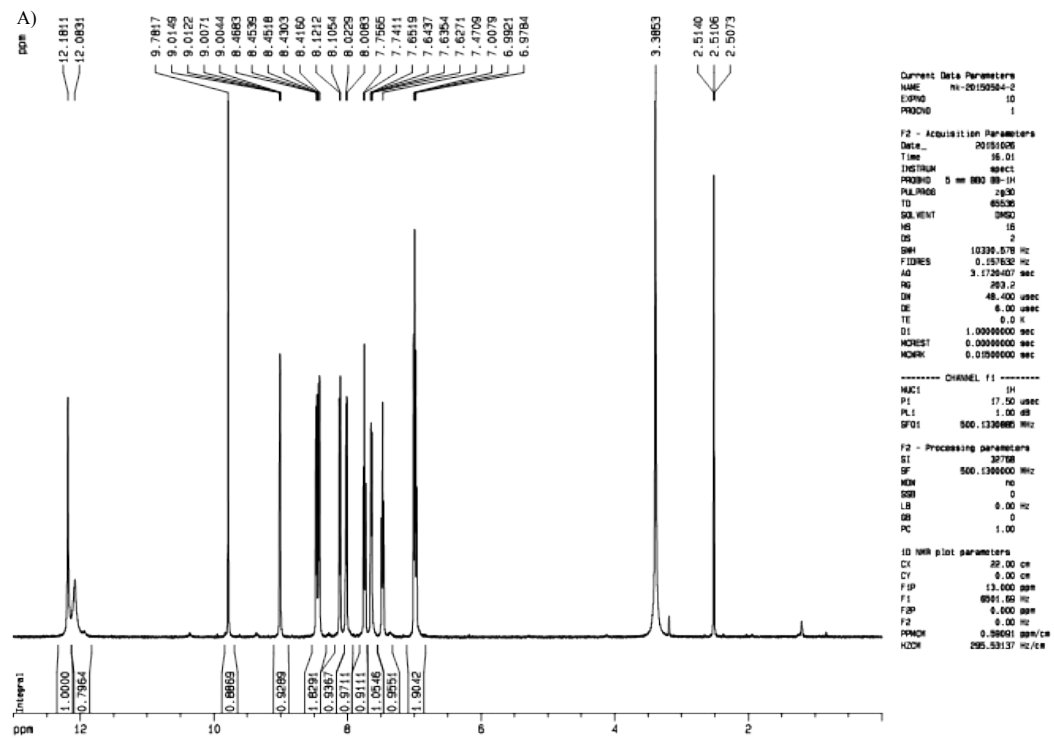


Fig. S6



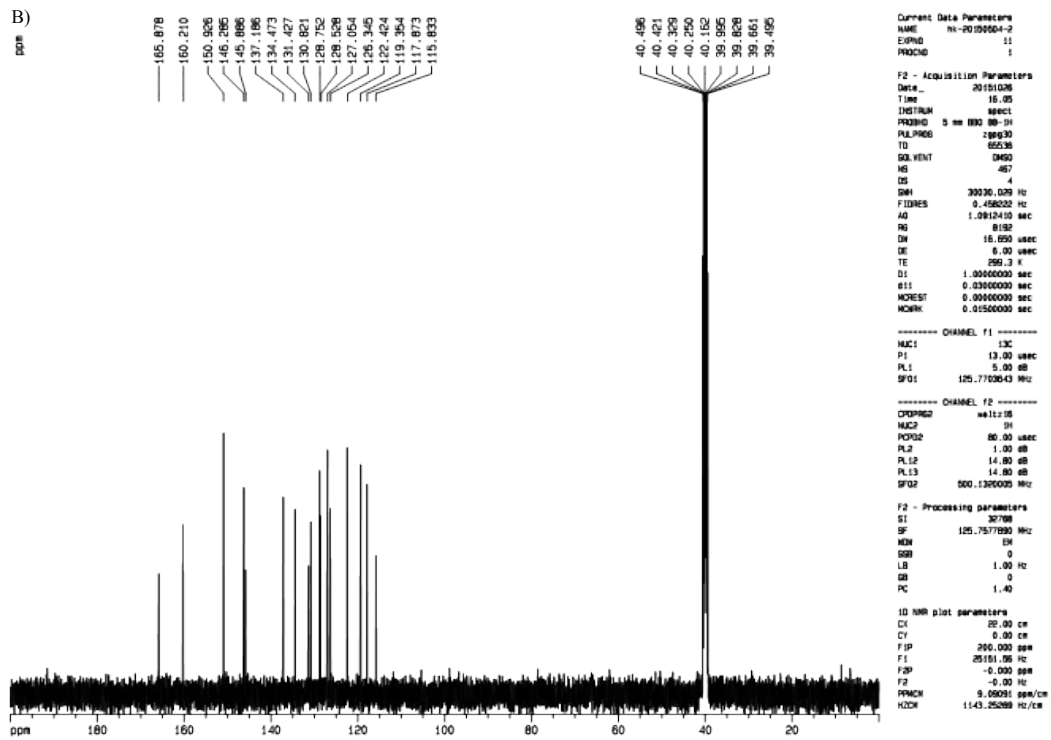


Fig. S7

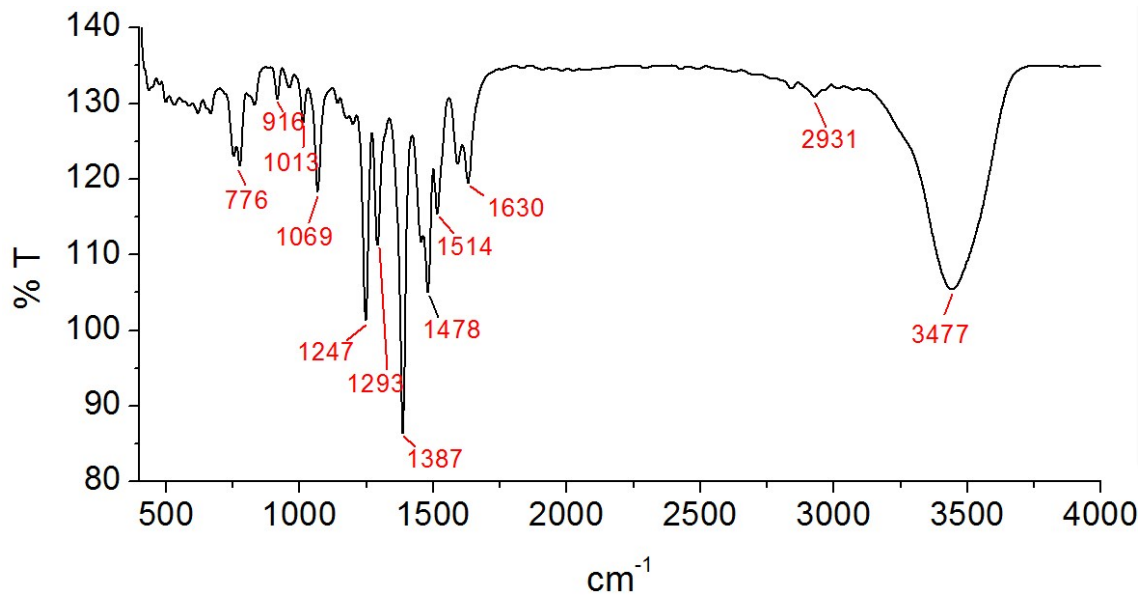


Fig. S8

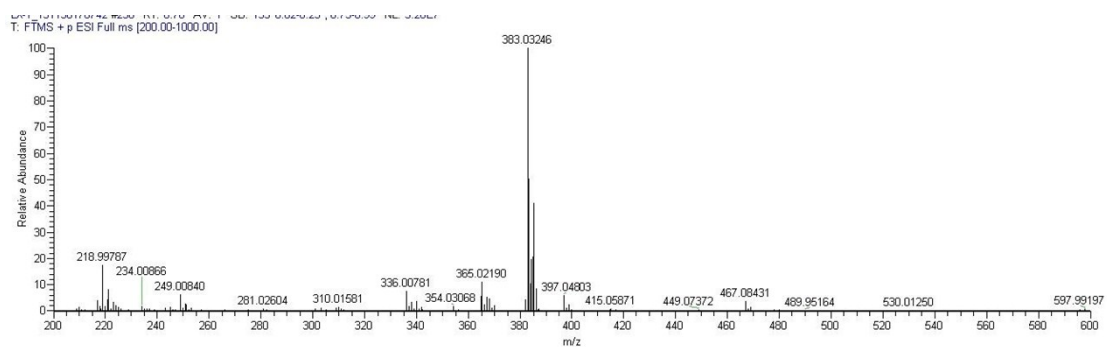


Fig. S9

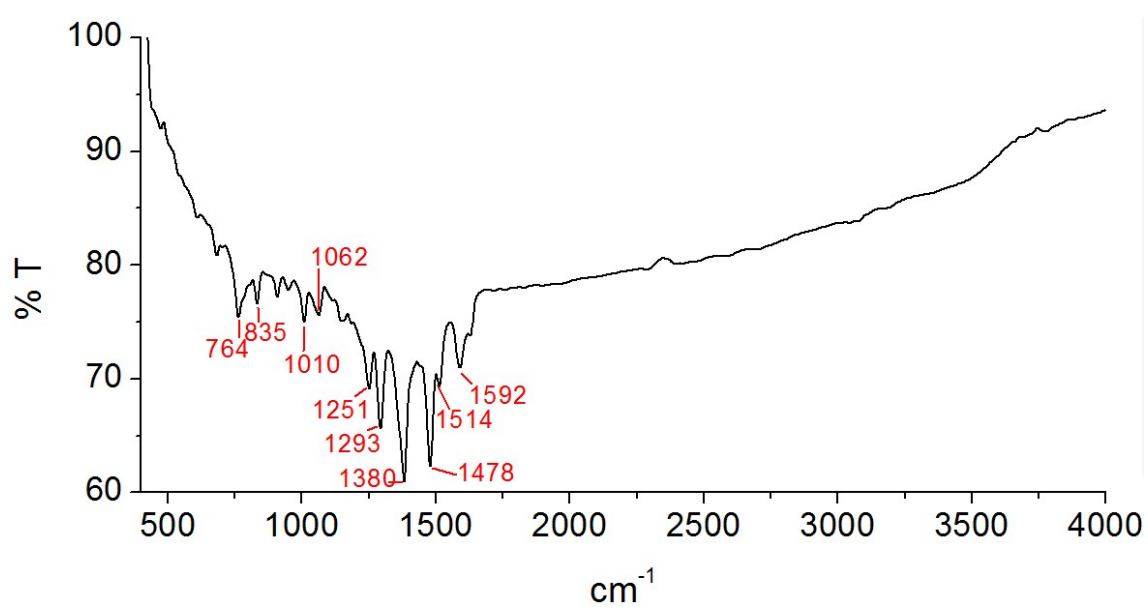




Fig. S10

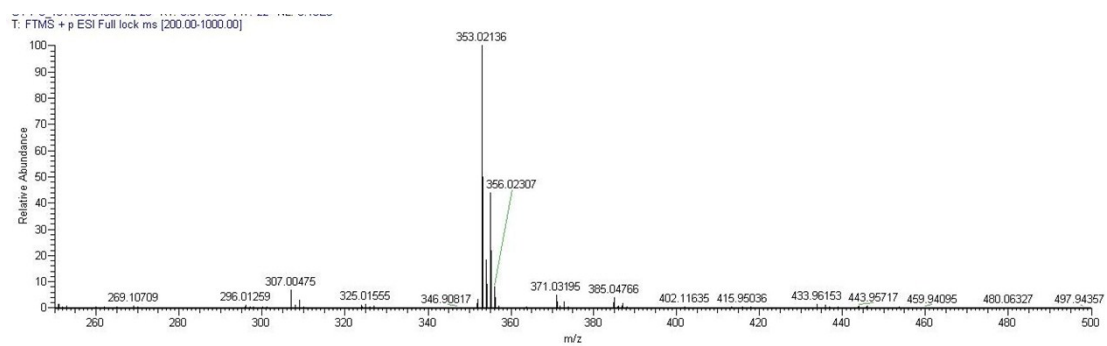
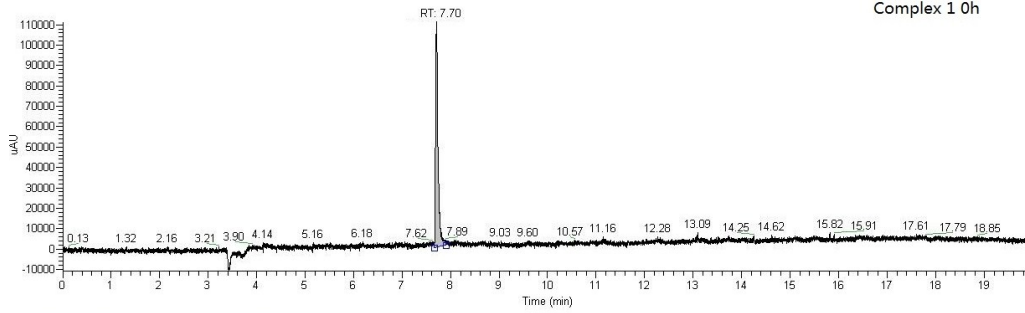
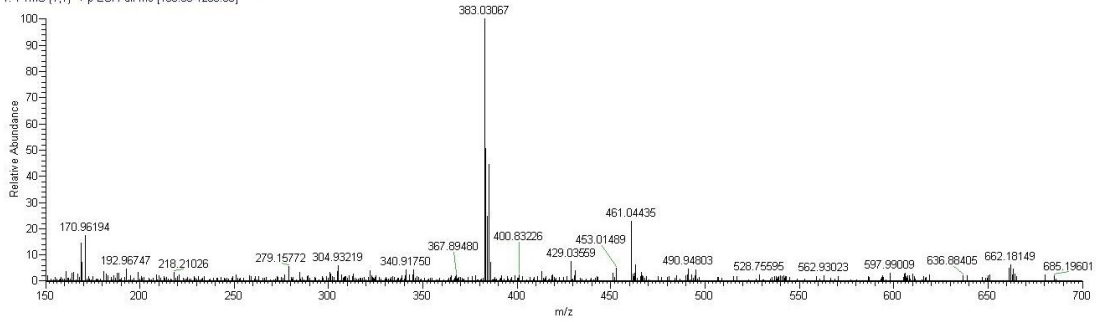


Fig. S11

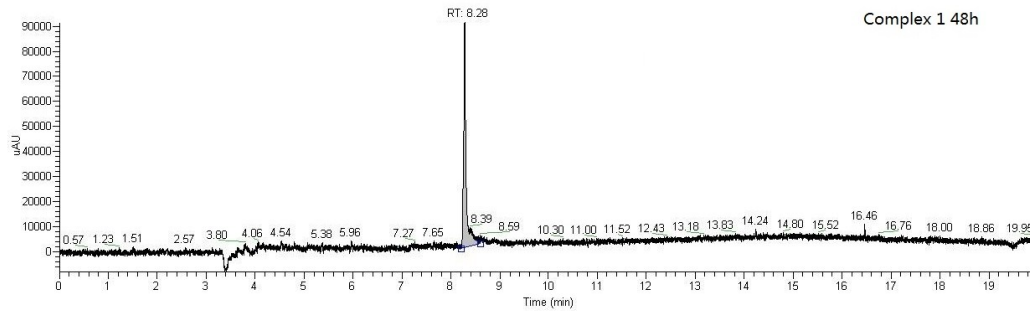
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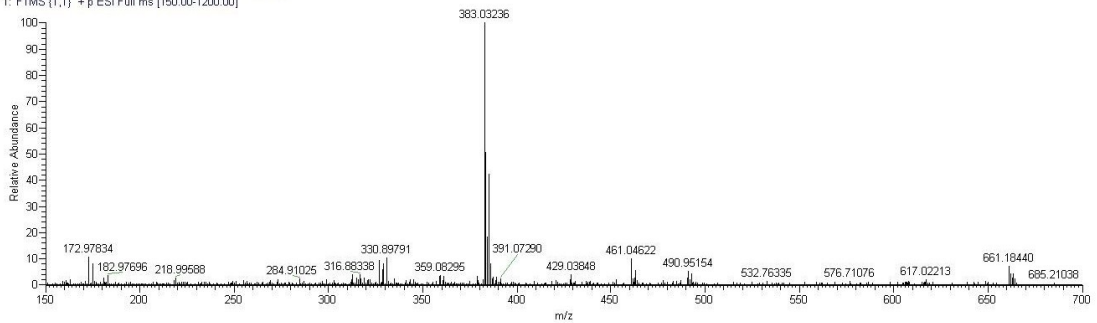
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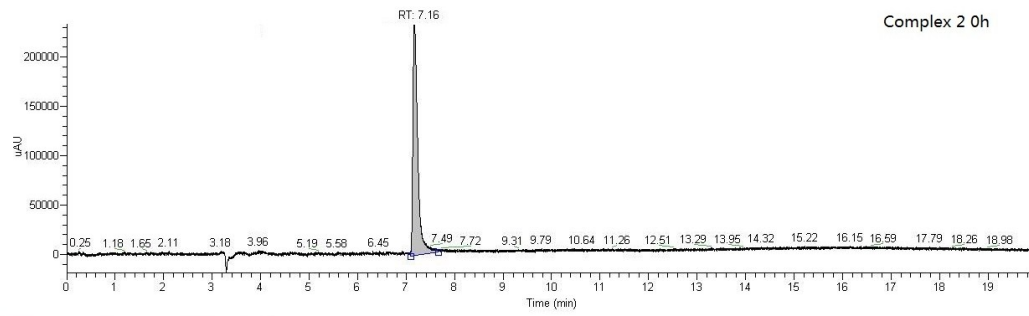
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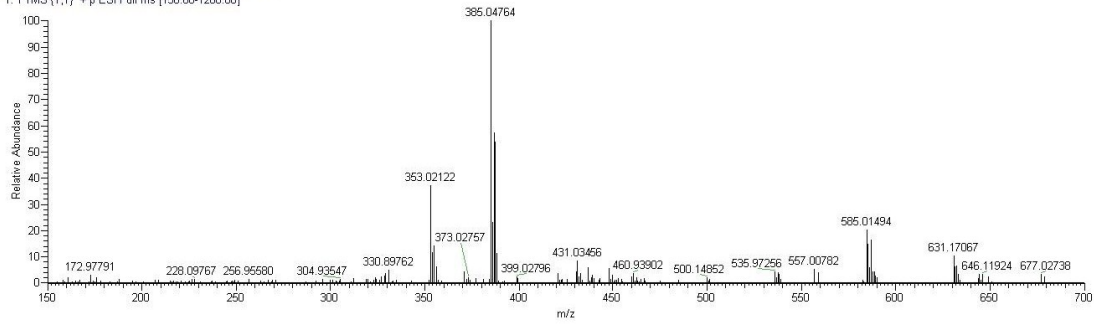
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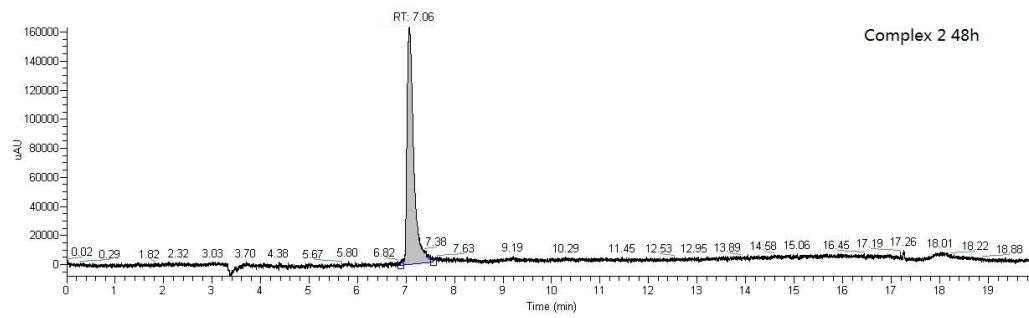
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2.34E5  
Channel A  
UV SY-14

SY-14 #1795 RT: 7.43 AV: 1 SB: 1.752 NL: 6.47E4  
T: FTMS (1,1) + p ESI Full ms [150.00-1200.00]



RT: 0.00 - 19.99



Complex 2 48h

NL:  
1.63E5  
Channel A  
UV  
SY-  
13\_1511081  
70827

SY-13\_151108170827 #1775 RT: 7.38 AV: 1 SB: 1.747 NL: 5.26E4  
T: FTMS (1,1) + p ESI Full ms [150.00-1200.00]

