Supplementary Materials: Copper Ion Attenuated the Antiproliferative Activity of Di-2-Pyridylhydrazone Dithiocarbamate Derivative; However, There Was a Lack of Correlation between ROS Generation and Antiproliferative Activity

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1. Purity of DpdtpA Was Determined by HPLC and NMR

1.1. HPLC (Shimadzu Corpation, Kyoto, Japan) Isolation(Gradient: 20%–50% Solven B within 10 min, Following Increased to 100% in 10 min, and Decreased to 20% in 2 min. and Keep Same Percent to 30 min). Solvent A: Water Plus 0.1% TFA; Solvent B: Acetonitrile Plus 0.1% TFA)

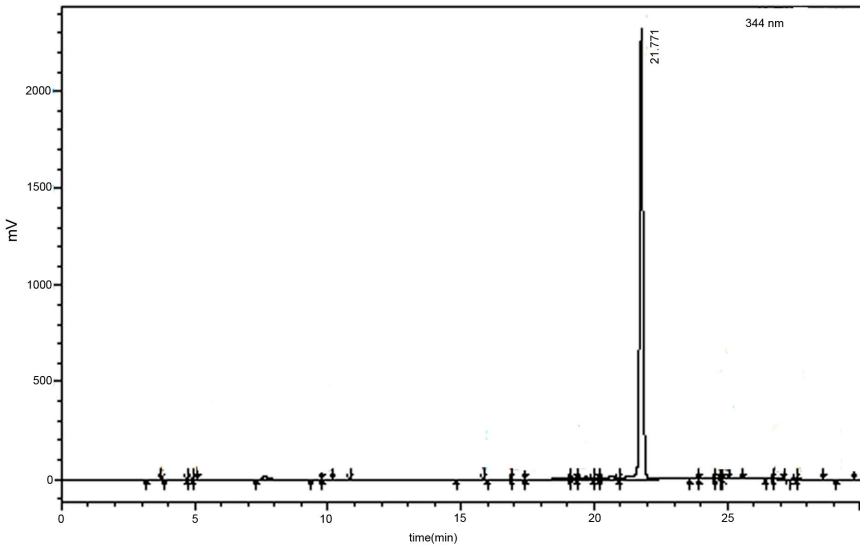

Figure S1. HPLC of DpdtpA

1.2. [1]HNMR Spectrum of DpdtpA

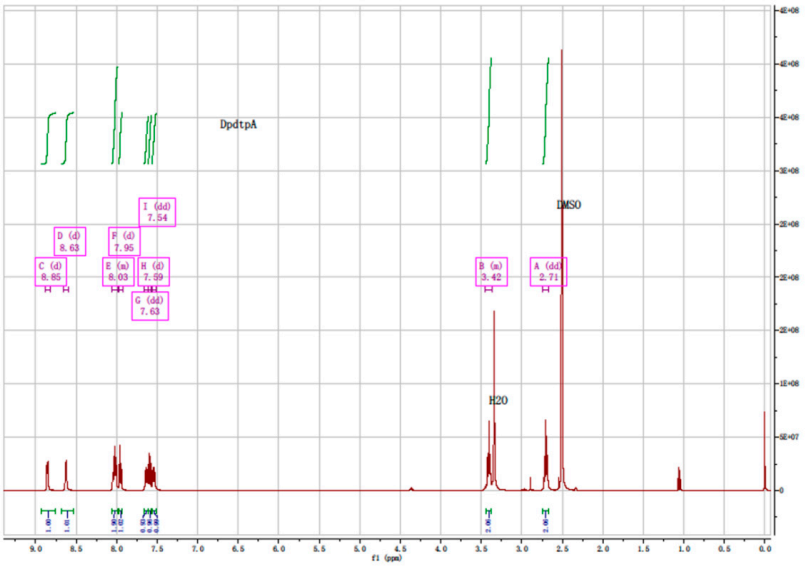

Figure S2. HNMR spectrum of DpdtpA.

2. Purity of DpdtpA-Cu

2.1. HPLC(Shimadzu Corpation, Kyoto, Japan) Isolation(Gradient: 20%–50% Solven B within 10 min, Following Increased to 100% in 10 min, and Decreased to 20% in 2 min. and Keep Same Percent to 30 min). Solvent A: Water Plus 0.1% TFA; Solvent B: Acetonitrile Plus 0.1% TFA)

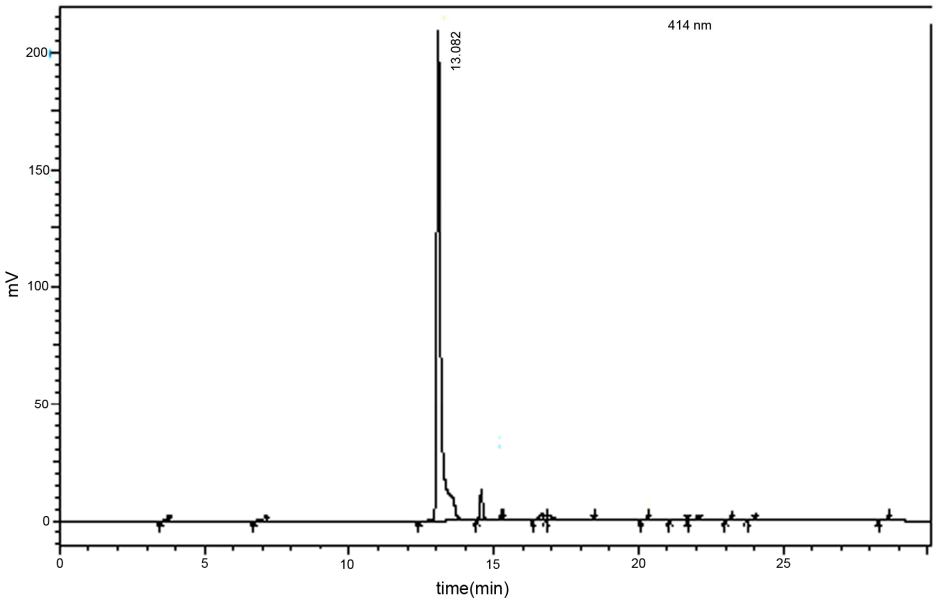

Figure S3. HPLC of dpdtpA-Cu.

2.2. IR Spectrum of DpdtpA-Cu

Based on literature [1,2], 3273–3493 cm^{-1} asigned to υ_{NH} of amide, 1457 cm^{-1} assigned to υ_{C-N} stretching frequency for the thioureide group in the DpdtpA, and 1230 cm^{-1} were assigned to C=S bond, but in the DpdtpA-Cu, the peaks were disappeared, indicating enolization occurred [1,2].

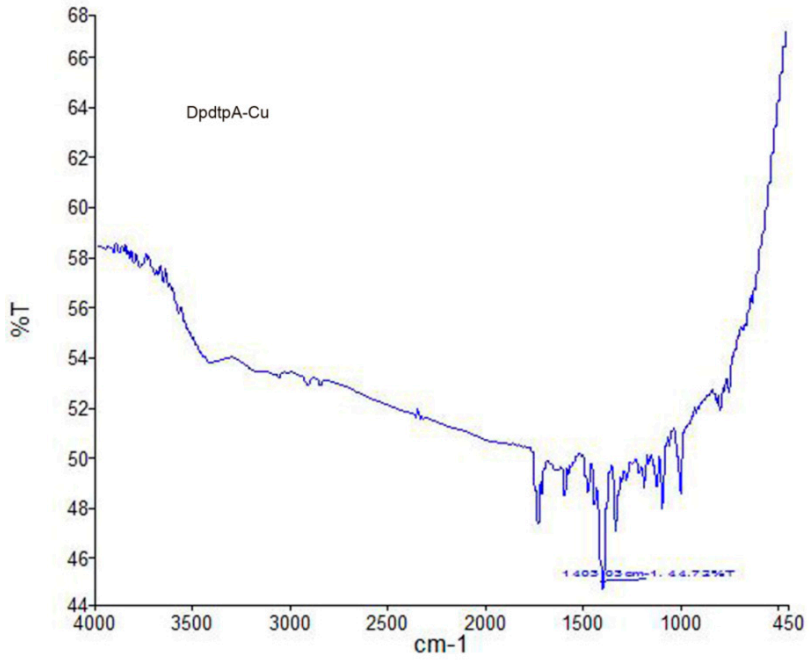

Figure S4. IR spectrum of DpdtpA-Cu.

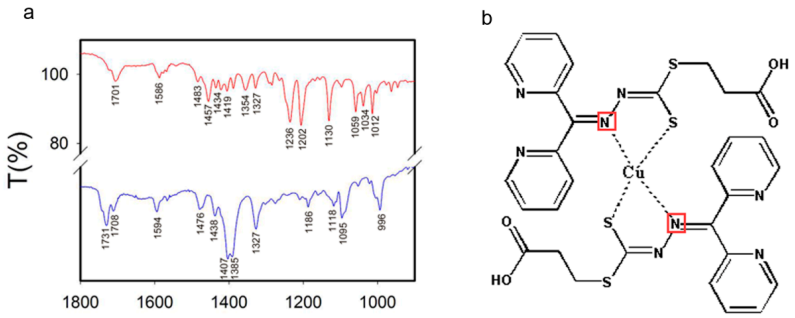

Figure S5. (**a**) IR comparison between DpdtpA (**red** line) and DpdtpA-Cu (**blue** line); and (**b**) coordination structure of DpdtpA-Cu proposed tentatively.

References

1. SaLlJk, B.N.; Özkay, Y.; Özkay, Ü.D.; Gençer, H.K. Synthesis and biological evaluation of some novel dithiocarbamate derivatives. *J. Chem.* **2014**, doi:10.1155/2014/387309.
2. Nabipour, H. Synthesis of a new dithiocarbamate cobalt complex and its nanoparticles with the study of their biological properties. *Int. J. Nano Dim.* **2011**, *1*, 225–232.