Supplementary Materials

In vitro antioxidant and pancreatic anticancer activity of novel 5-fluorouracil-coumarin conjugates

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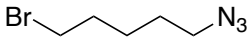
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1. Characterization of synthesized products.

1.1. 1-Azido-5-bromopentane (ABrP).



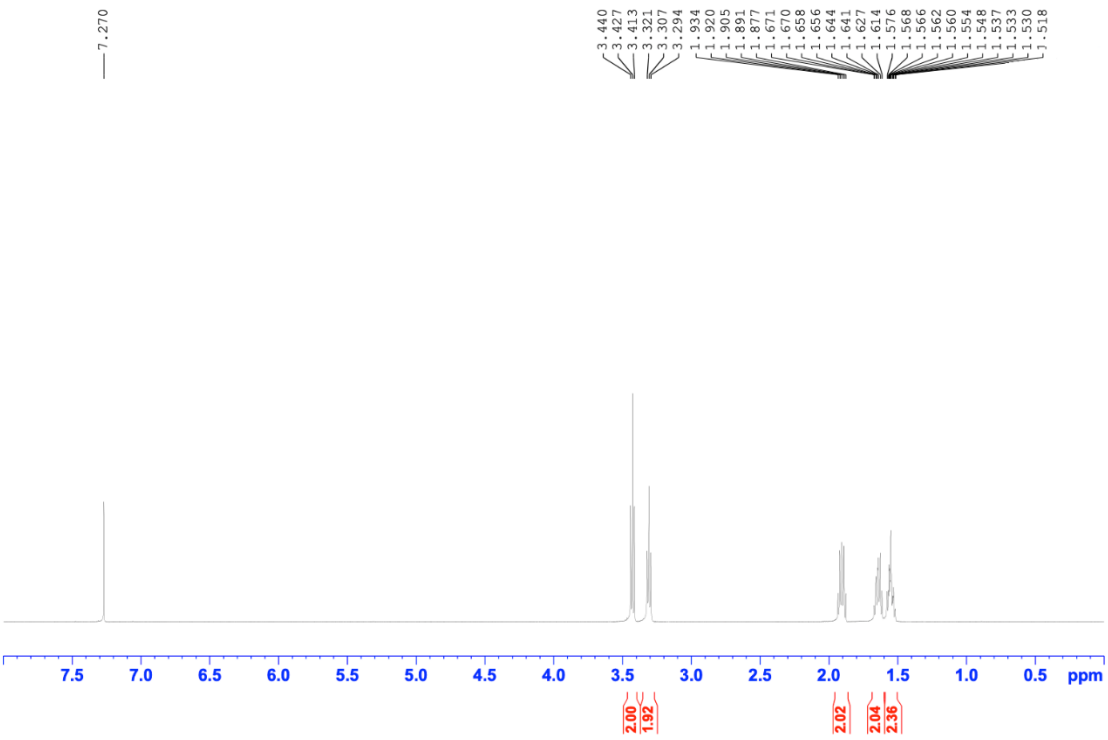


Figure S1. *^{1}H NMR ($CDCl_3$, 500 MHz) of* ***ABrP****.*

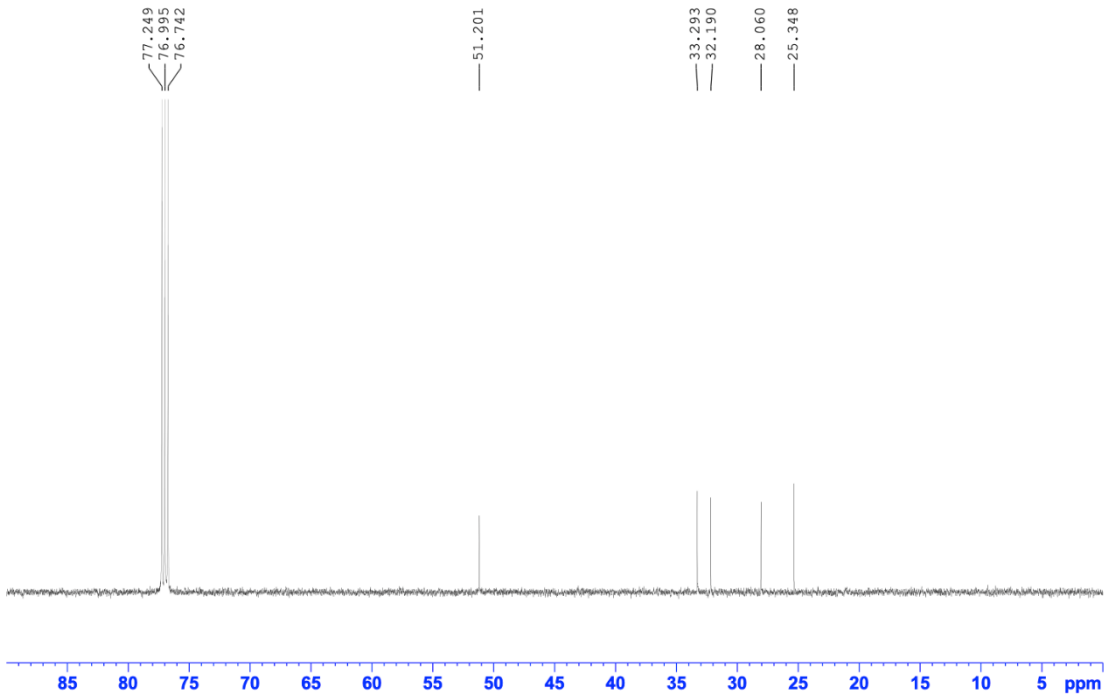
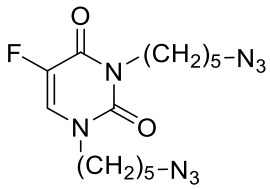


Figure S2. *^{13}C NMR ($CDCl_3$, 125 MHz) of* ***ABrP****.*

1.2. 1,3-Bis(5-azidopentyl)-5-fluorouracil (5-FUDA).



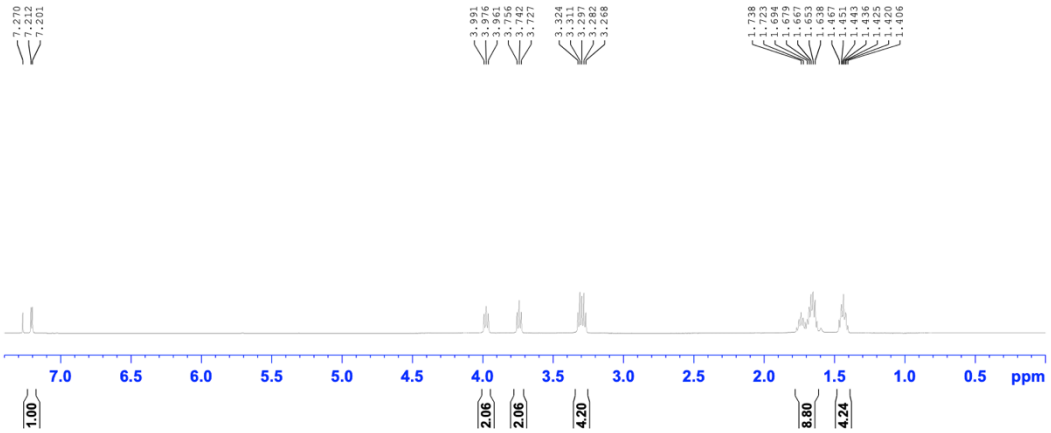


Figure S3. *^{1}H NMR ($CDCl_3$, 500 MHz) of* ***5-FUDA****.*

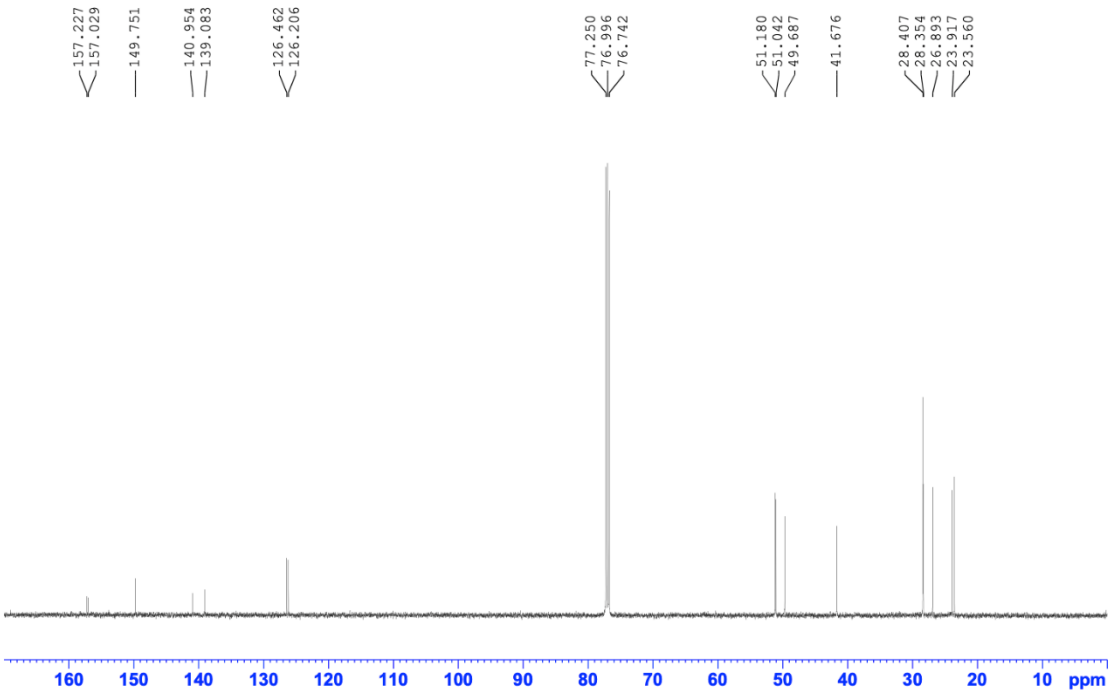


Figure S4. *^{13}C NMR ($CDCl_3$, 125 MHz) of* ***5-FUDA****.*

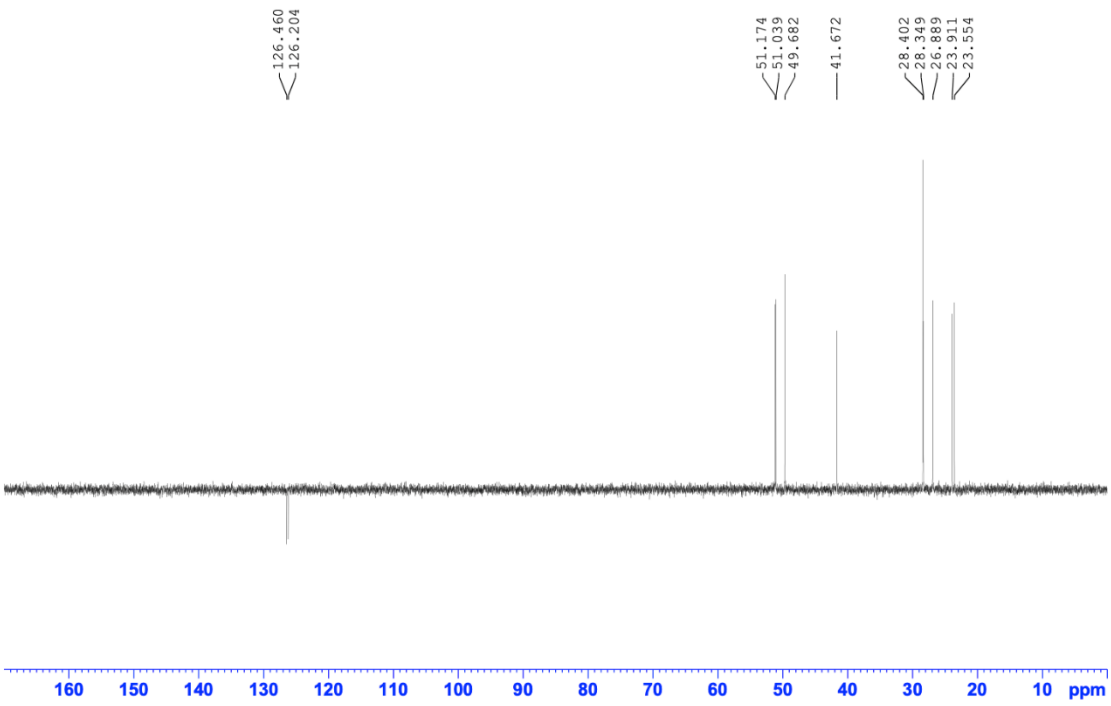


Figure S5. *DEPT ($CDCl_3$, 125 MHz) of* ***5-FUDA****.*

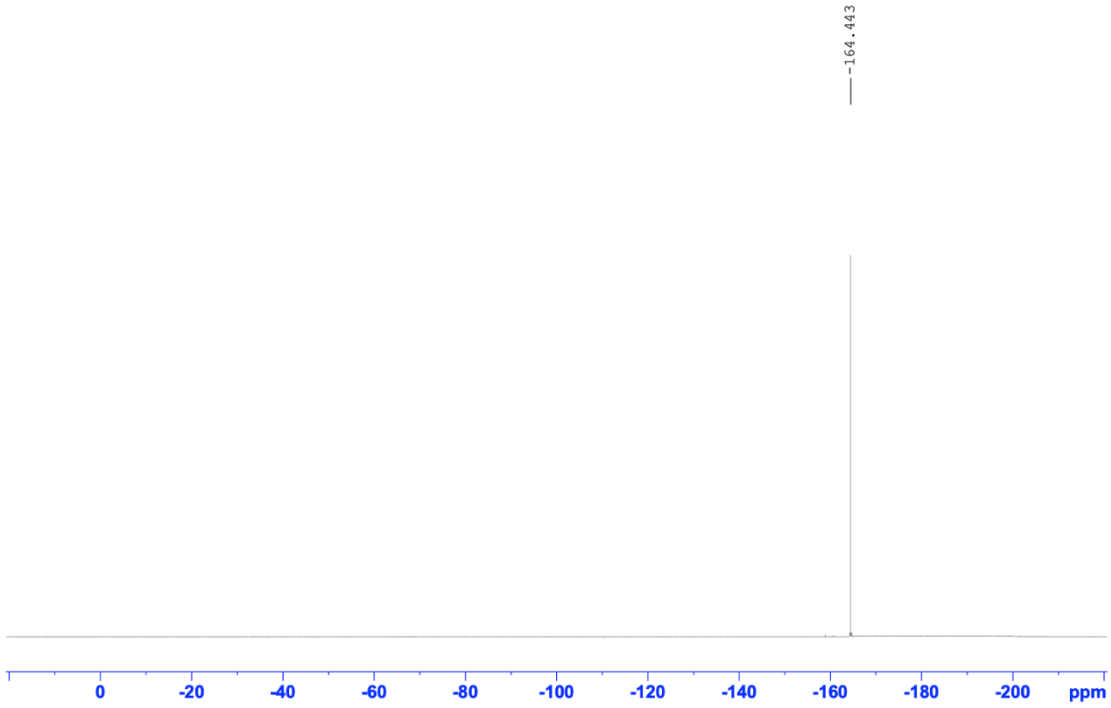


Figure S6. *^{19}F NMR ($CDCl_3$, 471 MHz) of* ***5-FUDA****.*

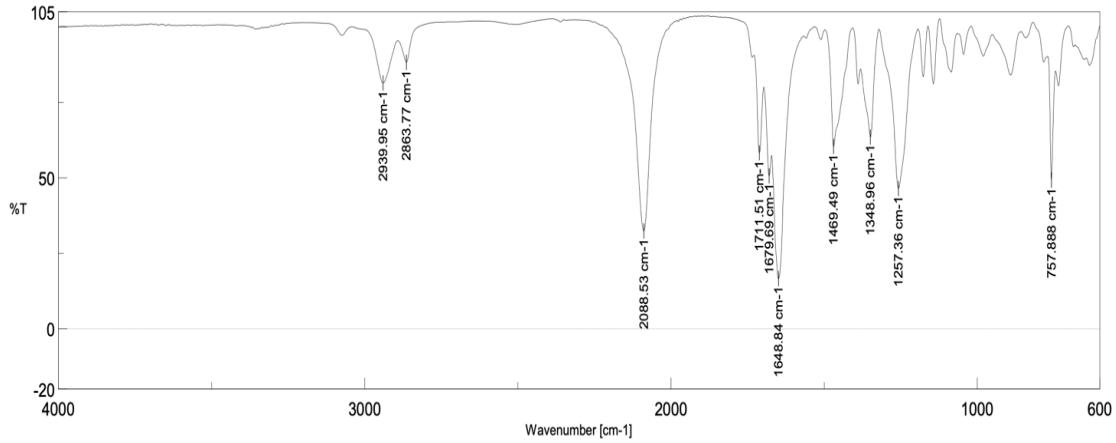


Figure S7. *FT-IR (ATR) of* ***5-FUDA****.*

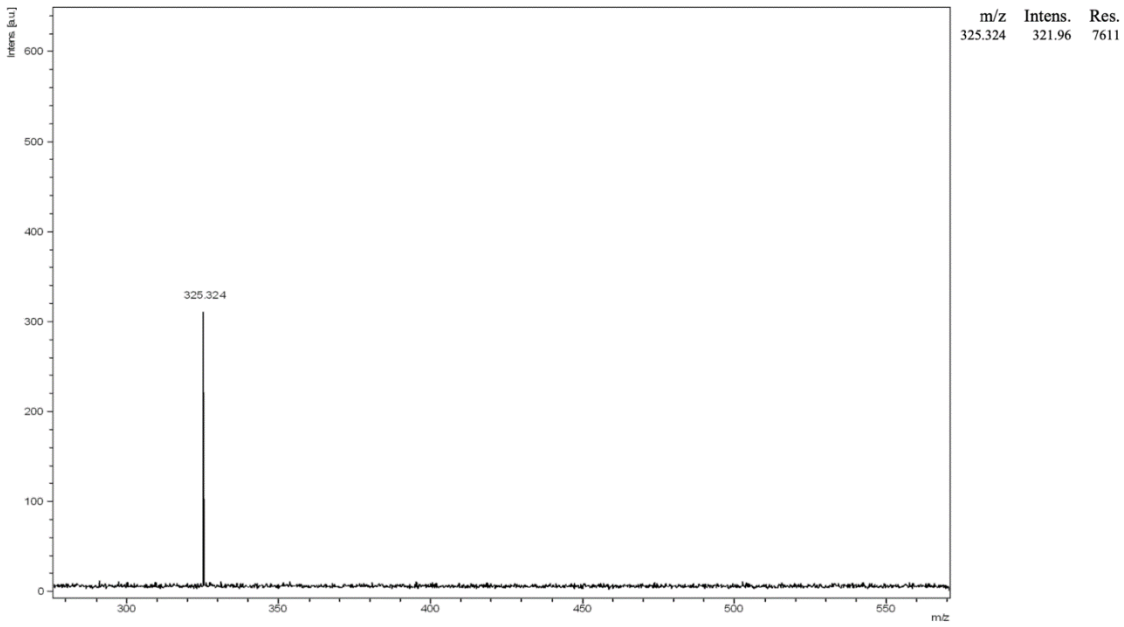
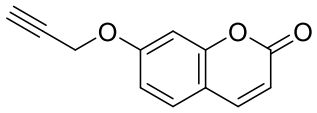


Figure S8. *MALDI-TOF MS (dithranol) of* ***5-FUDA****.*

1.3. 7-Propargyloxycoumarine (7-POC).



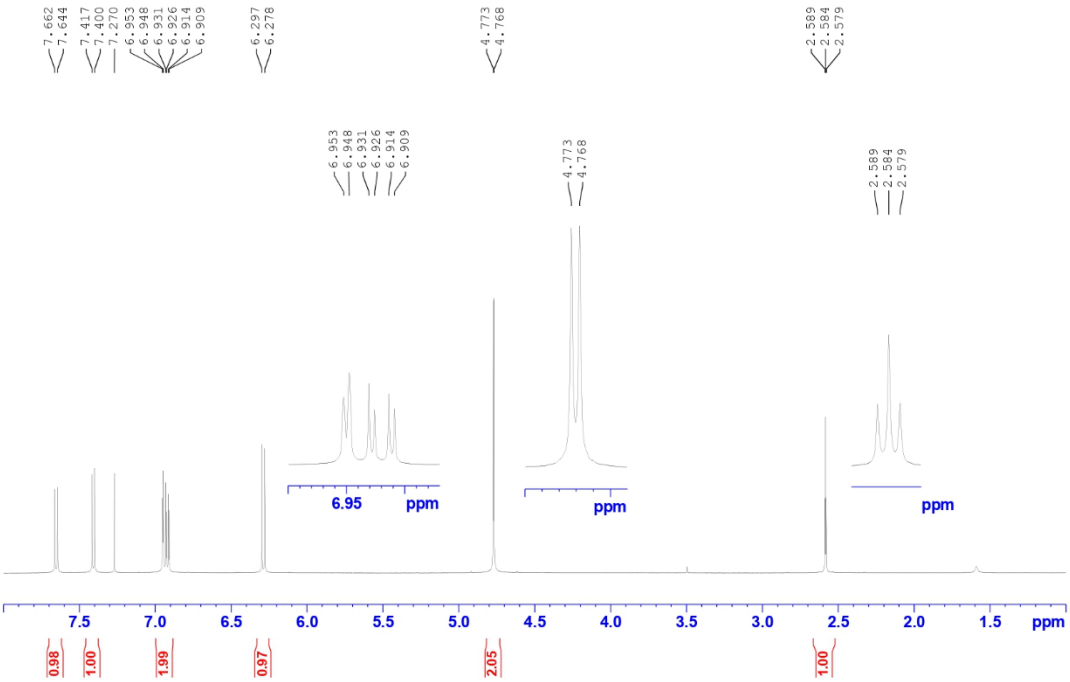


Figure S9. *^{1}H NMR ($CDCl_3$, 500 MHz) of* ***7-POC****.*

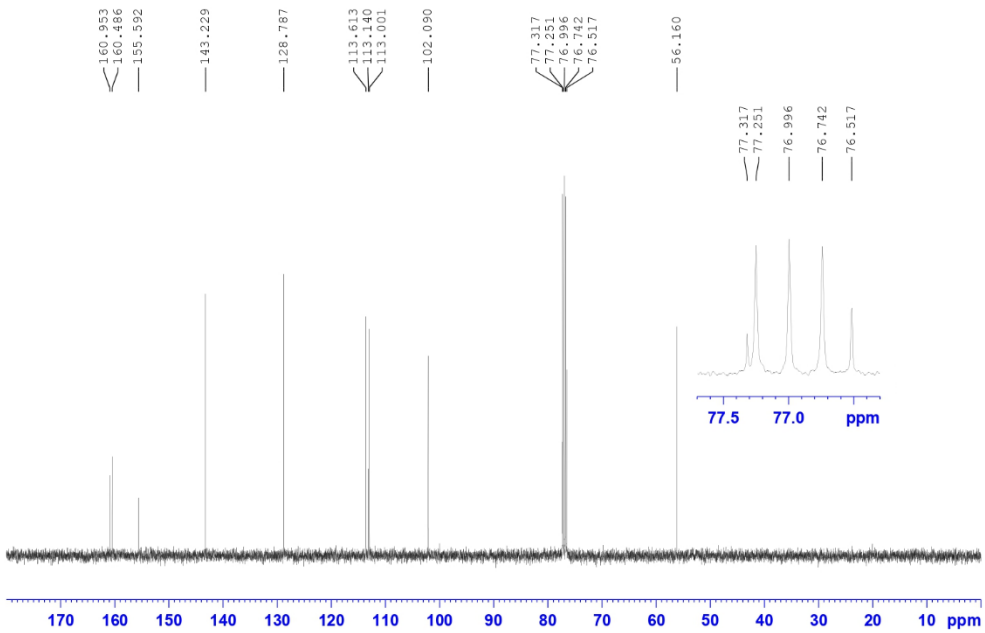


Figure S10. *^{13}C NMR ($CDCl_3$, 125 MHz) of* ***7-POC****.*

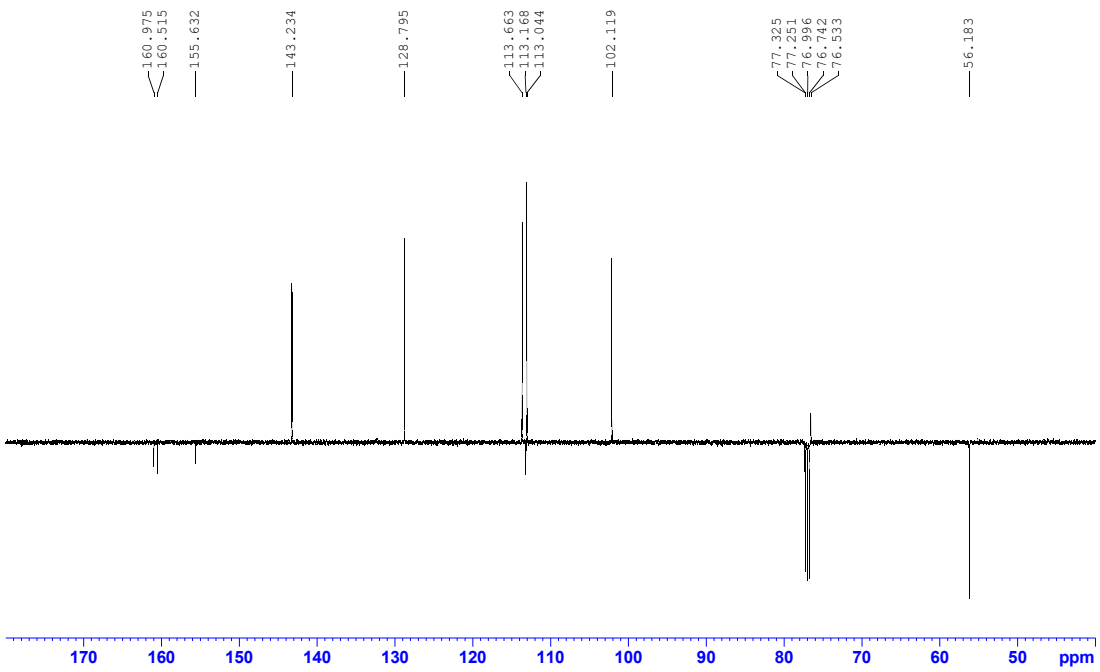


Figure S11. *APT ($CDCl_3$, 125 MHz) of* ***7-POC****.*

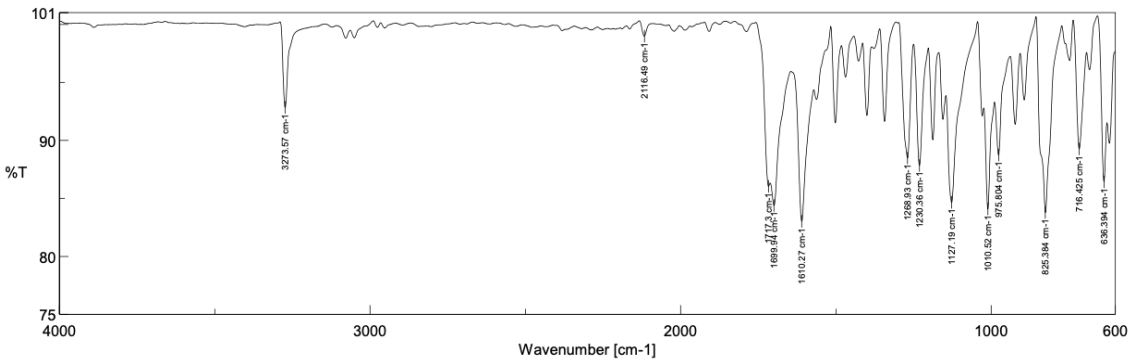
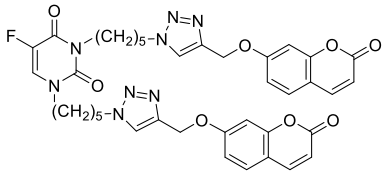


Figure S12. *FT-IR (ATR) of* ***7-POC****.*

1.4. Click product CP1.



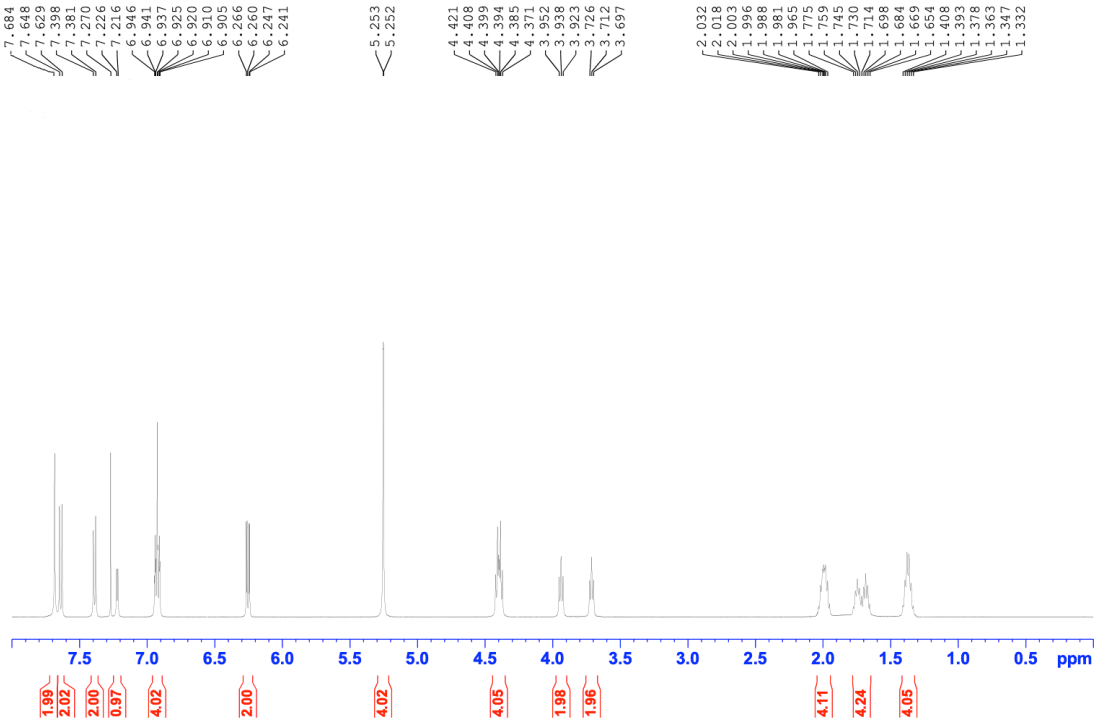


Figure S13. *^{1}H NMR ($CDCl_3$, 500 MHz) of* ***CP1****.*

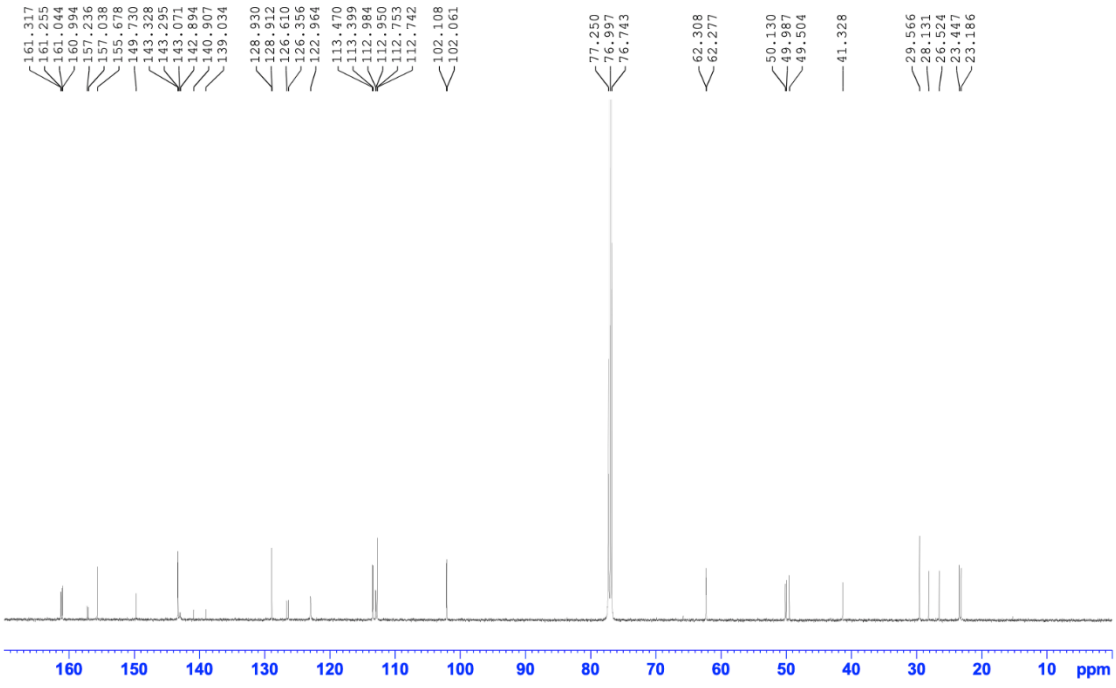


Figure S14. *^{13}C NMR ($CDCl_3$, 125 MHz) of* ***CP1****.*

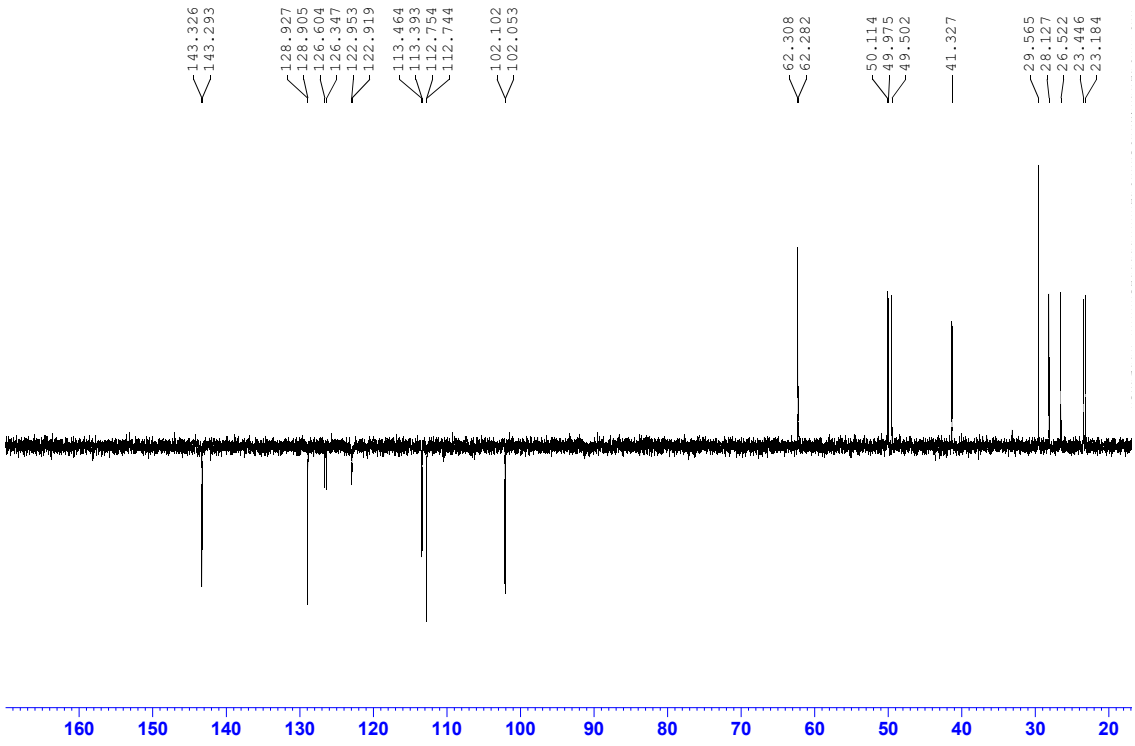


Figure S15. *DEPT ($CDCl_3$, 125 MHz) of* ***CP1****.*

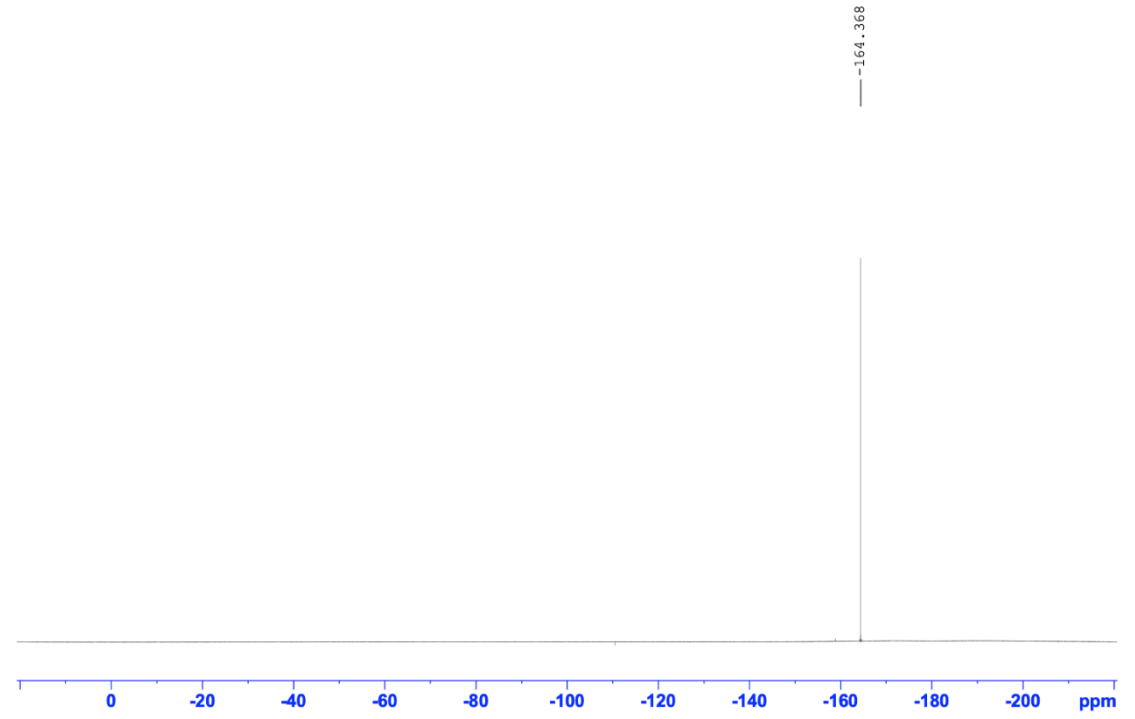


Figure S16. *^{19}F NMR ($CDCl_3$, 471 MHz) of* ***CP1****.*

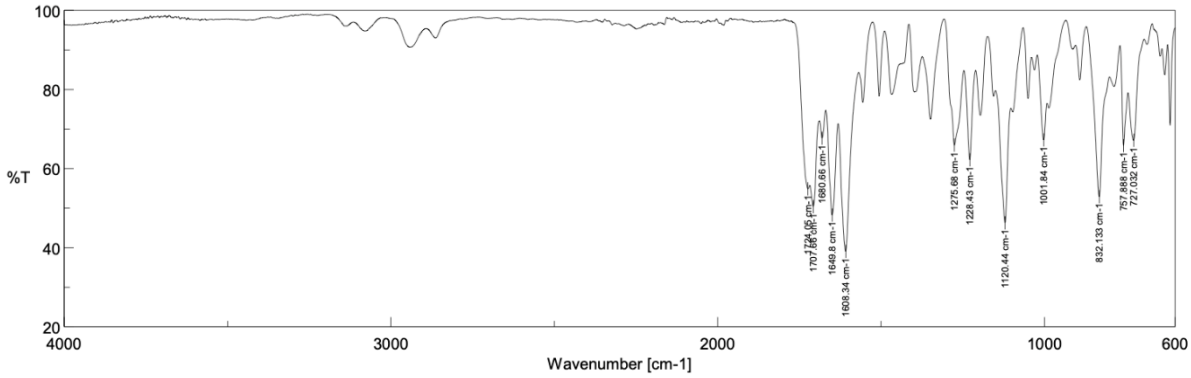


Figure S17. *FT-IR (ATR) of* ***CP1****.*

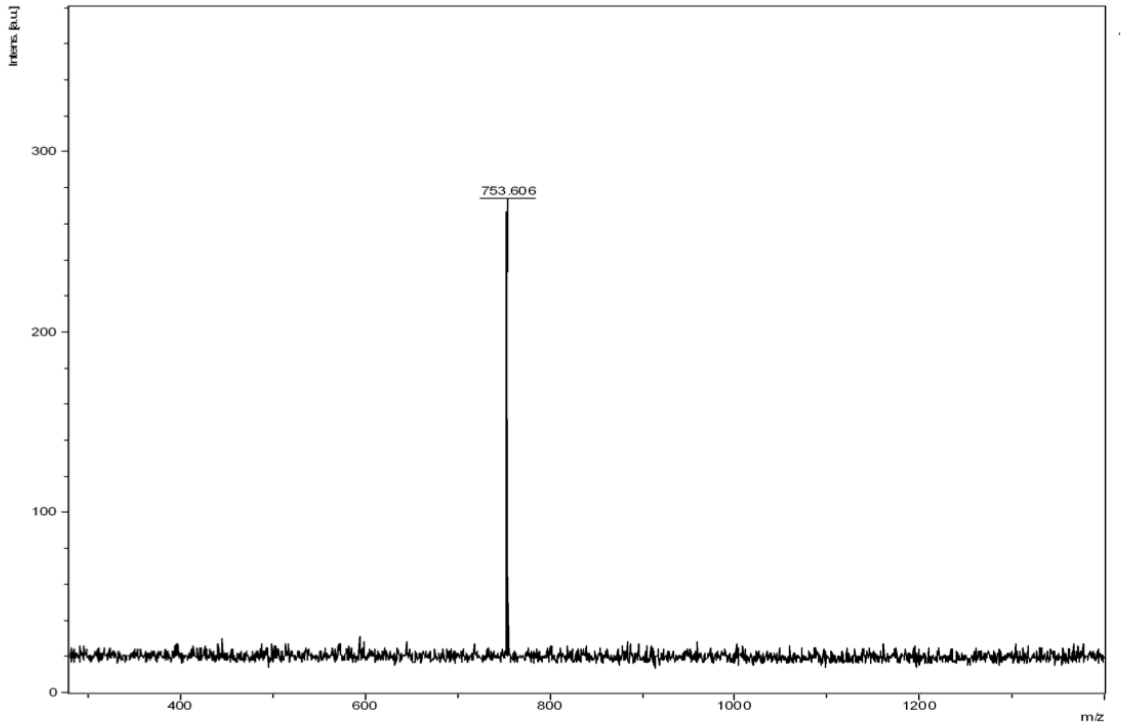
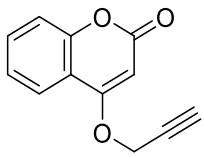


Figure S18. *MALDI-TOF MS (dithranol) of* ***CP1****.*

1.5. 4-Propargyloxycoumarin (4-POC).



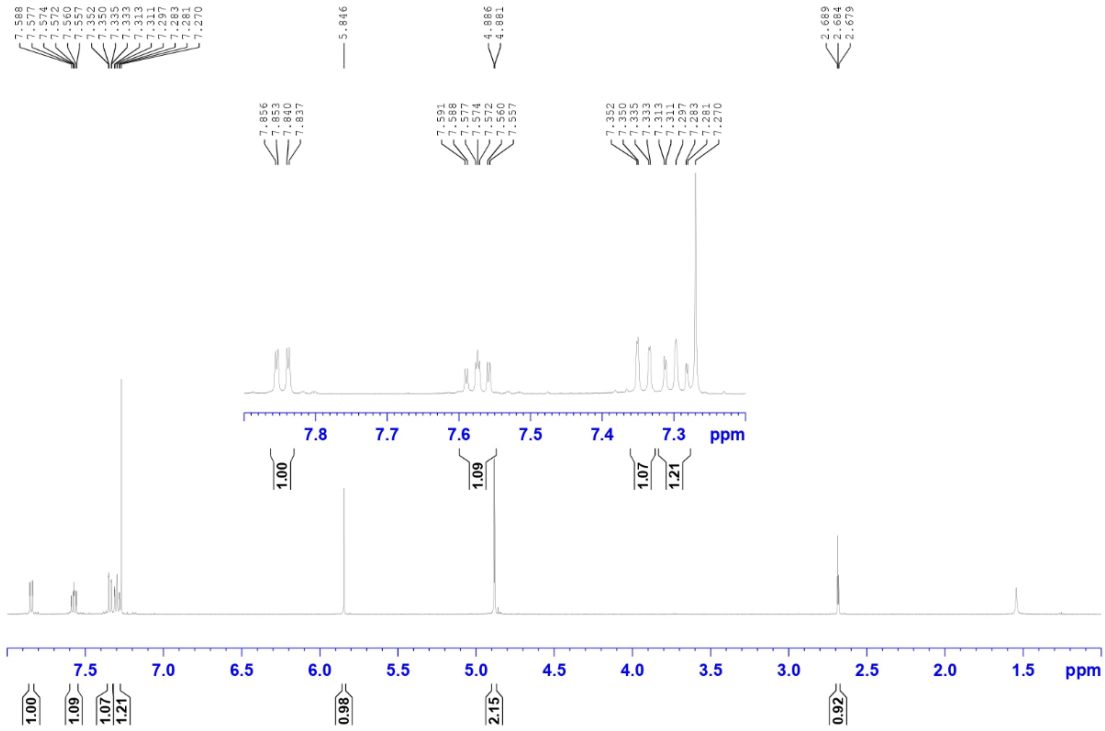


Figure S19. *^{1}H NMR ($CDCl_3$, 500 MHz) of* ***4-POC****.*

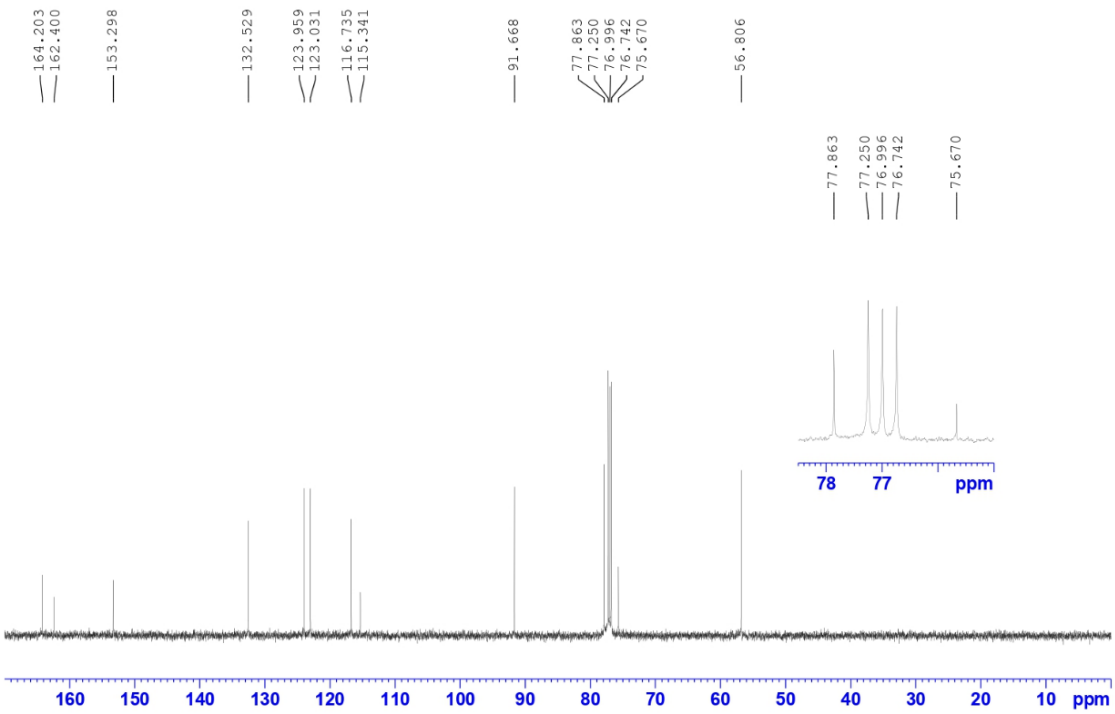


Figure S20. *^{13}C NMR ($CDCl_3$, 125 MHz) of* ***4-POC****.*

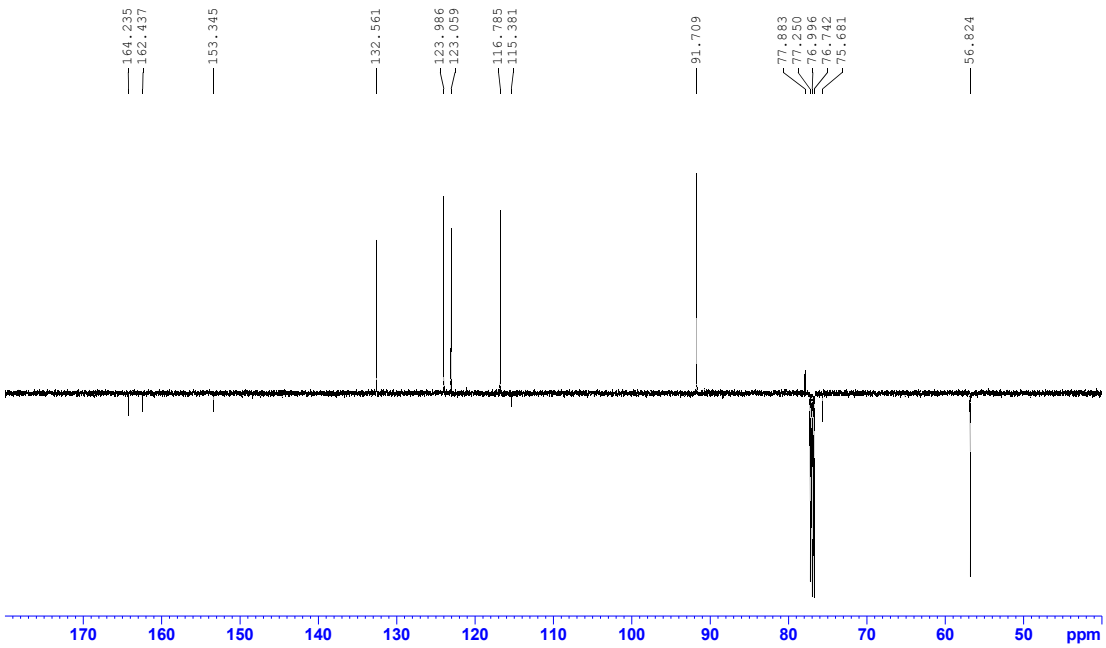


Figure S21. *APT ($CDCl_3$, 125 MHz) of* ***4-POC****.*

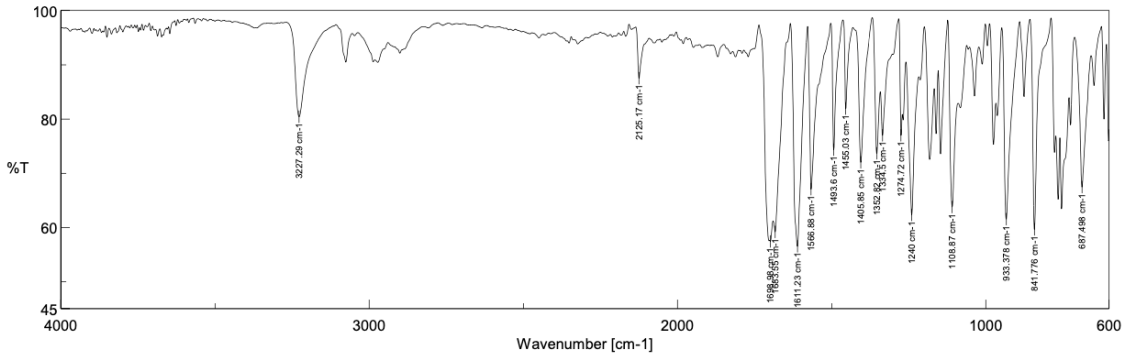
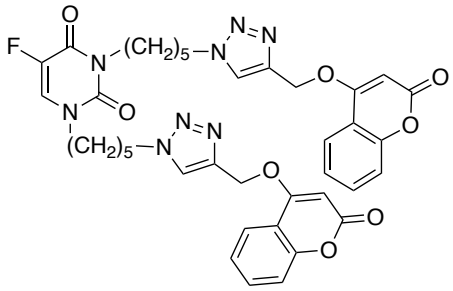


Figure S22. *FT-IR (ATR) of* ***4-POC****.*

1.6. Click product CP2.



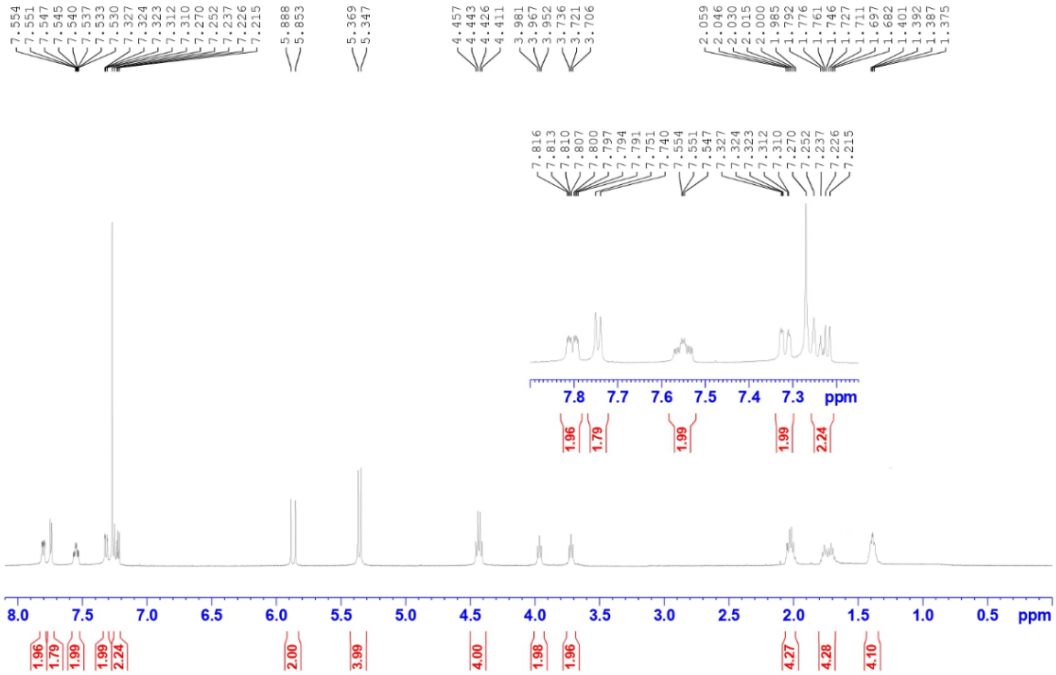


Figure S23. *^{1}H NMR ($CDCl_3$, 500 MHz) of* ***CP2****.*

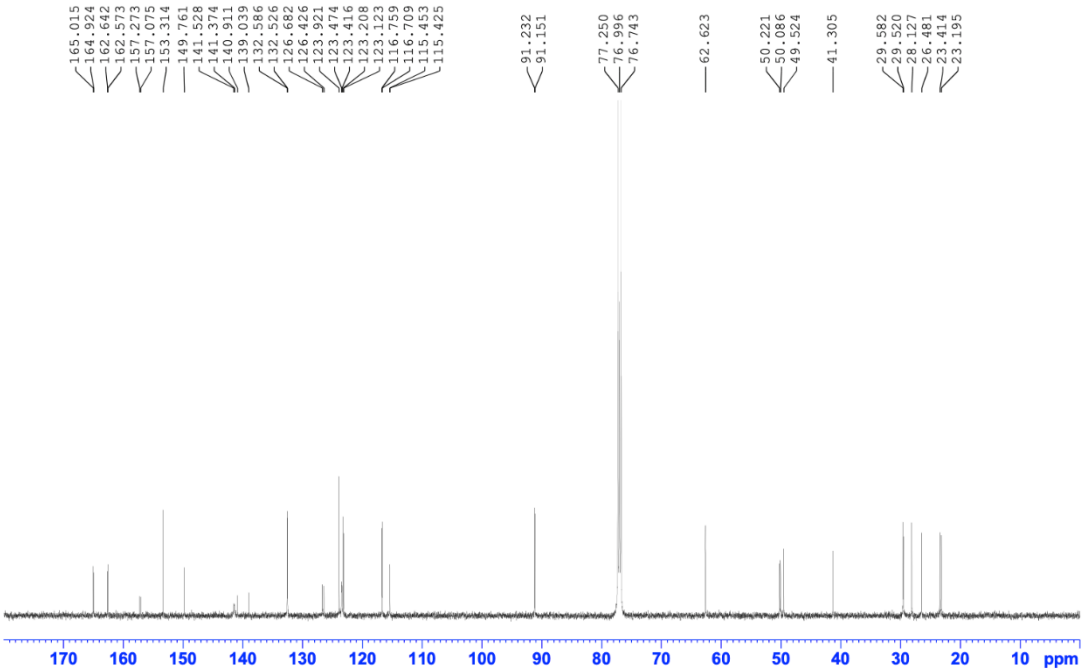


Figure S24. *^{13}C NMR ($CDCl_3$, 125 MHz) of* ***CP2****.*

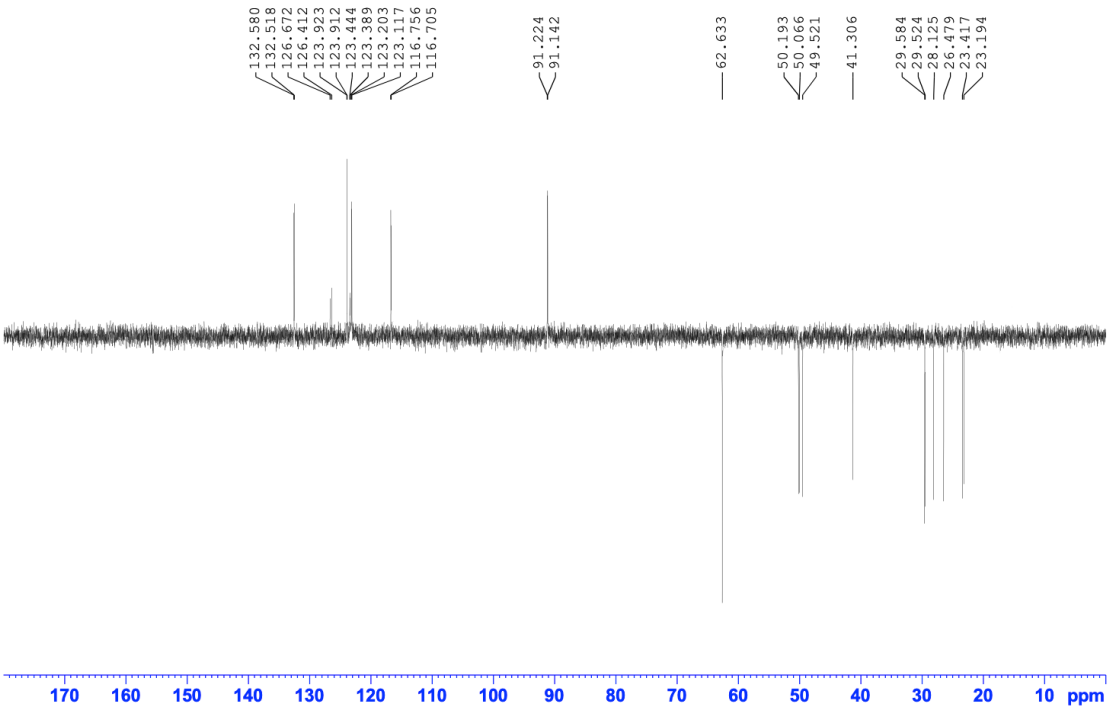


Figure S25. *DEPT ($CDCl_3$, 125 MHz) of* ***CP2****.*

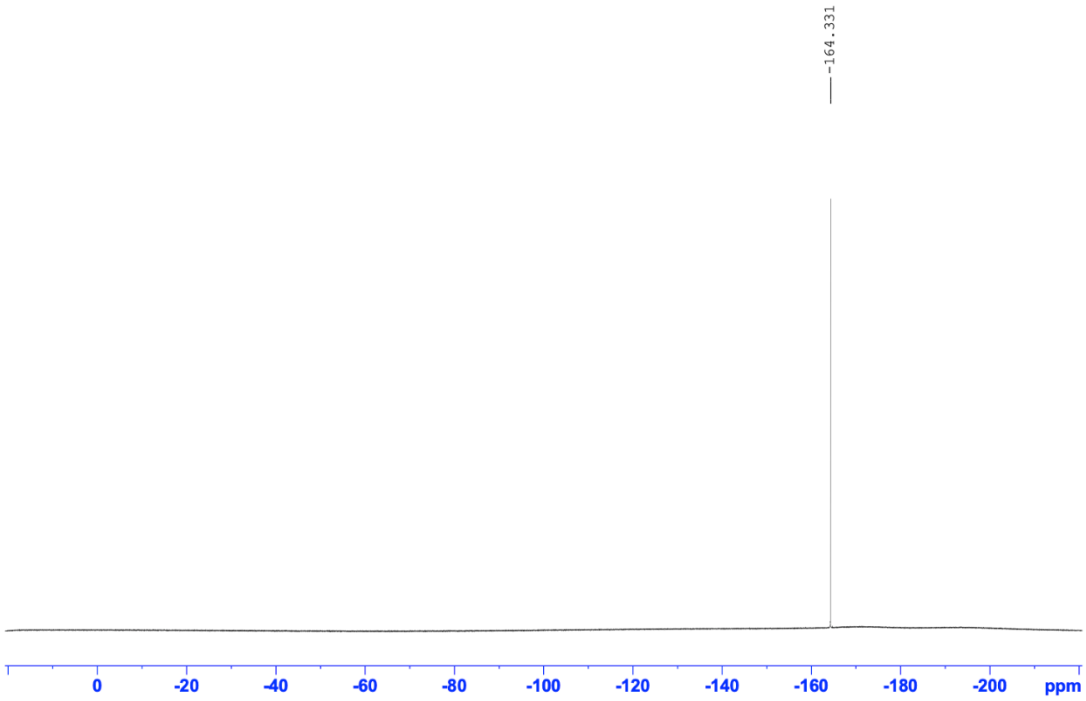


Figure S26. *^{19}F NMR ($CDCl_3$, 471 MHz) of* ***CP2****.*

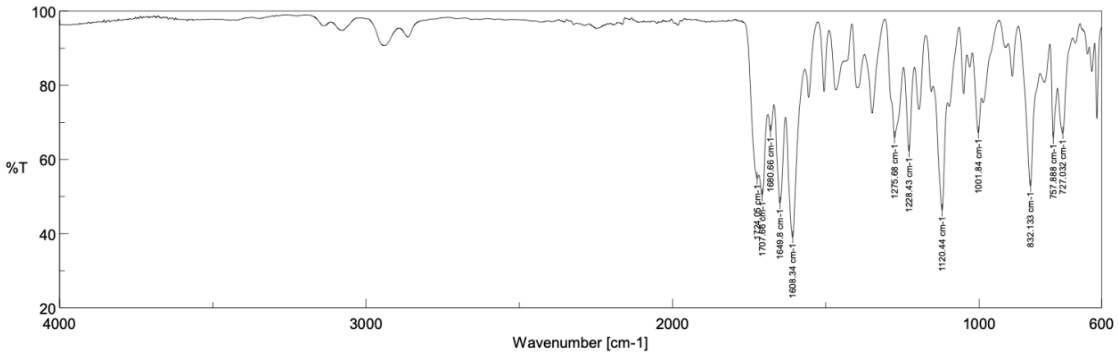


Figure S27. *FT-IR (ATR) of* ***CP2****.*

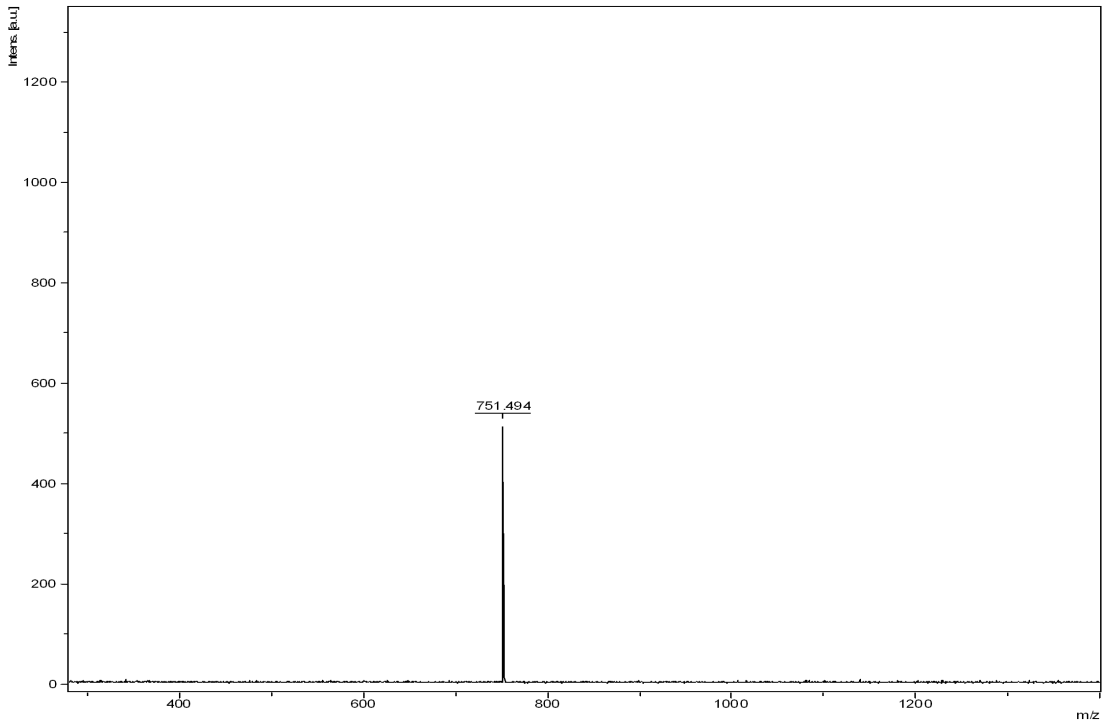


Figure S28. *MALDI-TOF MS (dithranol) of* ***CP2****.*

2. *In vitro* viability assay.

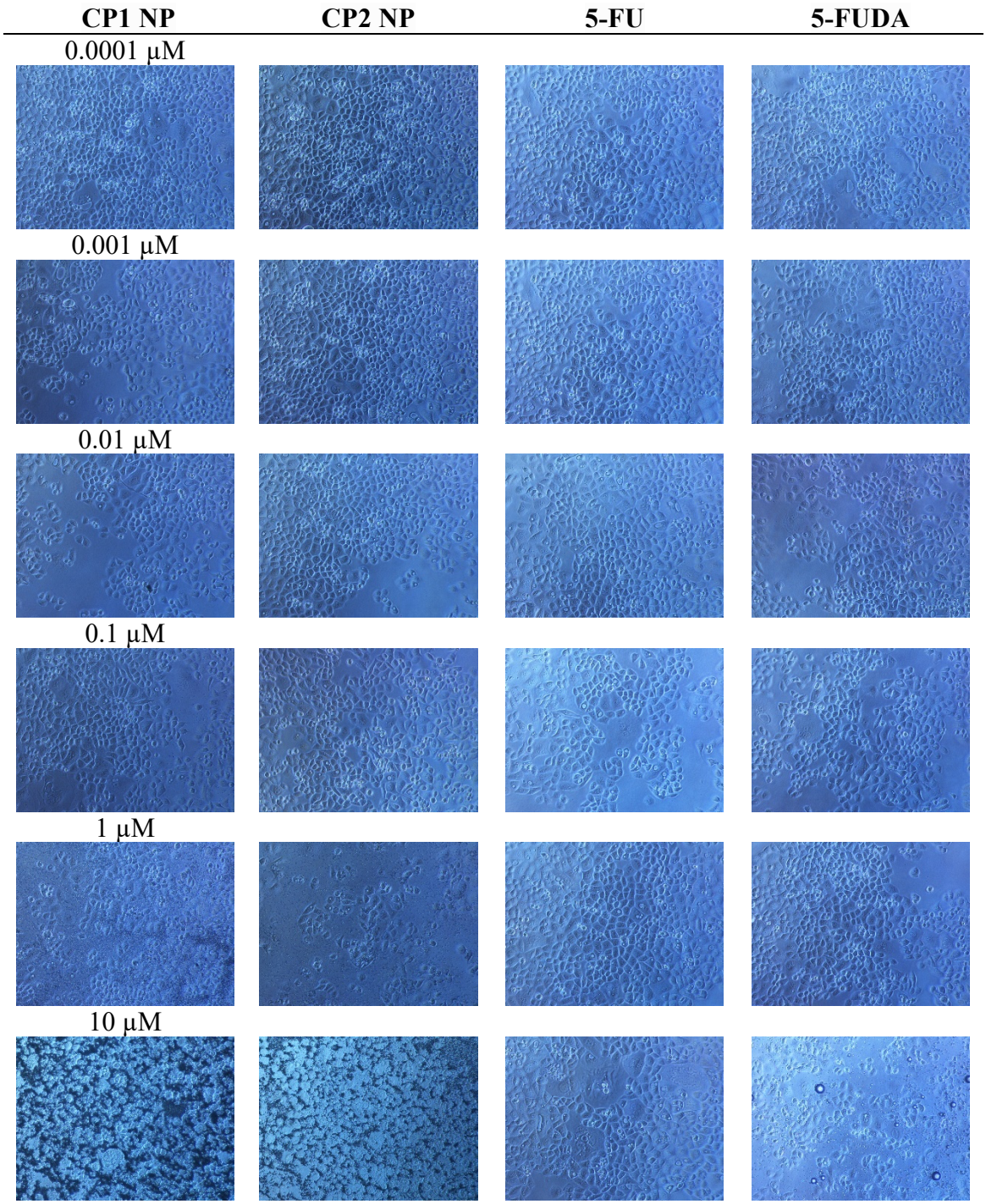


Figure S29. *Microscopic images (magnification 10×) of PANC-1 cells after treatment with* ***5-FU****,* ***5-FUDA****,* ***CP1****, and* ***CP2*** *NPs in MTT assays at different concentrations.*