

Supplementary Material

Radical Mediated Decarboxylation of Amino Acids via Photochemical Carbonyl Sulfide (COS) Elimination

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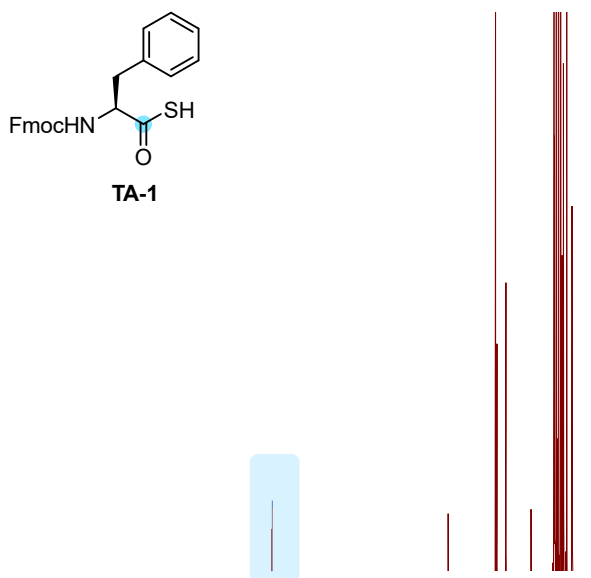


Figure S1. Crude ¹³C NMR (101 MHz, CDCl₃) of thioacid **TA-1** demonstrating complete conversion to the thioacid (δc 199.3 ppm) after trityl deprotection. For reference, the thioester carbonyl of Fmoc-Phe-STrt **1a** is found at δc 197.2 ppm [11].



Figure S2. UV flow reactor set-up. Syringe pump with a 10 mL syringe containing the reaction mixture was connected to FEP tubing (inner diameter 0.8 mm) coiled around a glass insert placed inside a Luzchem photoreactor, LZC-EDU (110 V/60 Hz) containing 14 UVA lamps centred at 354 nm (left). The terminus of the tubing was inserted into a glass vial outside the UV reactor for sample collection (right).

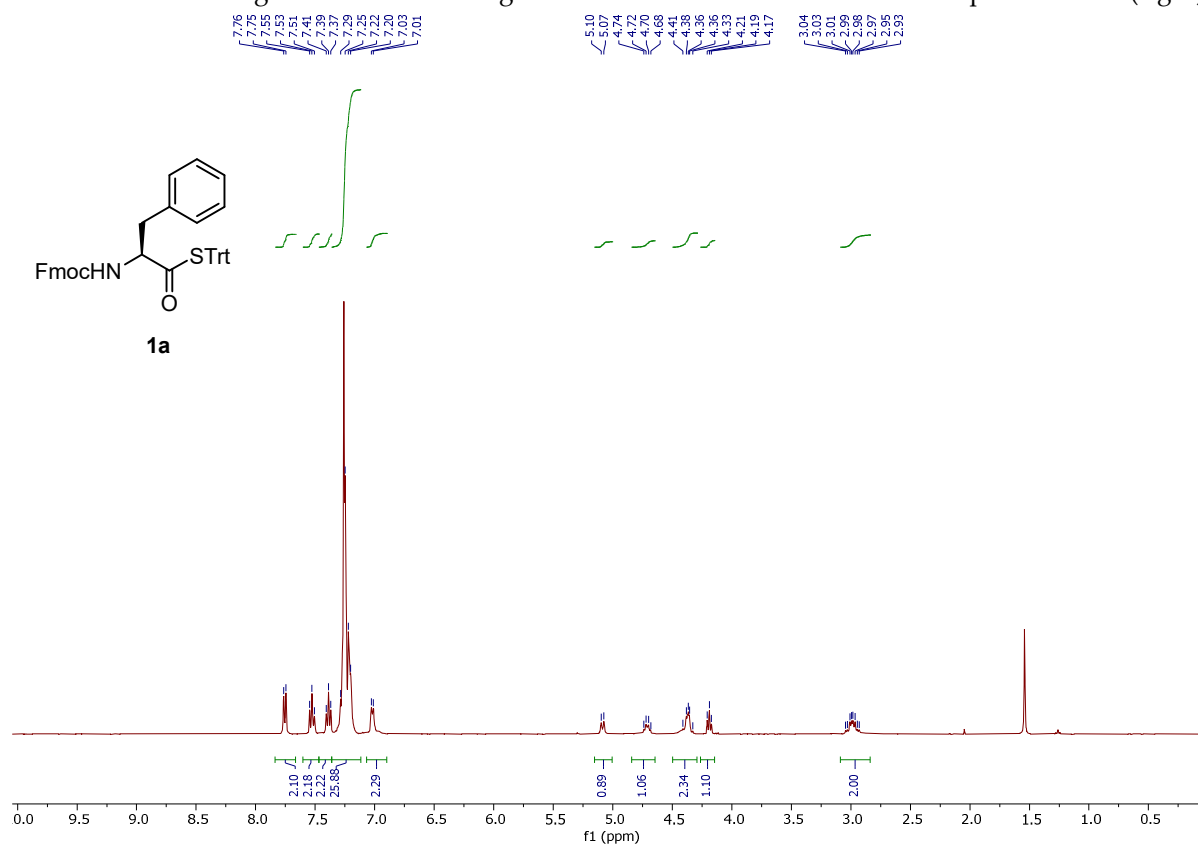


Figure S3. ¹H NMR (400 MHz, CDCl₃) of compound **1a**.

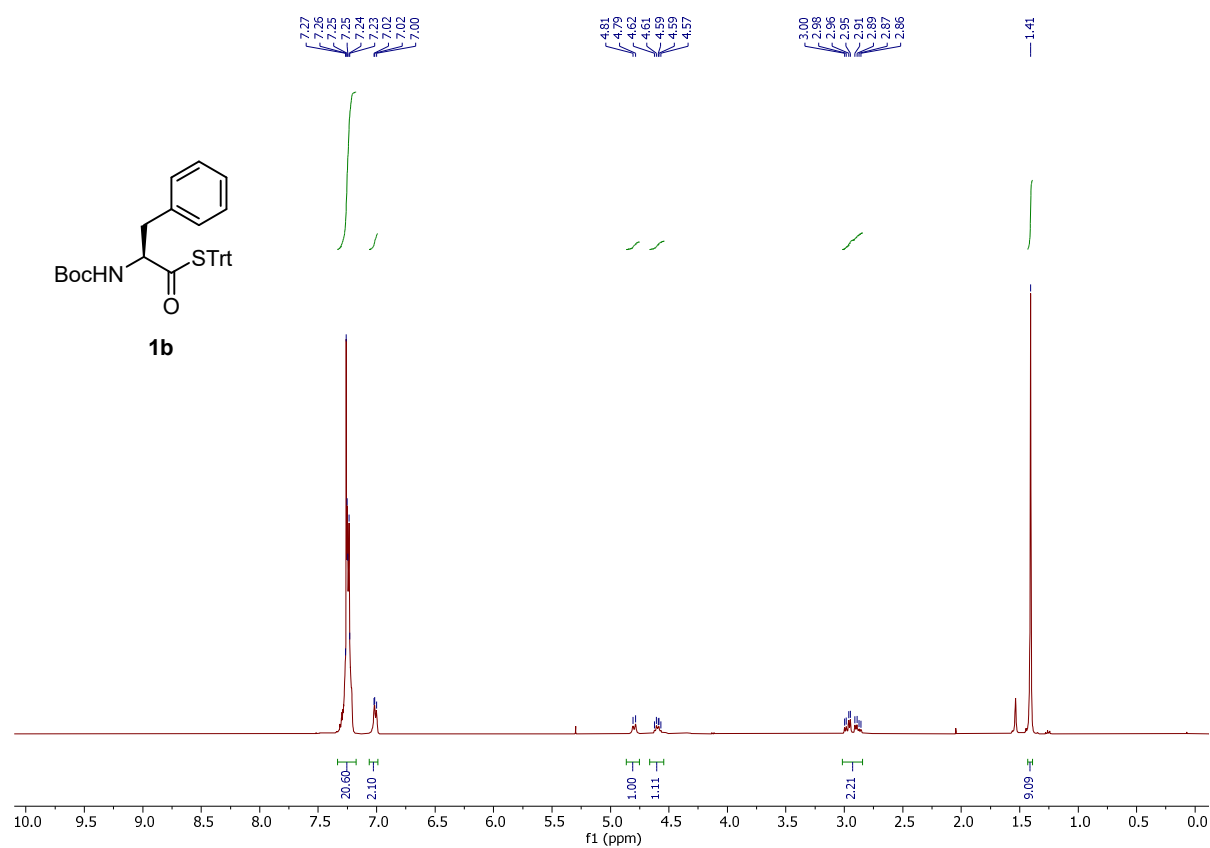


Figure S4. ¹H NMR (400 MHz, CDCl₃) of compound **1b**.

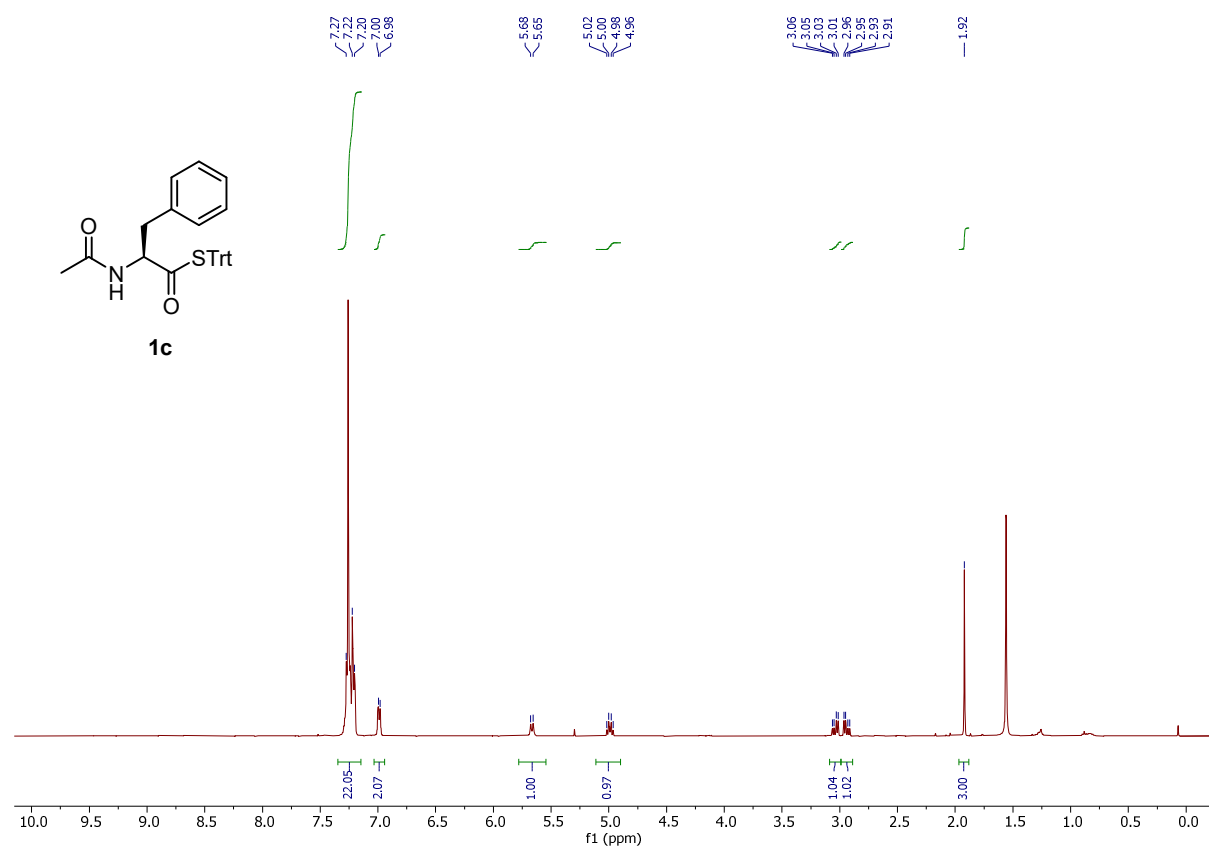


Figure S5. ¹H NMR (400 MHz, CDCl₃) of compound **1c**.

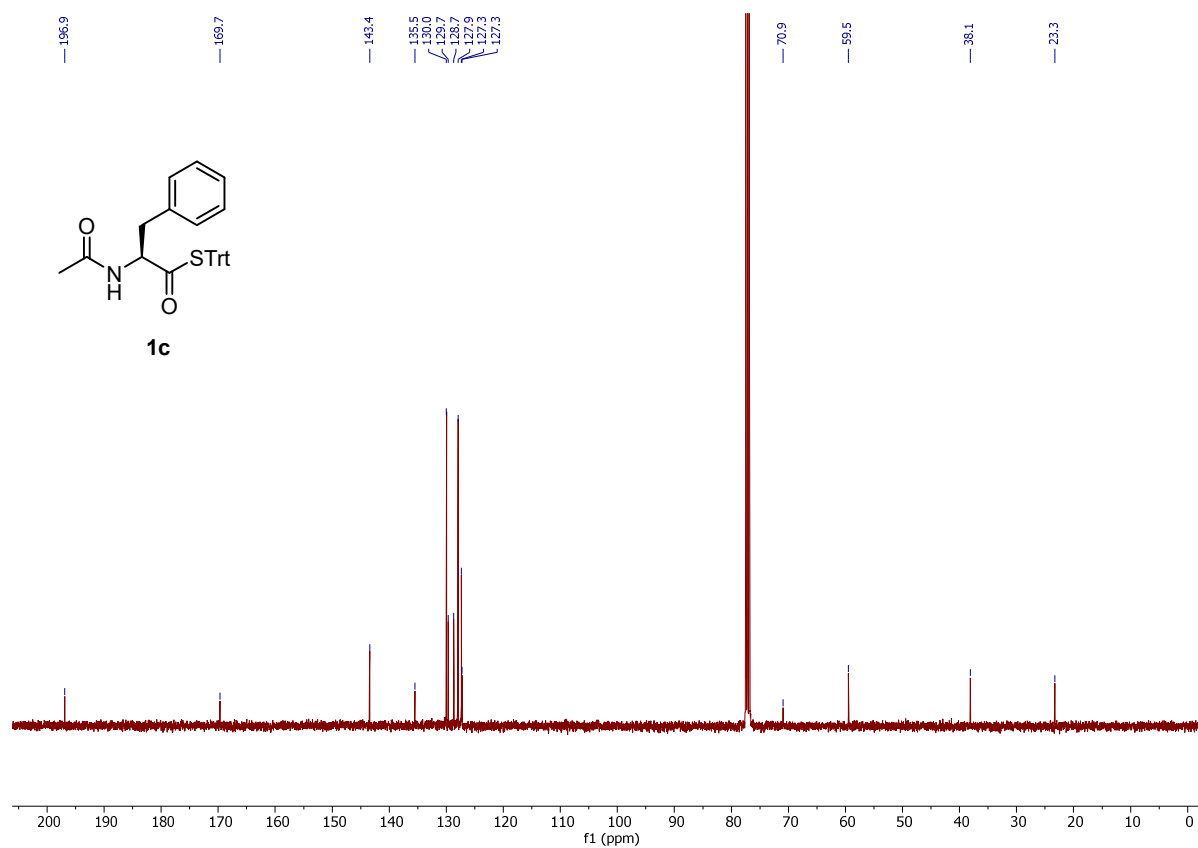


Figure S6. ¹³C NMR (101 MHz, CDCl₃) of compound **1c**.

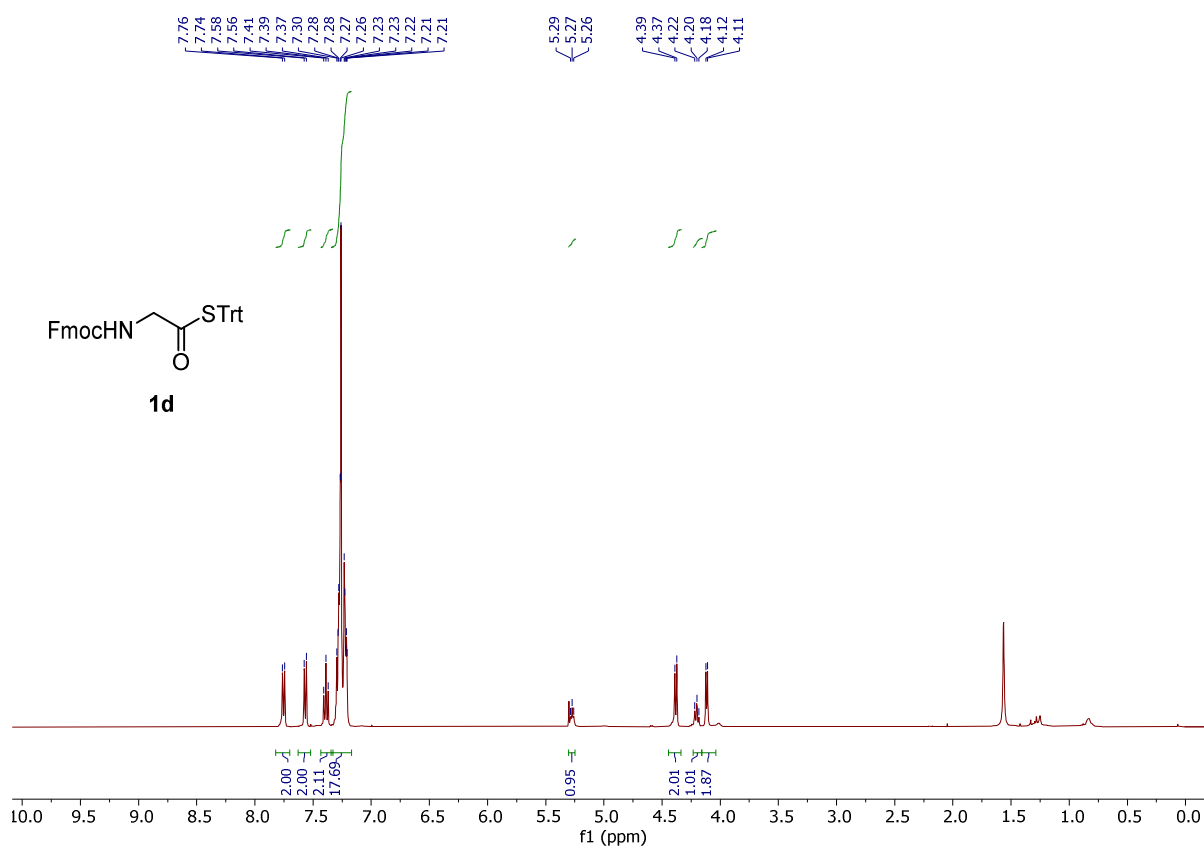


Figure S7. ¹H NMR (400 MHz, CDCl₃) of compound **1d**.

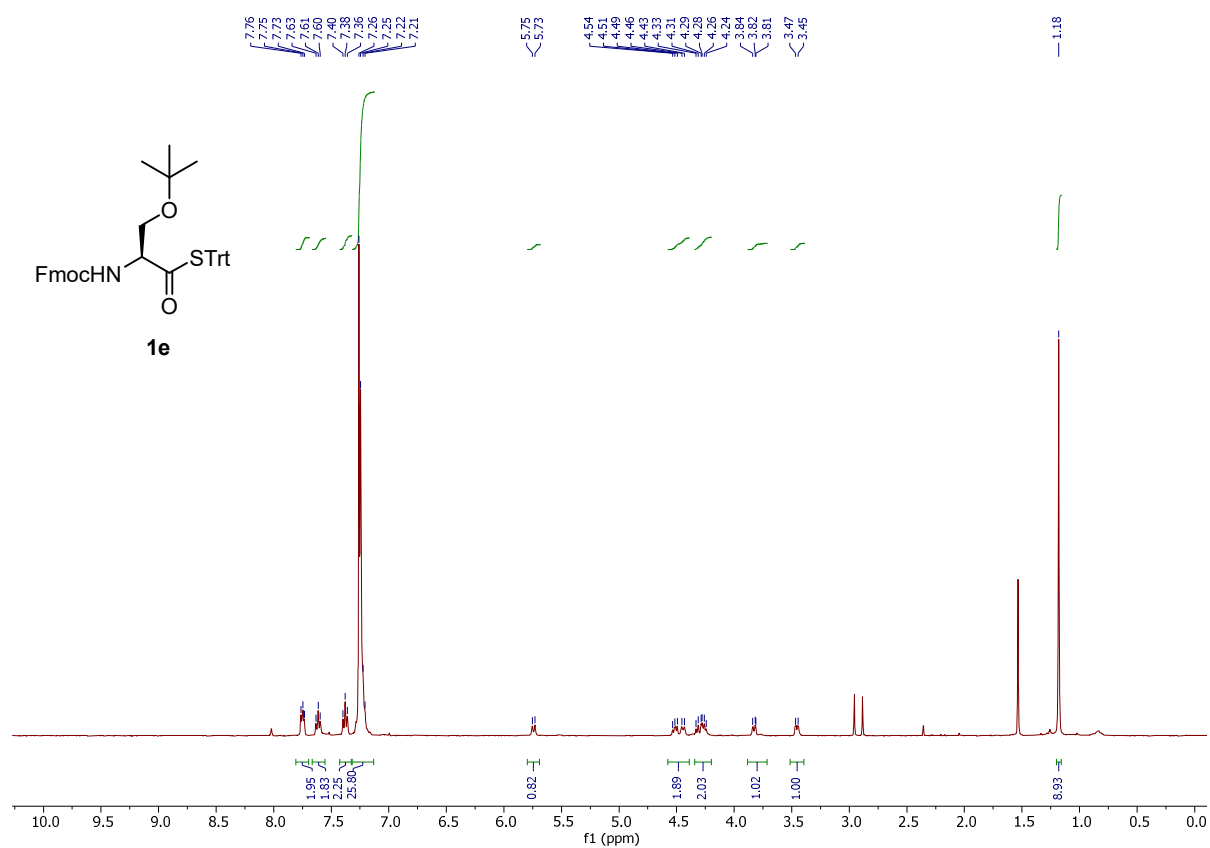


Figure S8. ¹H NMR (400 MHz, CDCl₃) of compound **1e**.

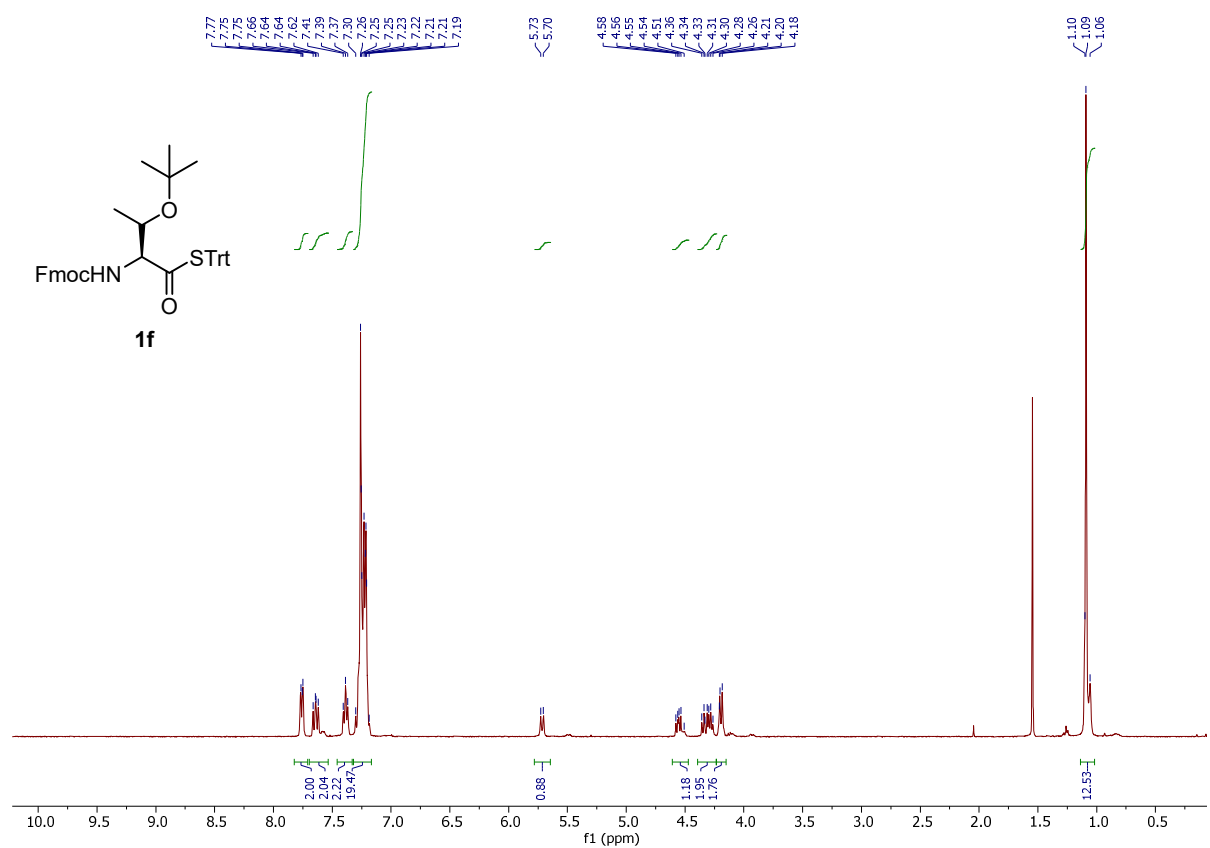


Figure S9. ¹H NMR (400 MHz, CDCl₃) of compound **1f**.

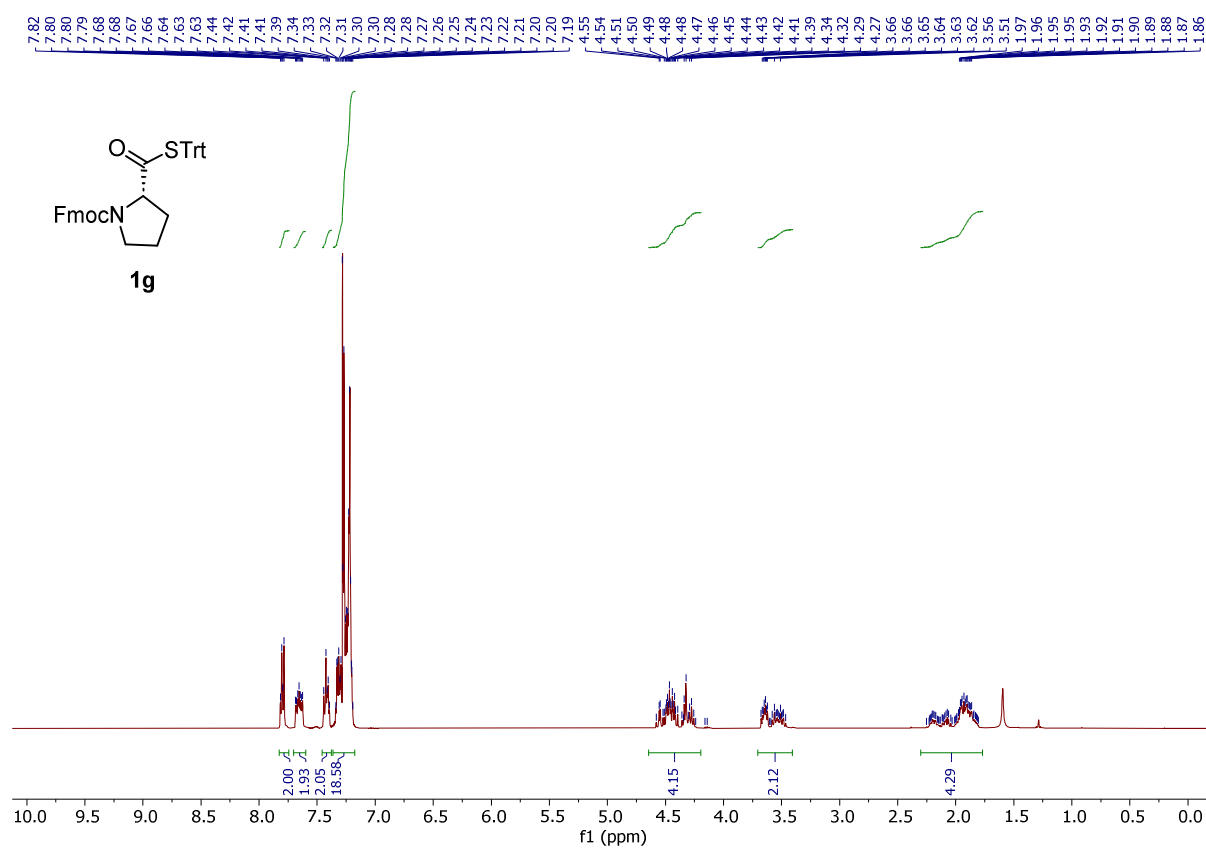


Figure S10. ¹H NMR (400 MHz, CDCl₃) of compound **1g**.

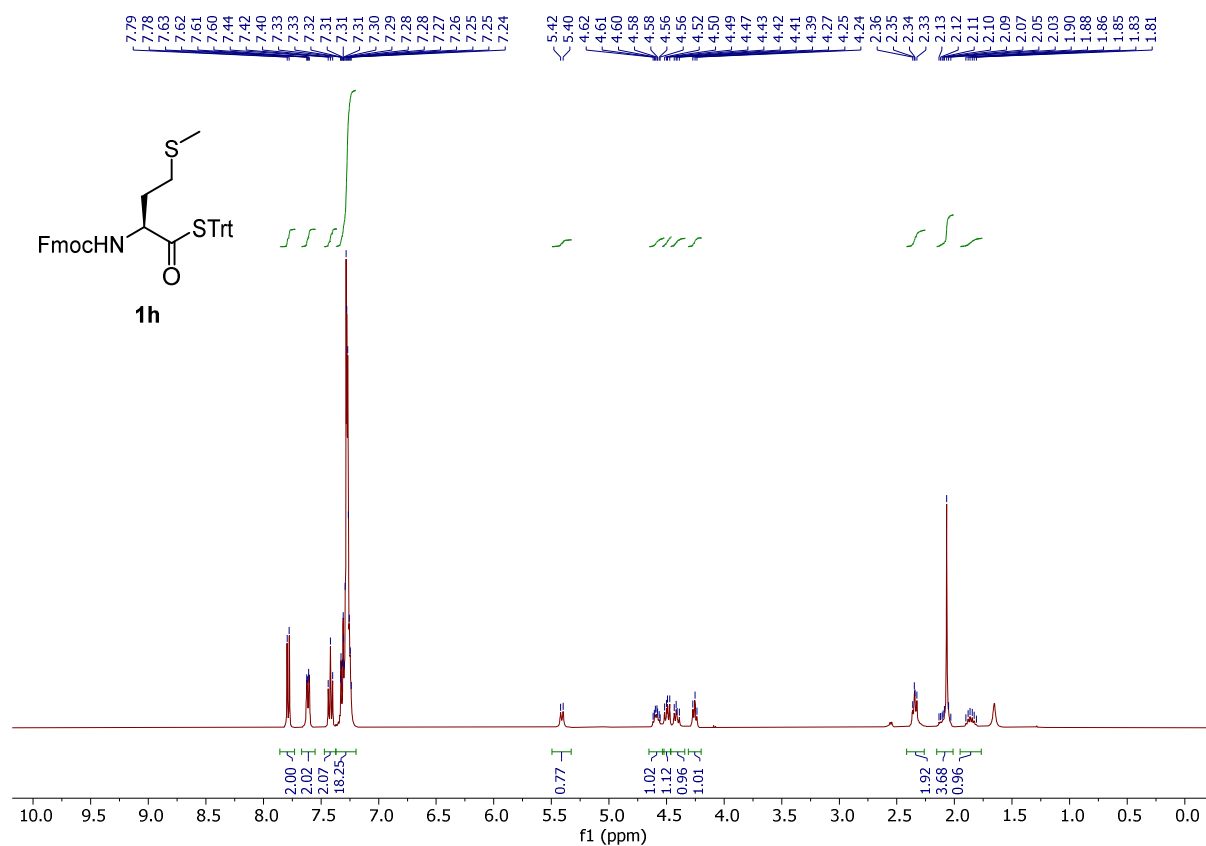


Figure S11. ¹H NMR (400 MHz, CDCl₃) of compound **1h**.

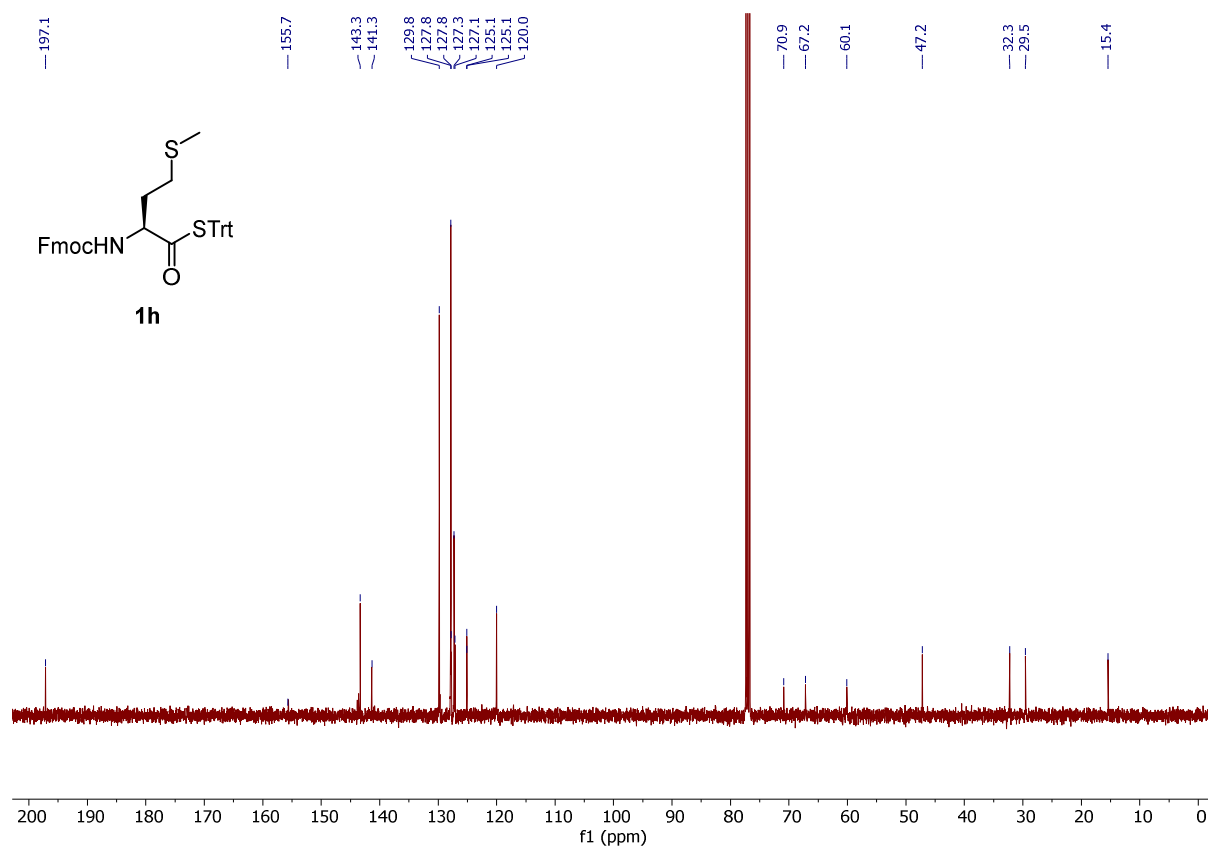


Figure S12. ¹³C NMR (101 MHz, CDCl₃) of compound **1h**.

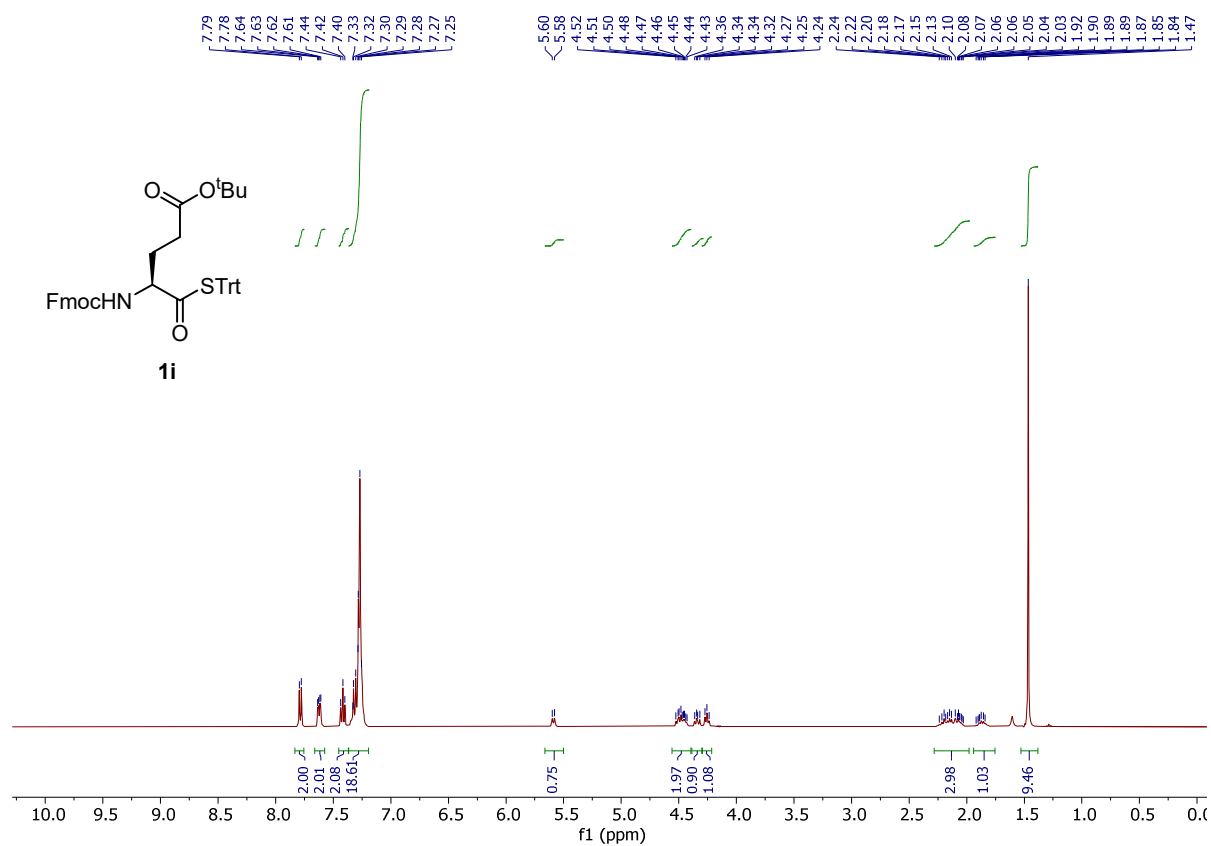


Figure S13. ¹H NMR (400 MHz, CDCl₃) of compound **1i**.

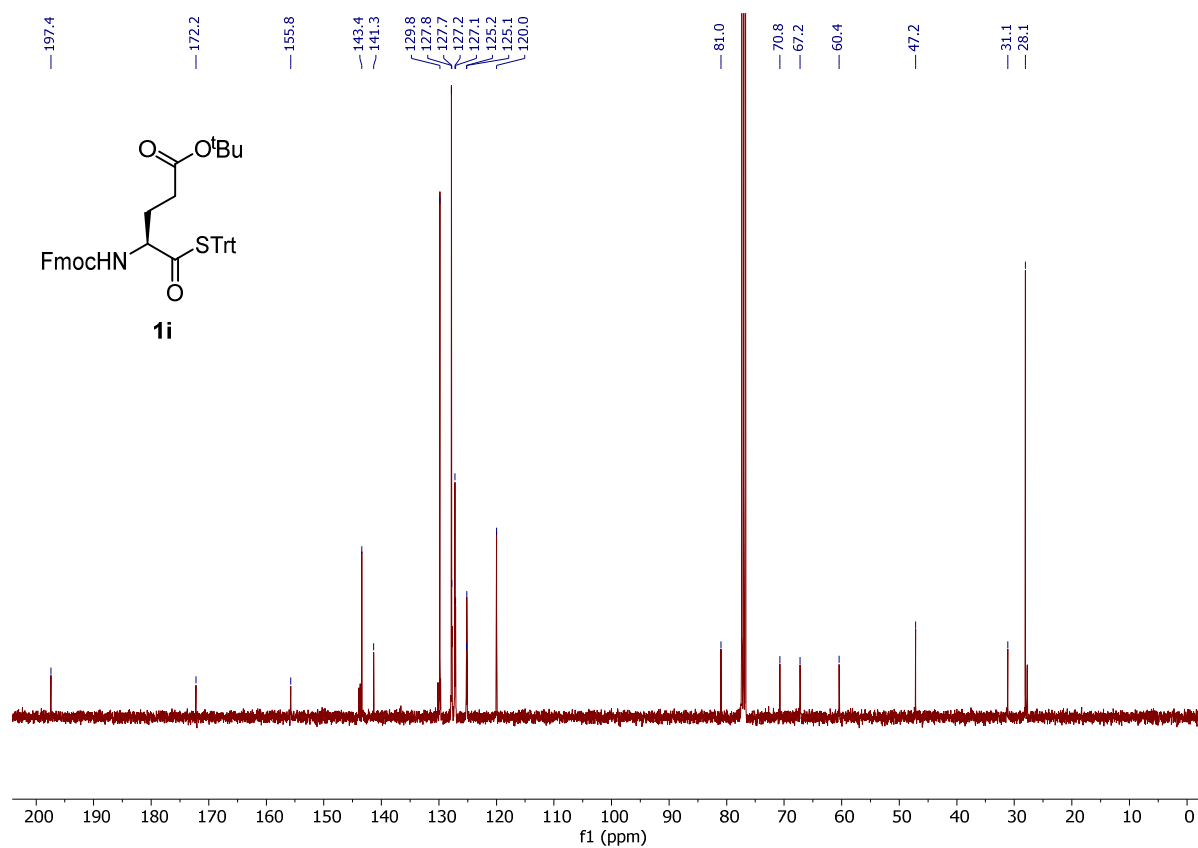


Figure S14. ¹³C NMR (101 MHz, CDCl₃) of compound **1i**.

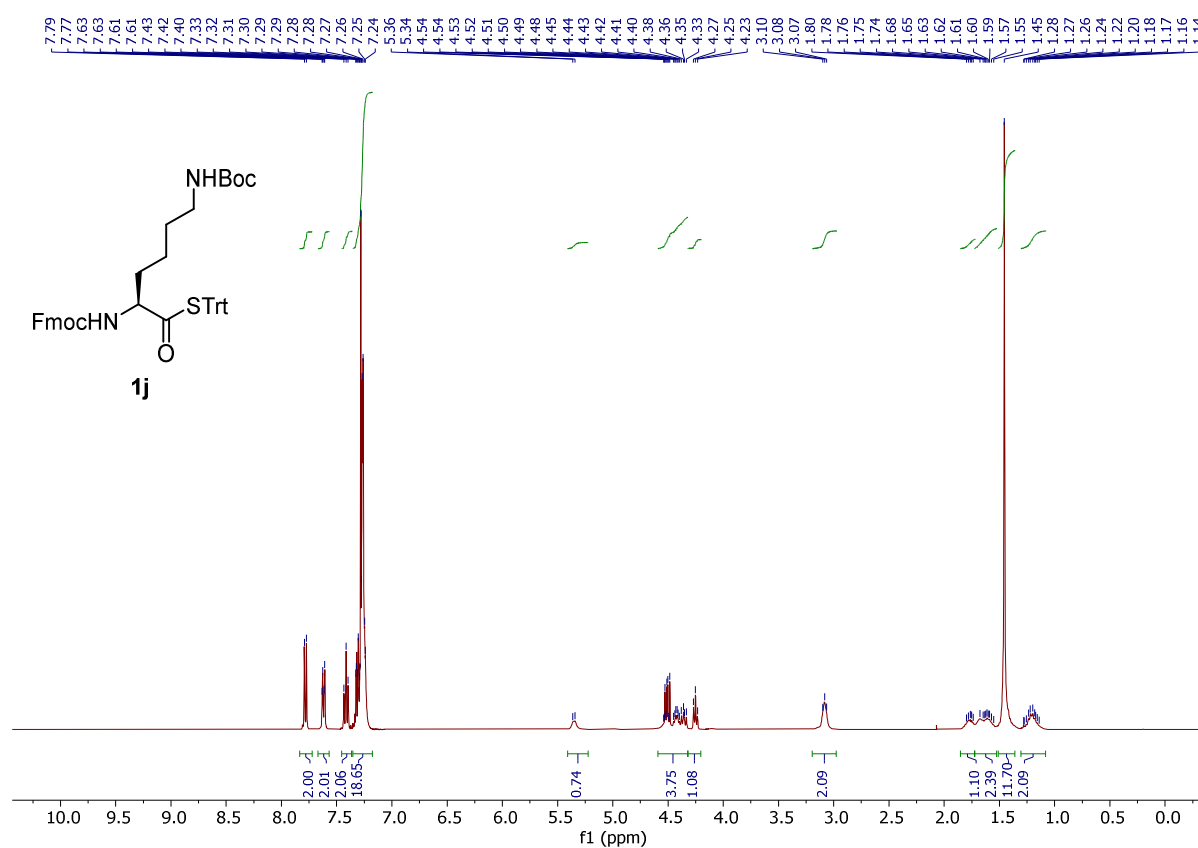


Figure S15. ¹H NMR (400 MHz, CDCl₃) of compound **1j**.

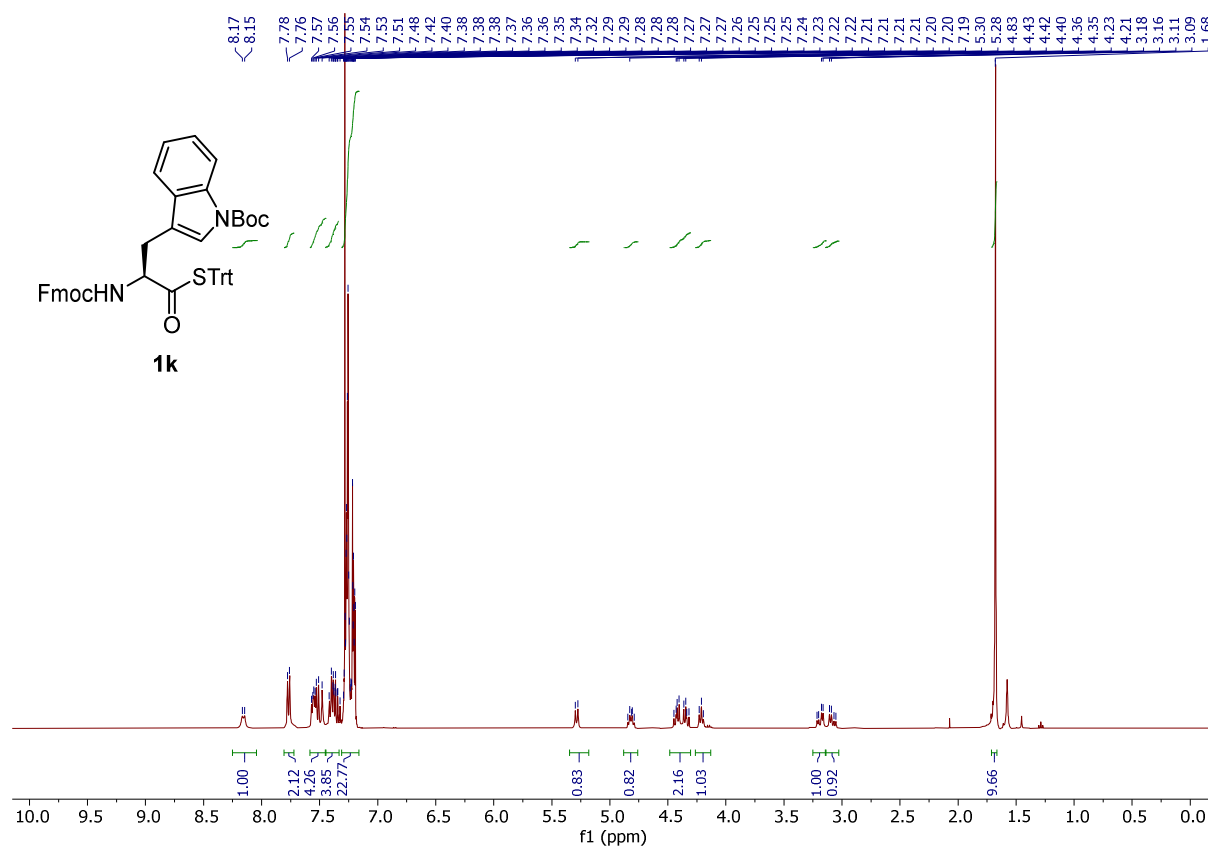


Figure S16. ¹H NMR (400 MHz, CDCl₃) of compound **1k**.

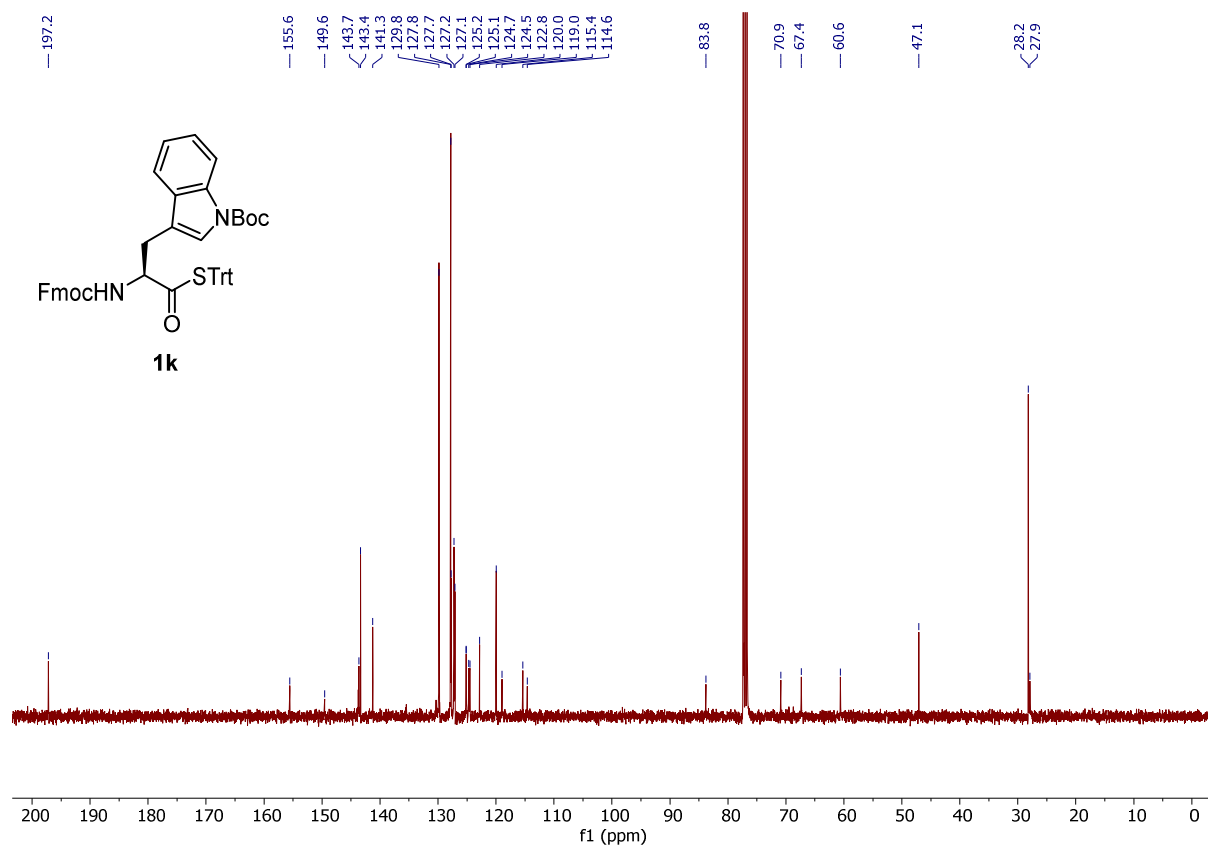


Figure S17. ¹³C NMR (101 MHz, CDCl₃) of compound **1k**.

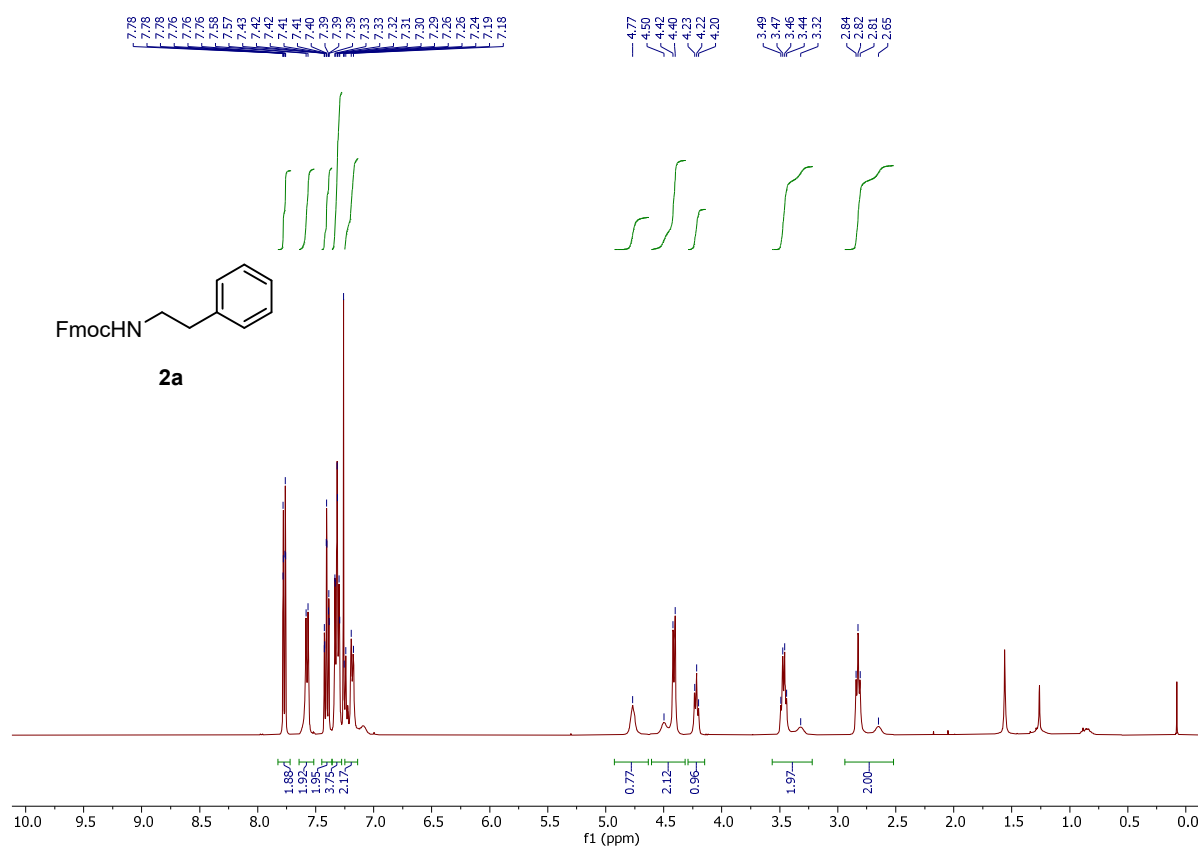


Figure S18. ¹H NMR (400 MHz, CDCl₃) of compound **2a**.

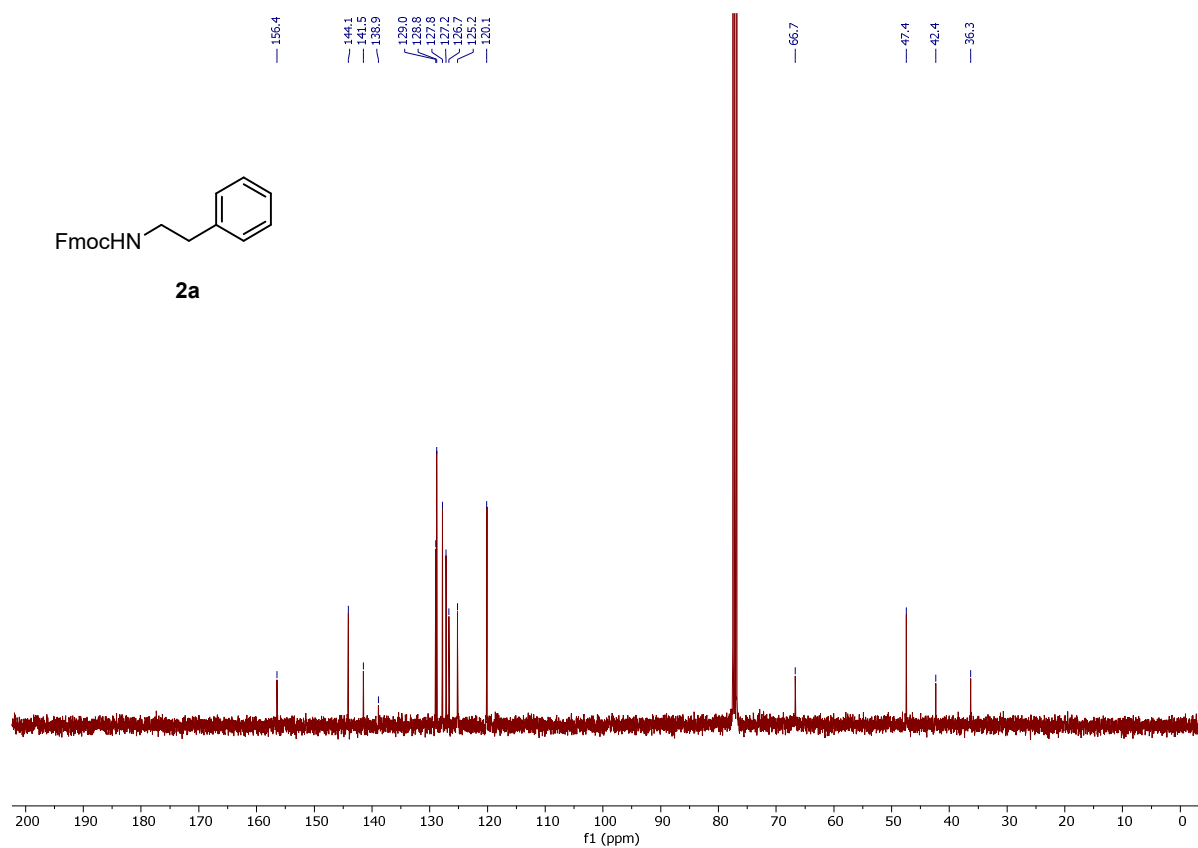


Figure S19. ¹³C NMR (101 MHz, CDCl₃) of compound **2a**.



Figure S20. ¹H NMR (400 MHz, CDCl₃) of compound **2b**.

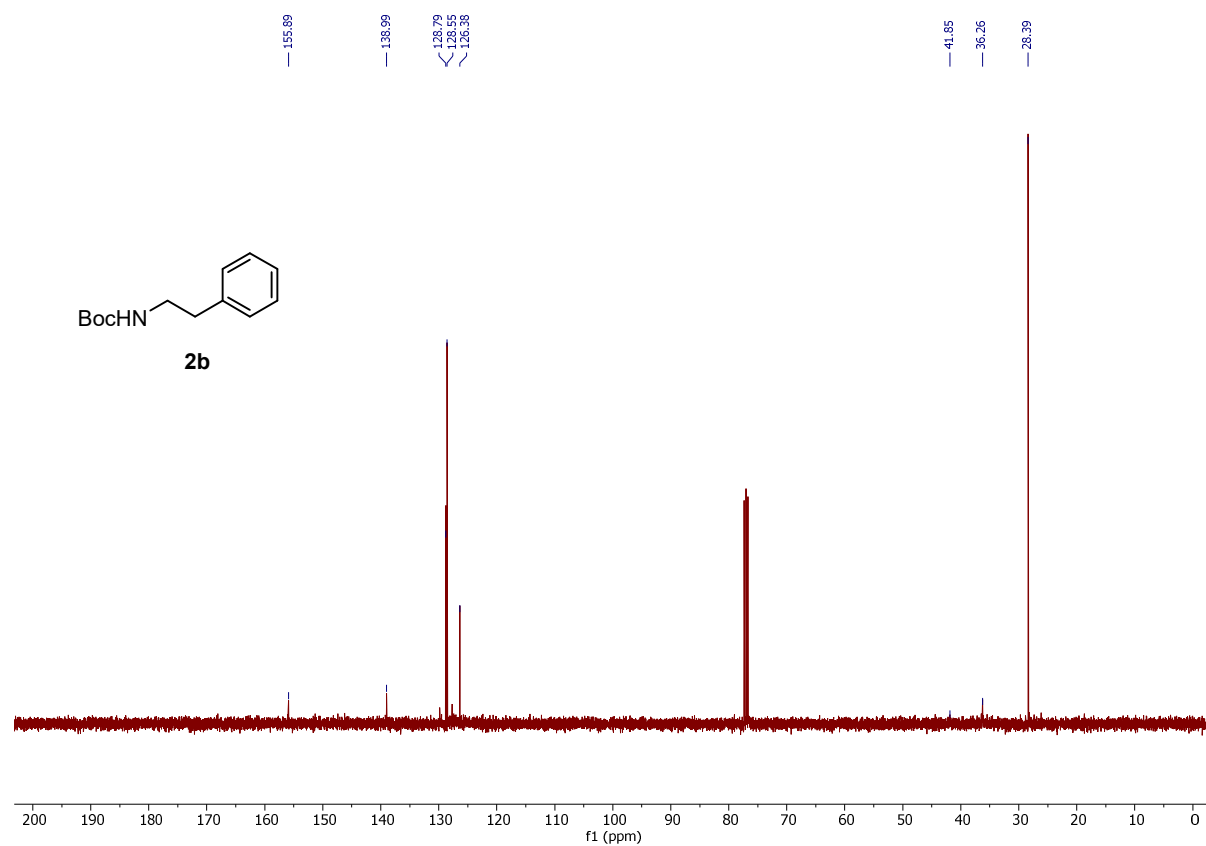


Figure S21. ¹³C NMR (101 MHz, CDCl₃) of compound **2b**.

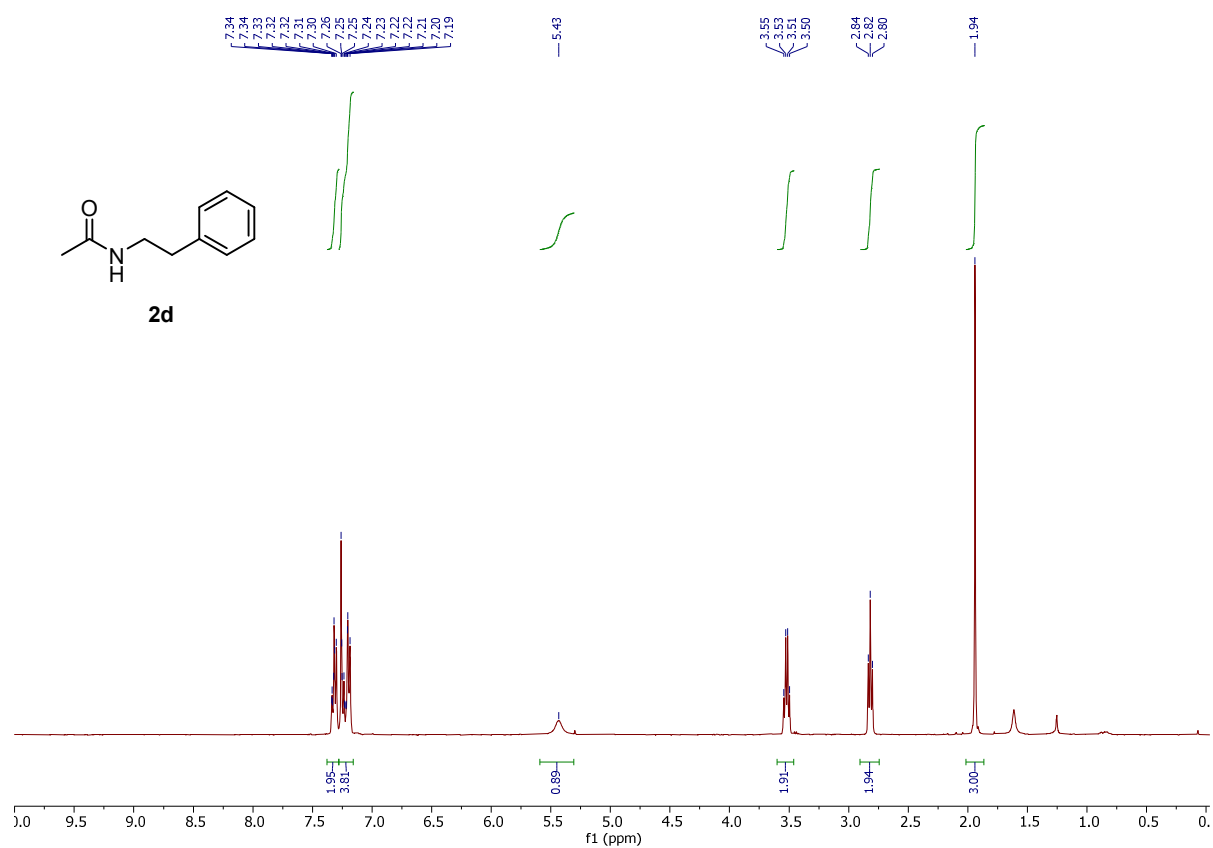


Figure S22. ¹H NMR (400 MHz, CDCl₃) of compound **2d**.

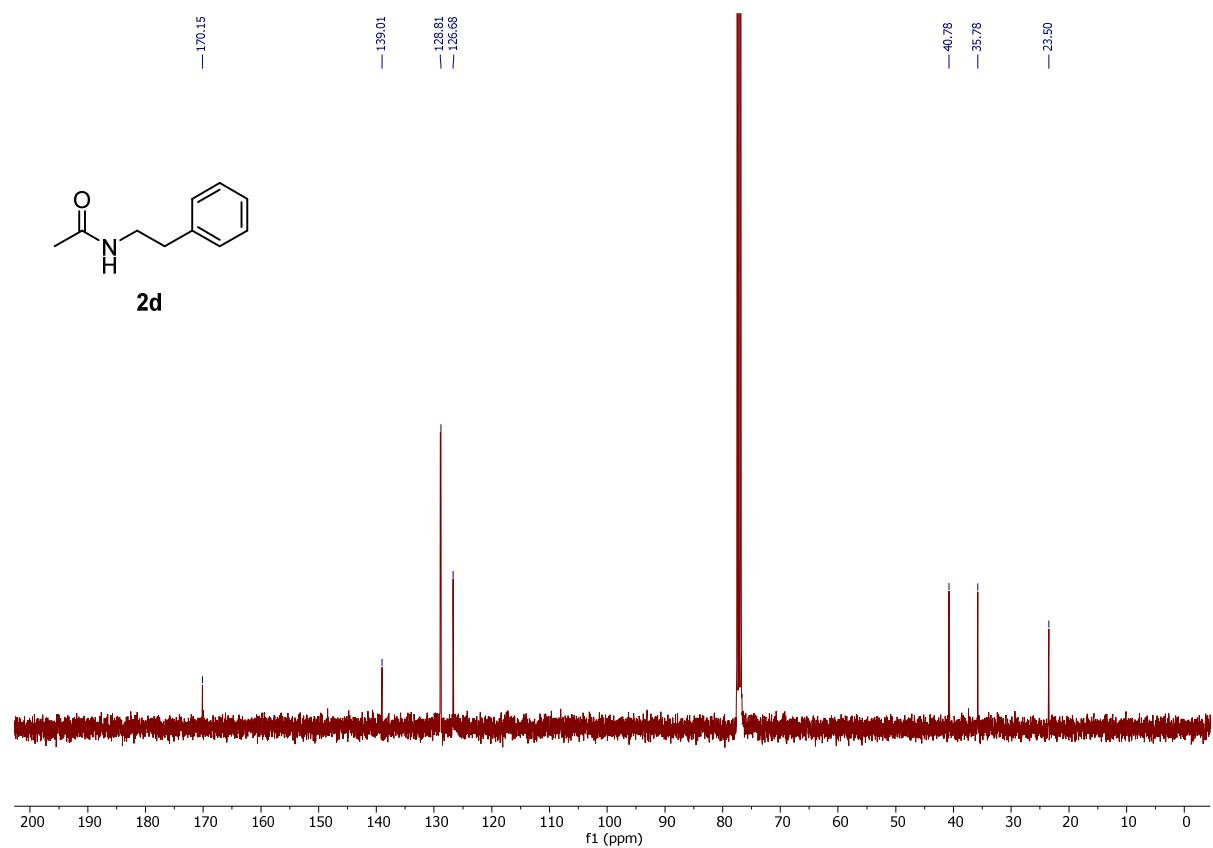


Figure S23. ¹³C NMR (101 MHz, CDCl₃) of compound **2d**.

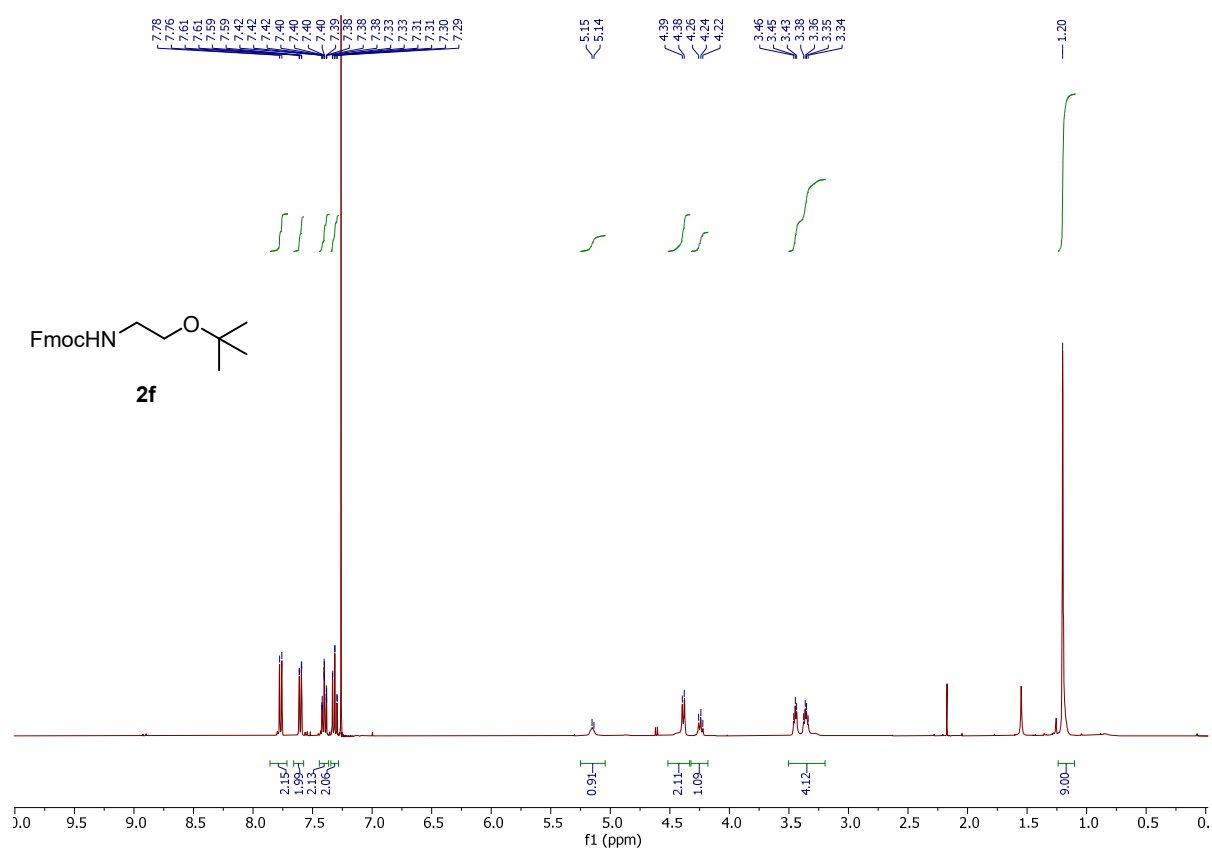


Figure S24. ¹H NMR (400 MHz, CDCl₃) of compound **2f**.

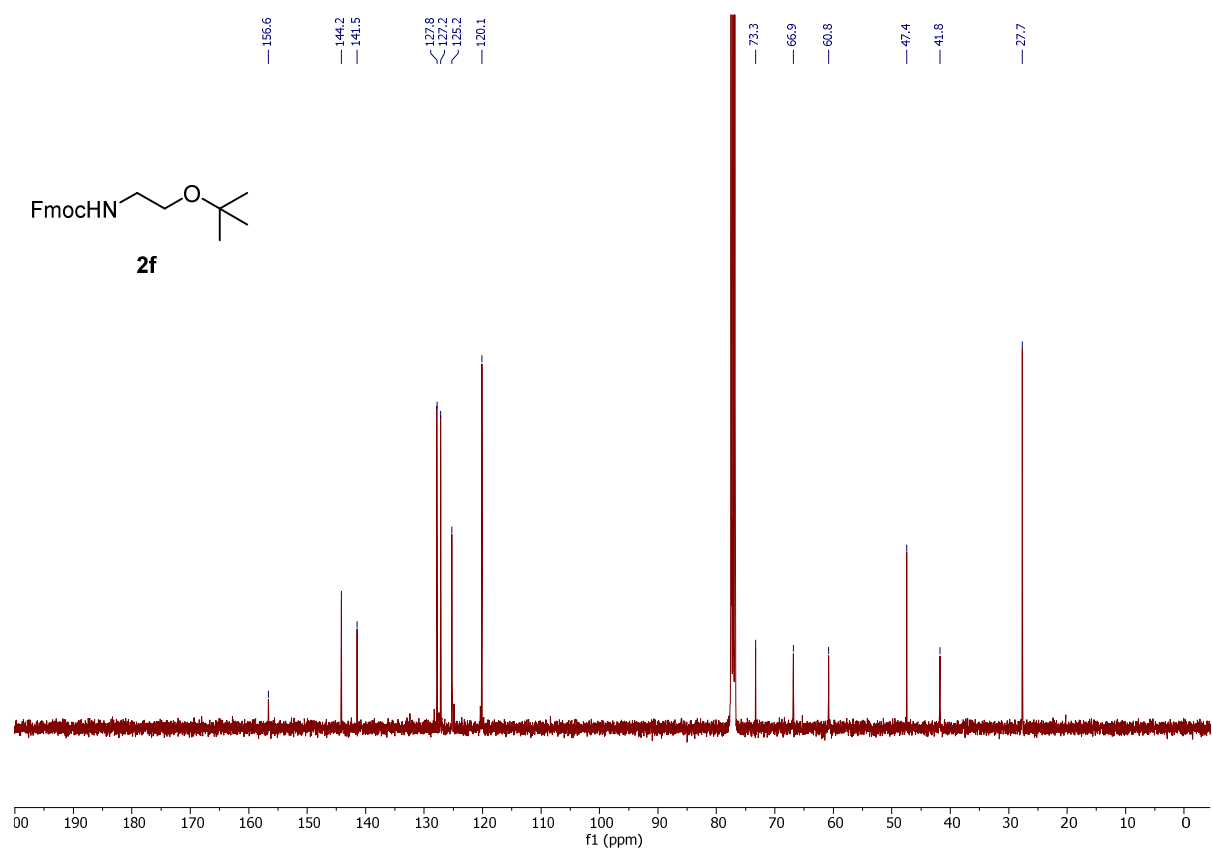


Figure S25. ¹³C NMR (101 MHz, CDCl₃) of compound **2f**.

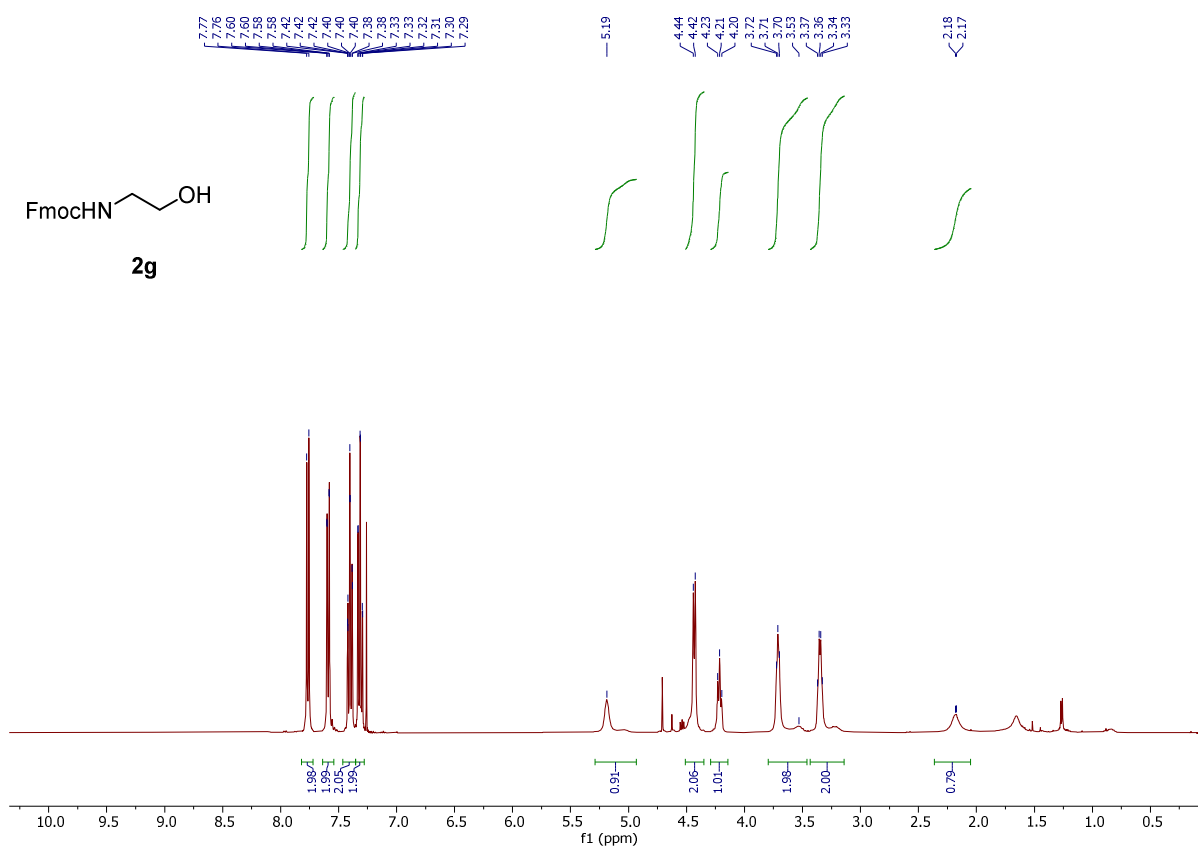


Figure S26. ¹H NMR (400 MHz, CDCl₃) of compound **2g**.

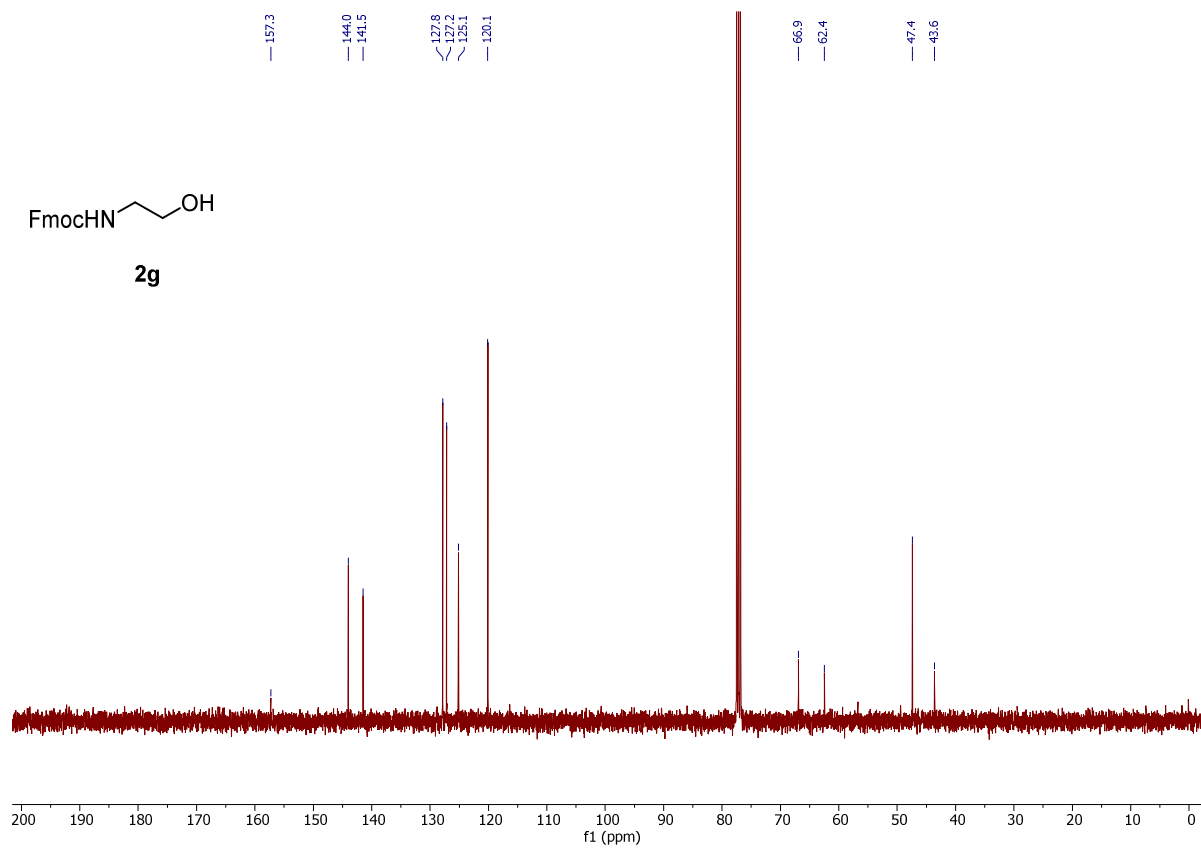


Figure S27. ¹³C NMR (101 MHz, CDCl₃) of compound **2g**.

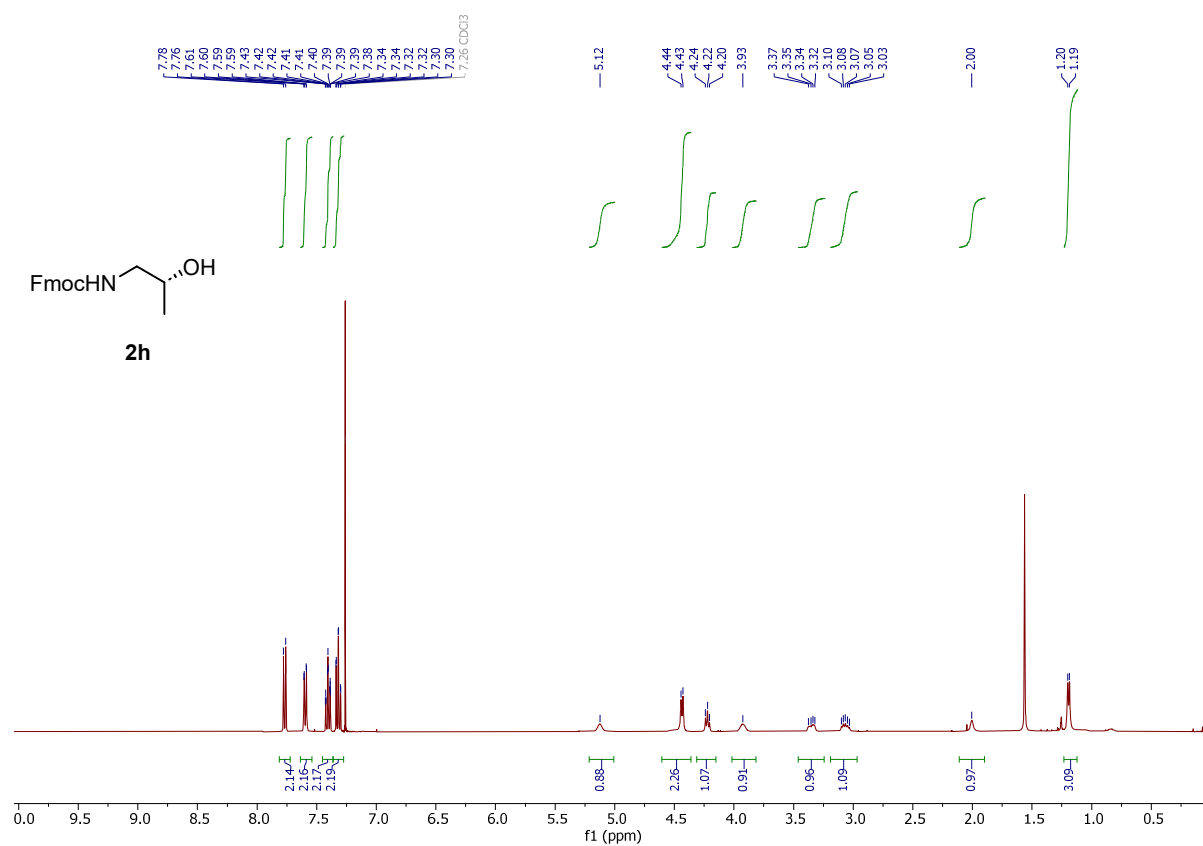


Figure S28. ¹H NMR (400 MHz, CDCl₃) of compound **2h**.

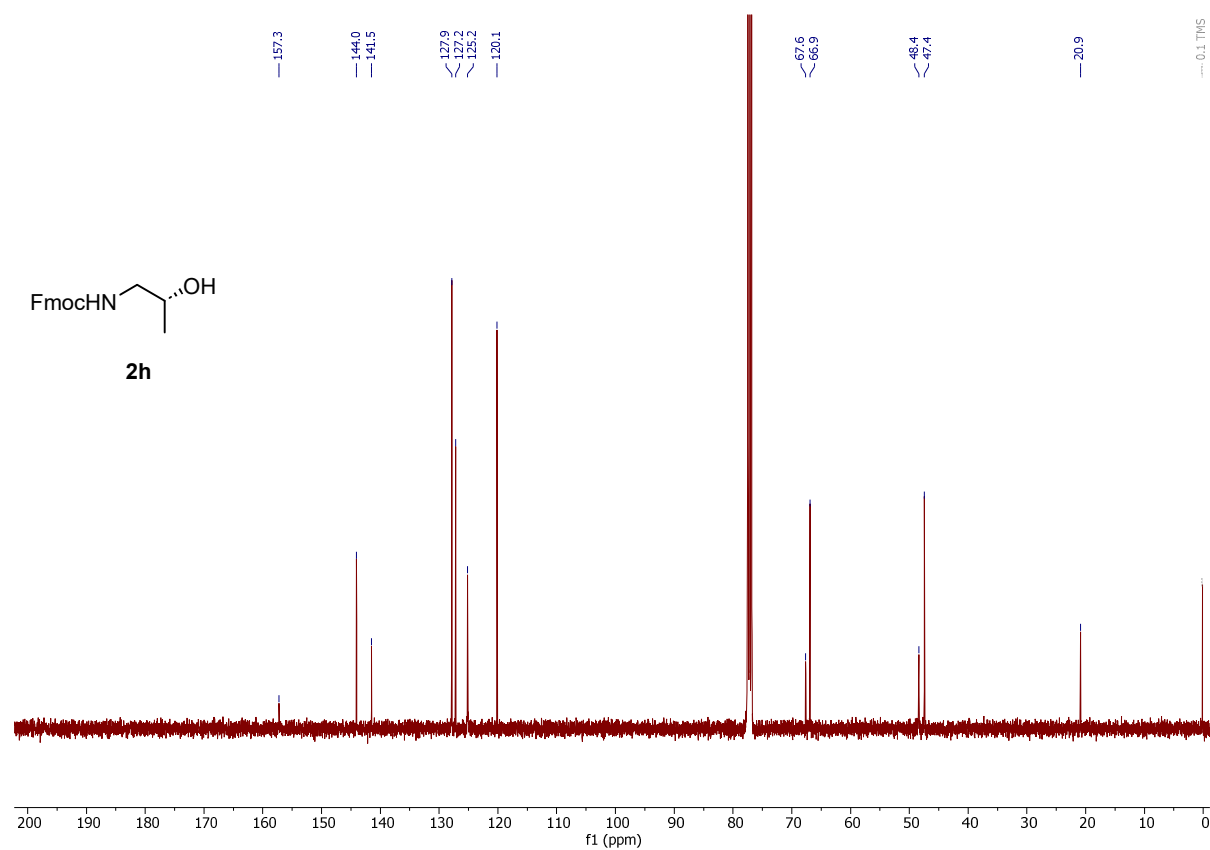


Figure S29. ¹³C NMR (101 MHz, CDCl₃) of compound **2h**.

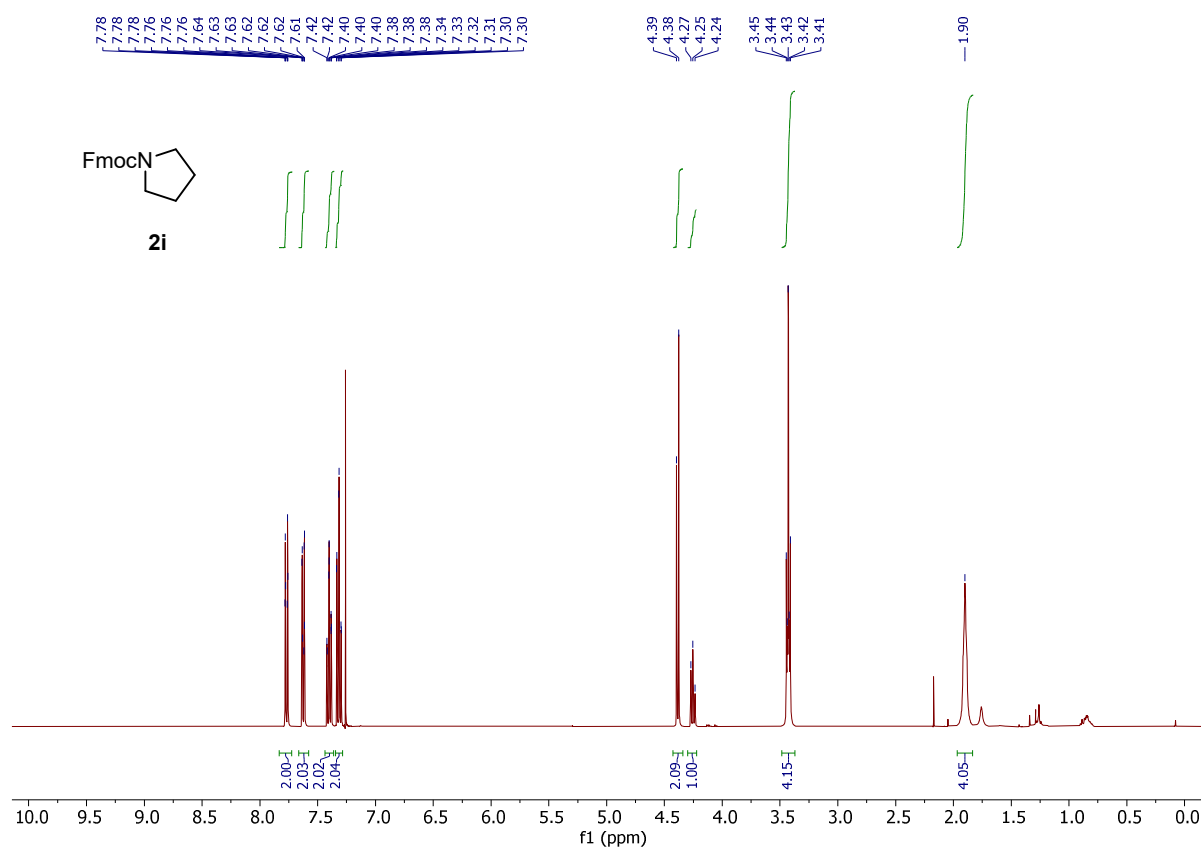


Figure S30. ^1H NMR (400 MHz, CDCl_3) of compound **2i**.

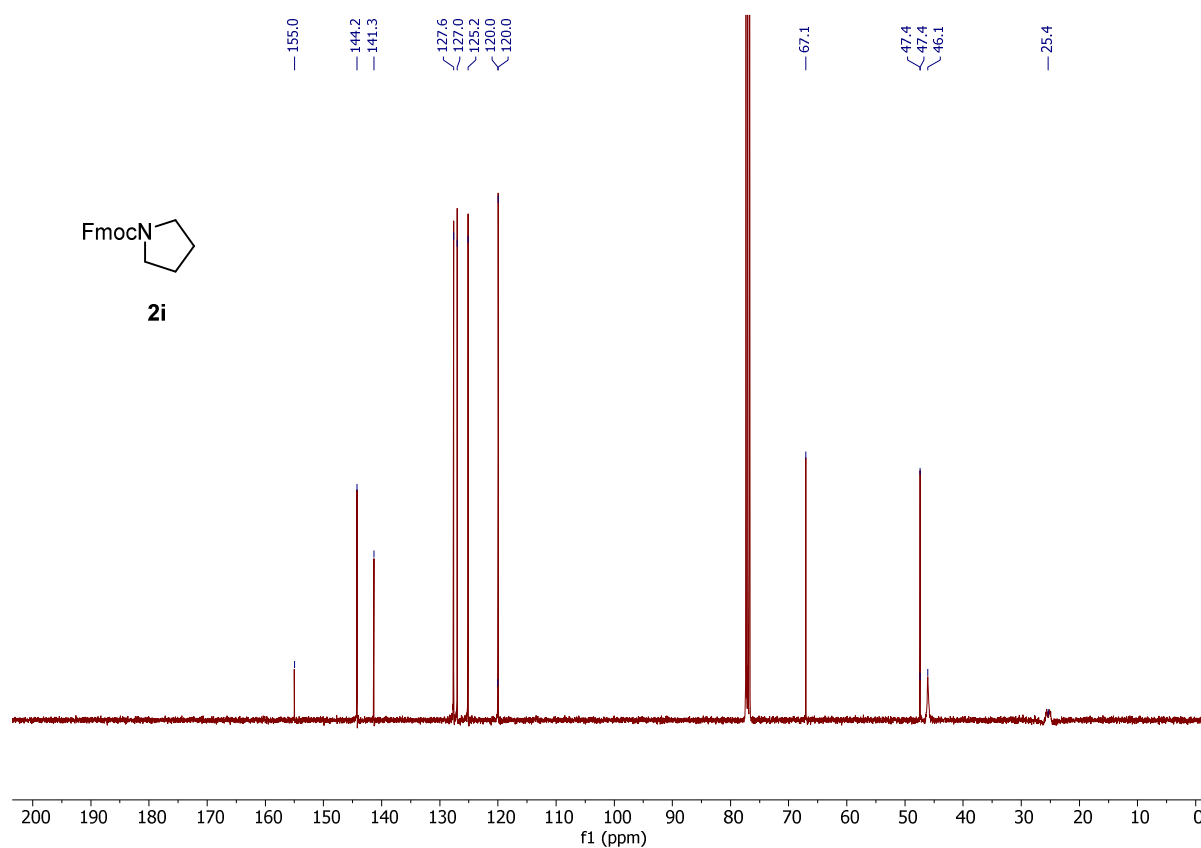


Figure S31. ^{13}C NMR (101 MHz, CDCl_3) of compound **2i**.

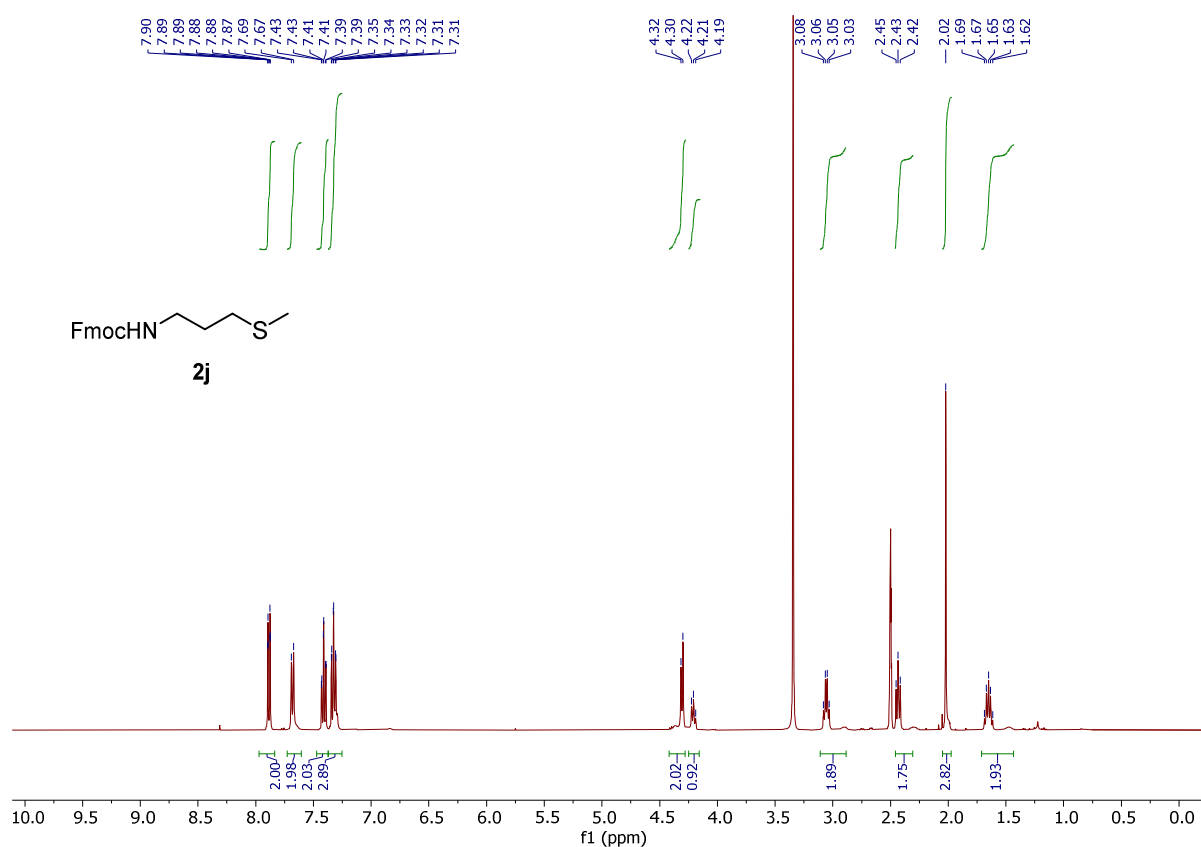


Figure S32. ¹H NMR (400 MHz, DMSO-d₆) of compound **2j**.

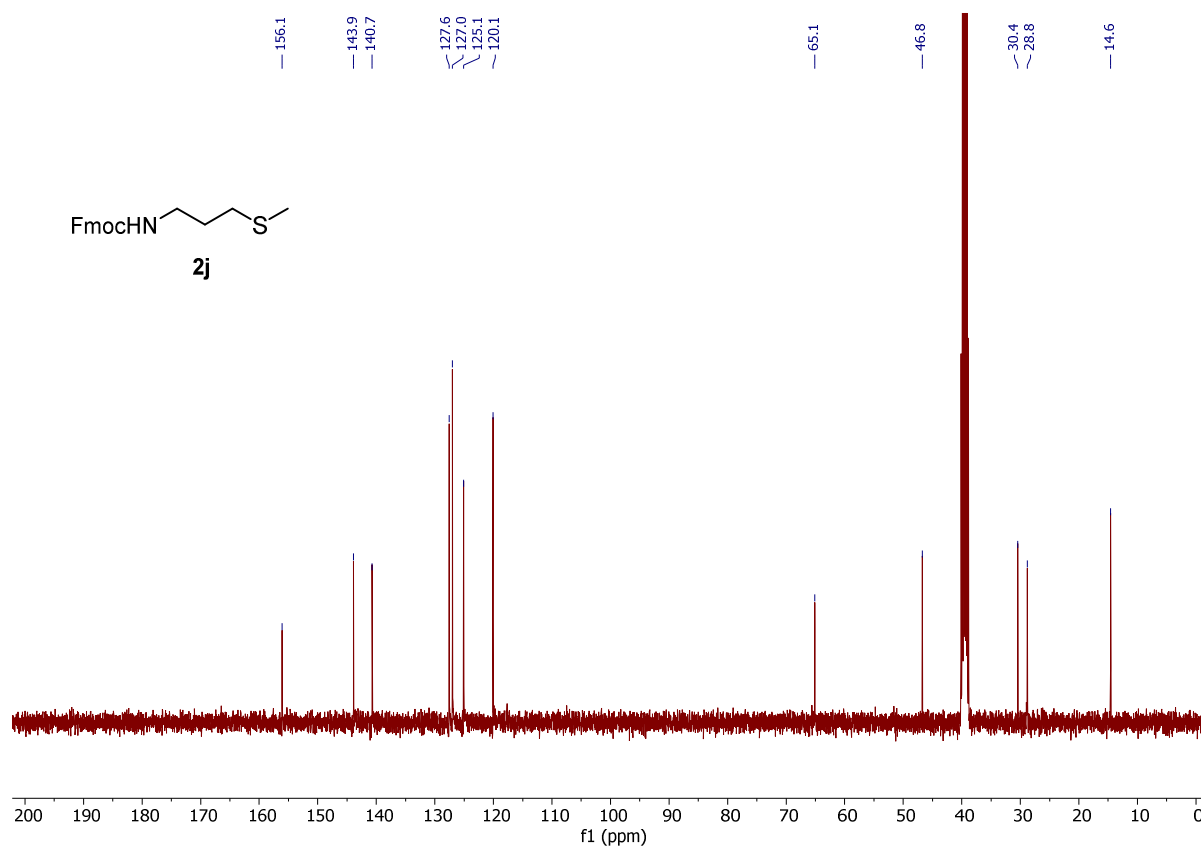


Figure S33. ¹³C NMR (101 MHz, DMSO-d₆) of compound **2j**.

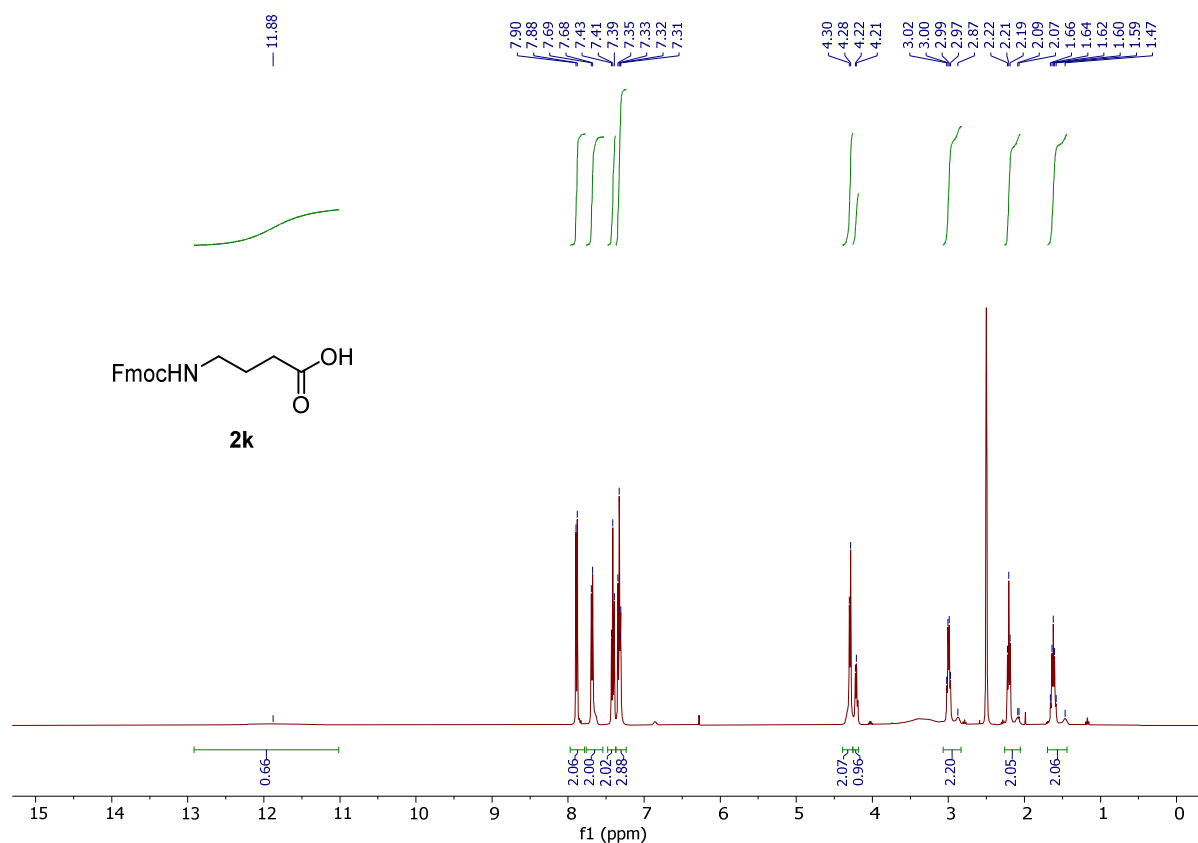


Figure S34. ¹H NMR (400 MHz, DMSO-d₆) of compound **2k**.

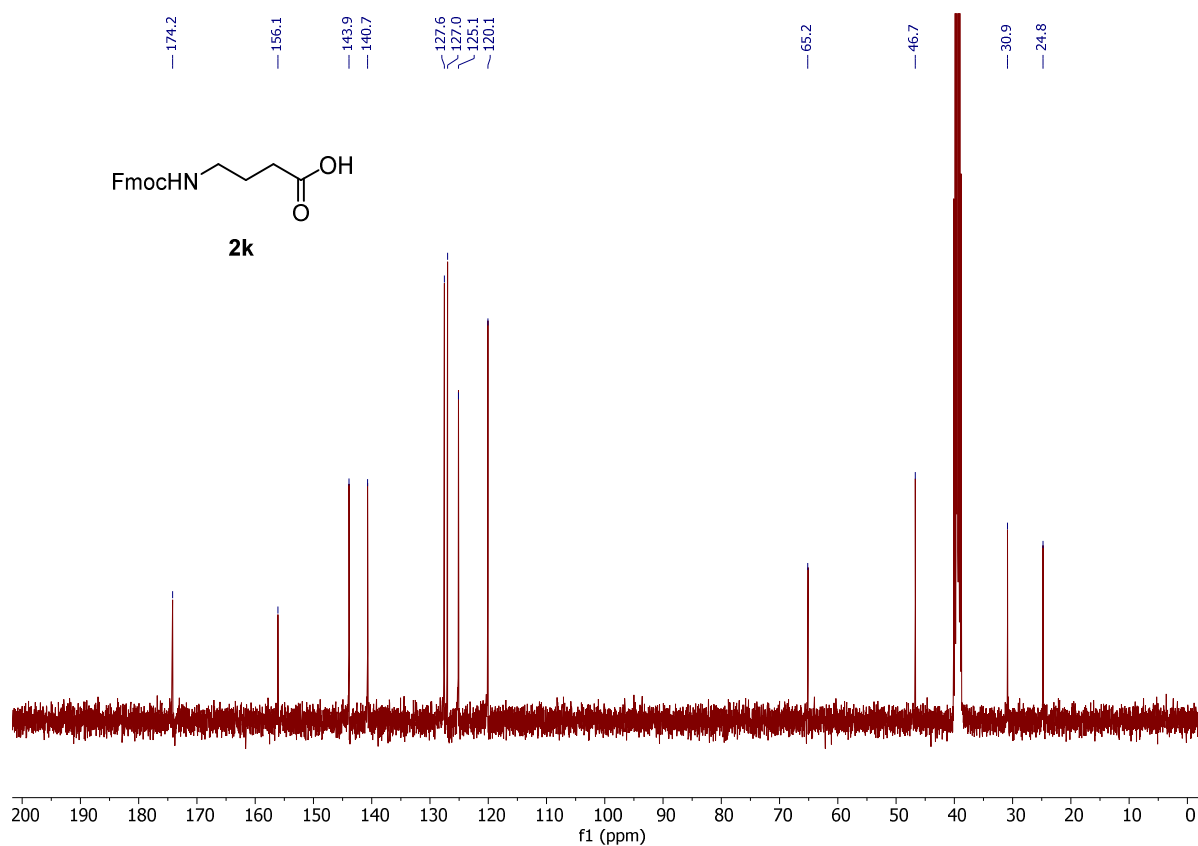


Figure S35. ¹³C NMR (101 MHz, DMSO-d₆) of compound **2k**.

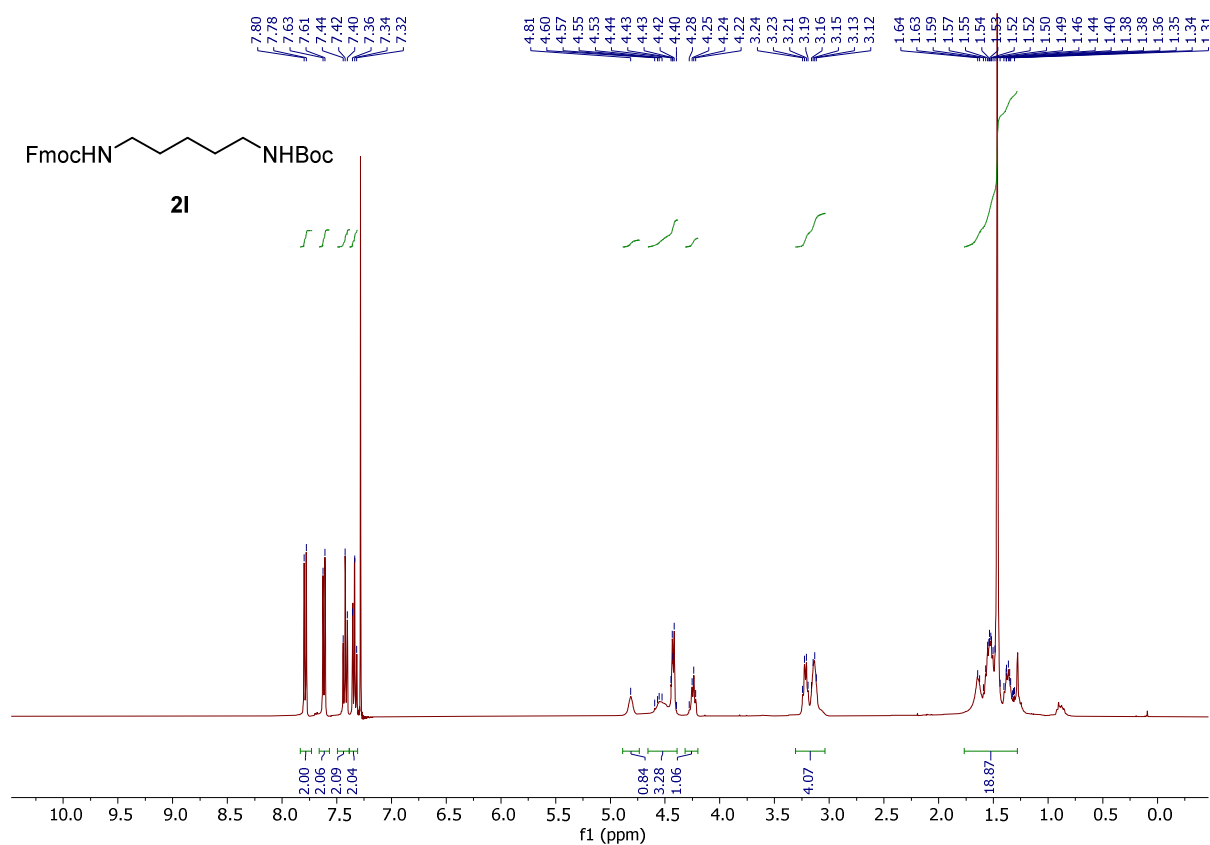


Figure S36. ¹H NMR (400 MHz, CDCl₃) of compound **2l**.

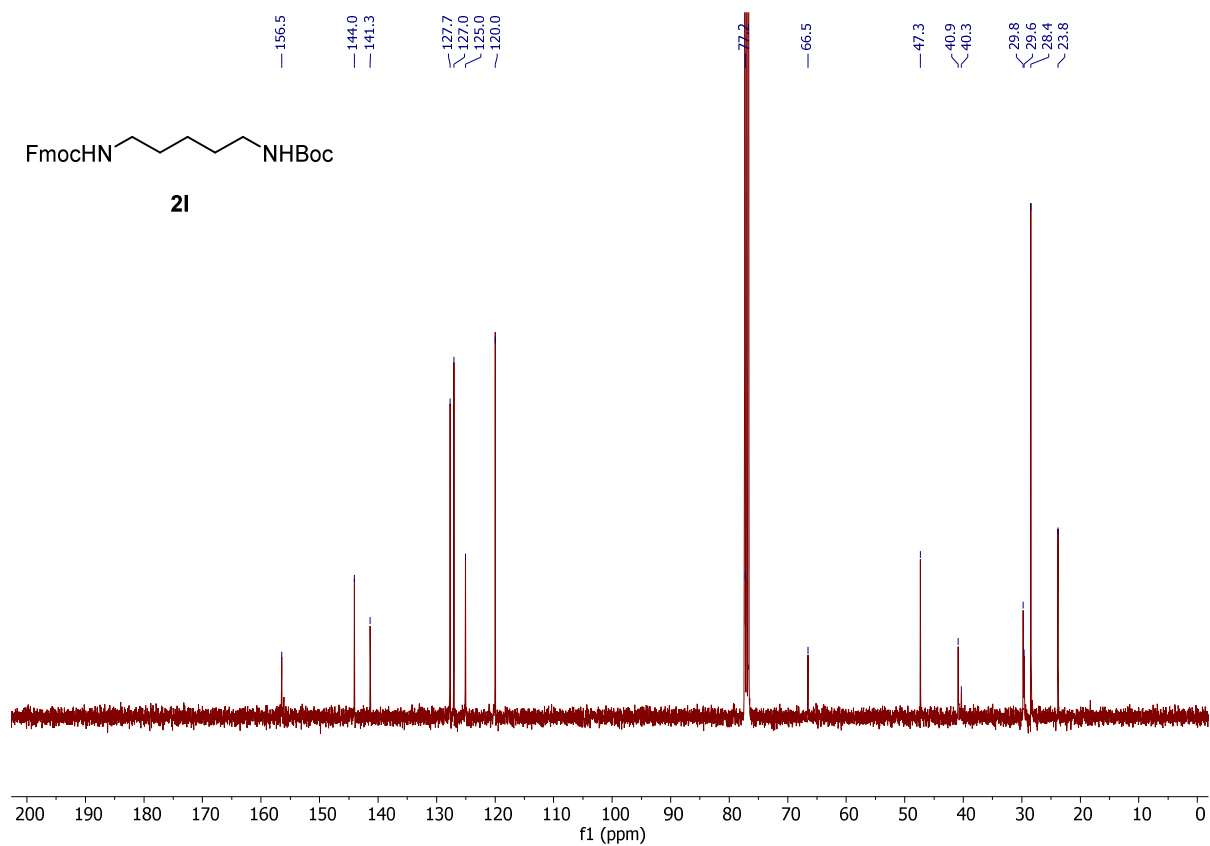


Figure S37. ¹³C NMR (101 MHz, CDCl₃) of compound **2l**.

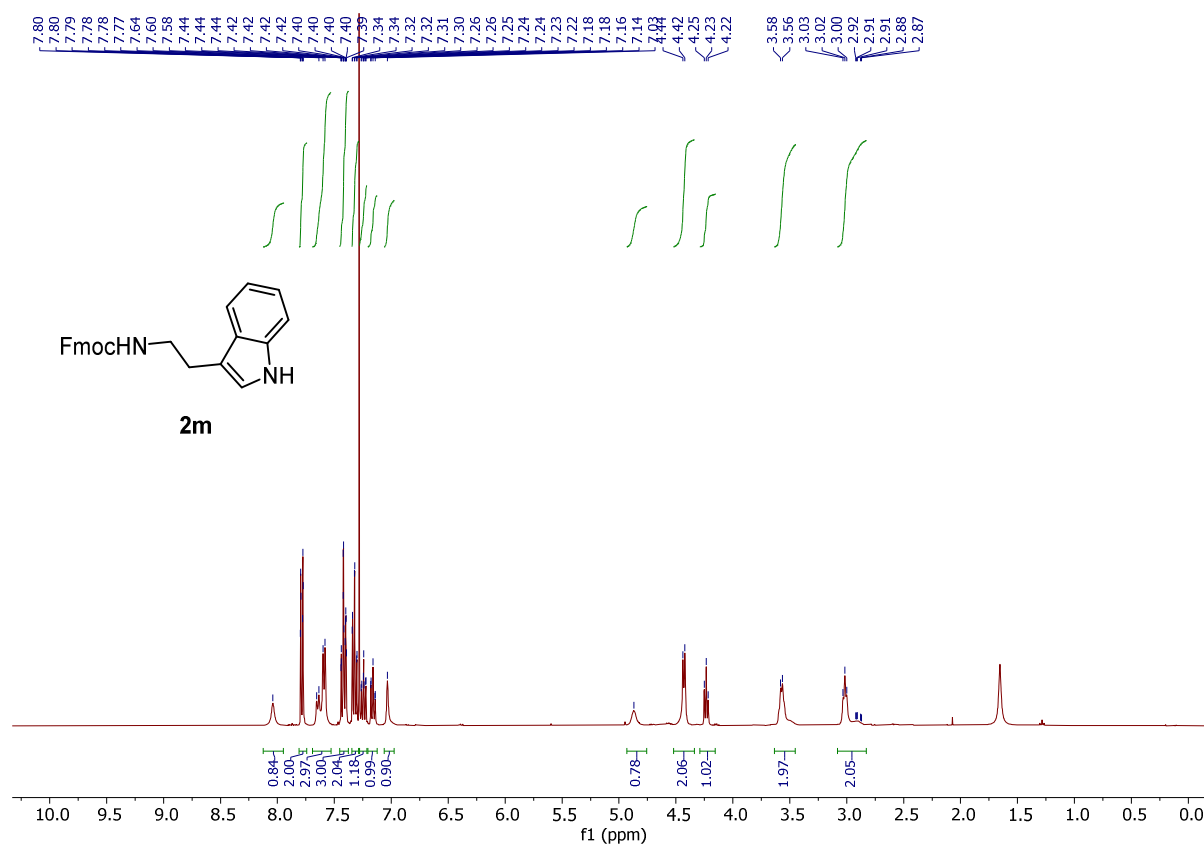


Figure S38. ¹H NMR (400 MHz, CDCl₃) of compound **2m**.

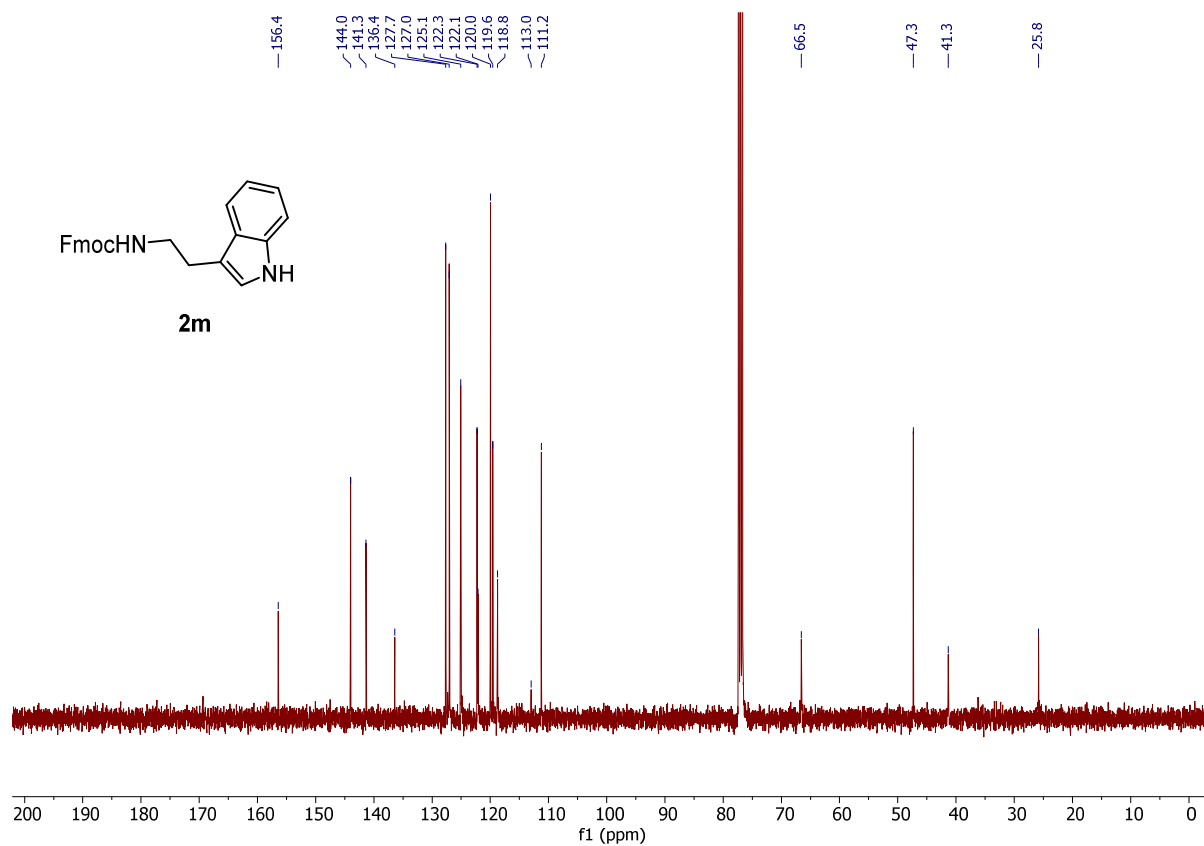


Figure S39. ¹³C NMR (101 MHz, CDCl₃) of compound **2m**.