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Supporting Information

A Rink-Amide Soluble Support: High Purity Conotoxins and Other Peptides Accessed with Minimal Reagents

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NMR spectra of compounds

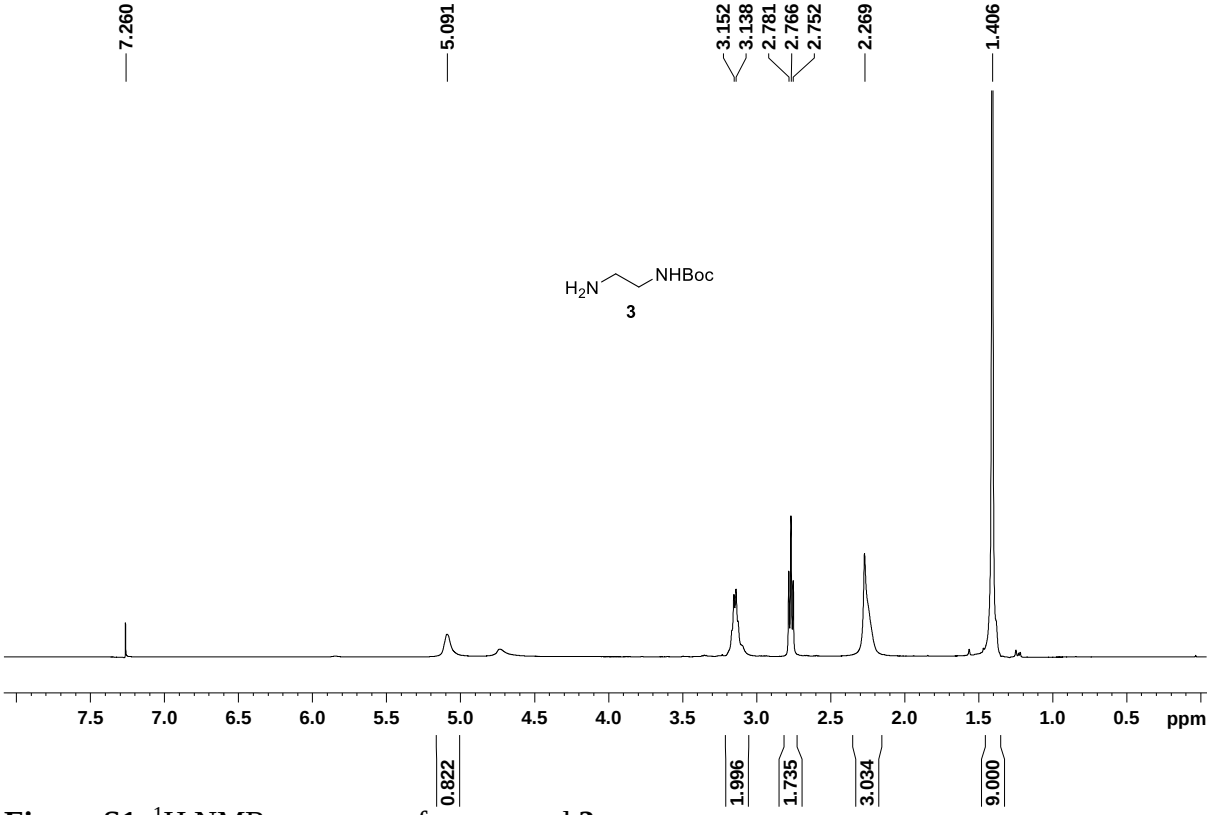


Figure S1. ^{1}H NMR spectrum of compound **3**.

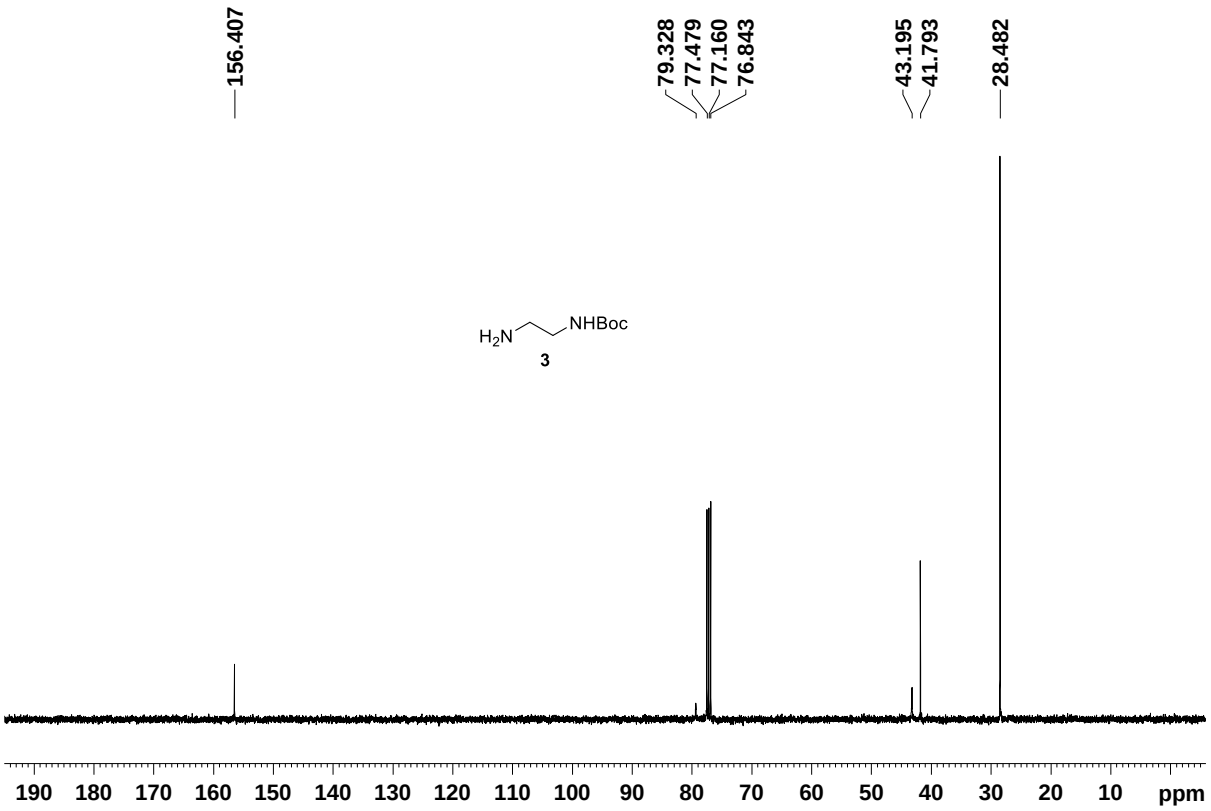


Figure S2. ^{13}C NMR spectrum of compound **3**.

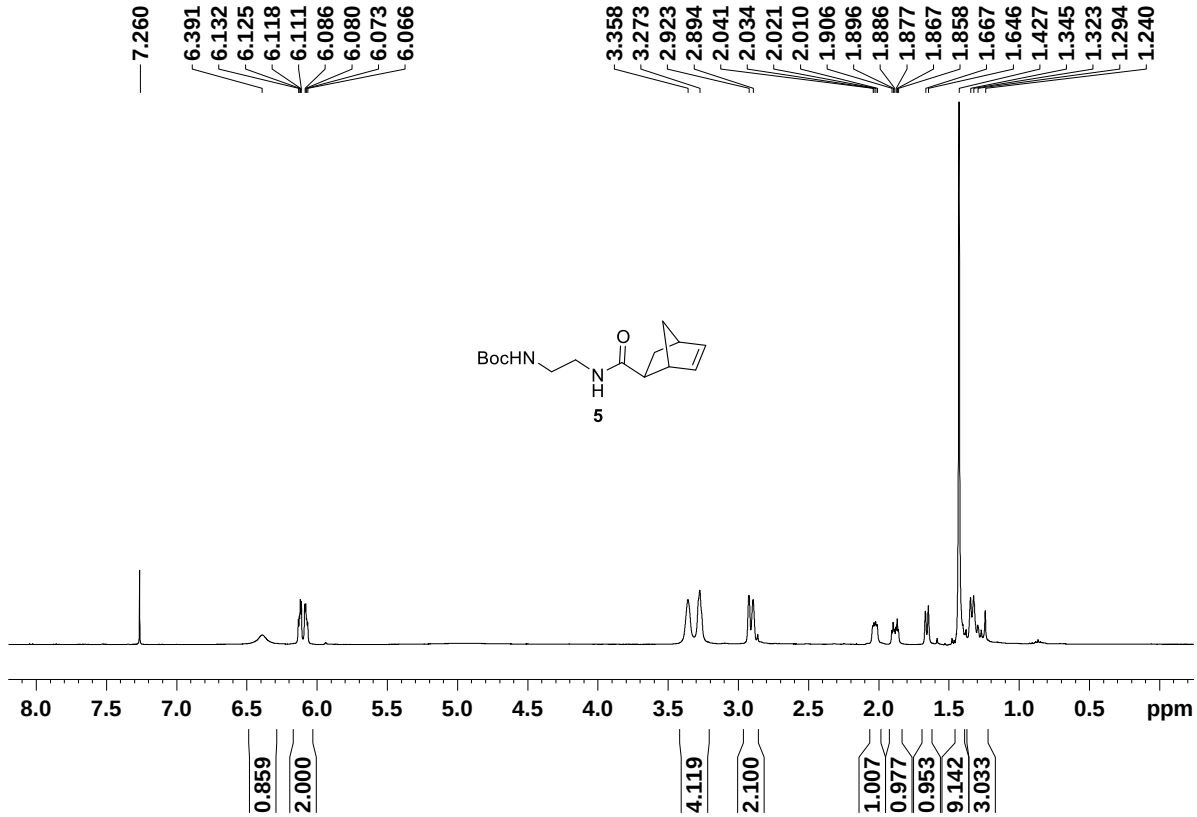


Figure S3. ^{1}H NMR spectrum of compound **5**.

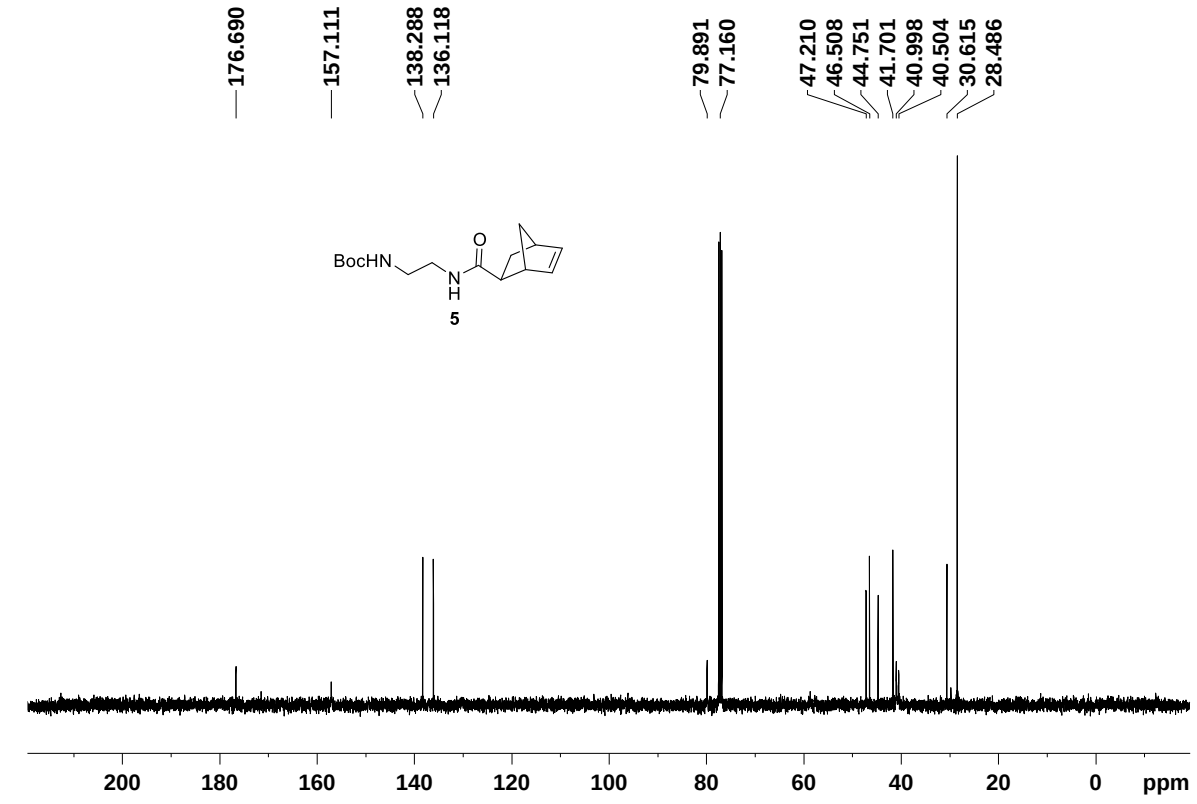


Figure S4. ^{13}C NMR spectrum of compound **5**.

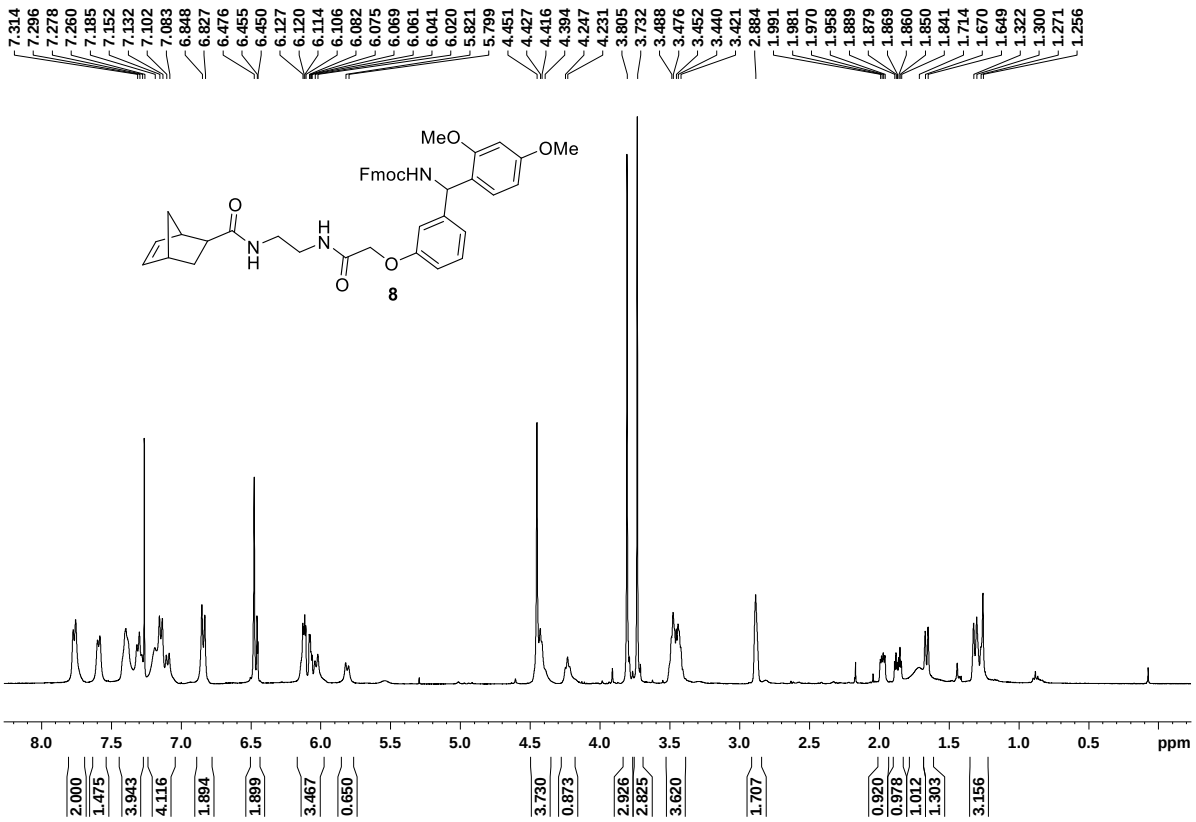


Figure S5. ^{1}H NMR spectrum of compound **8**.

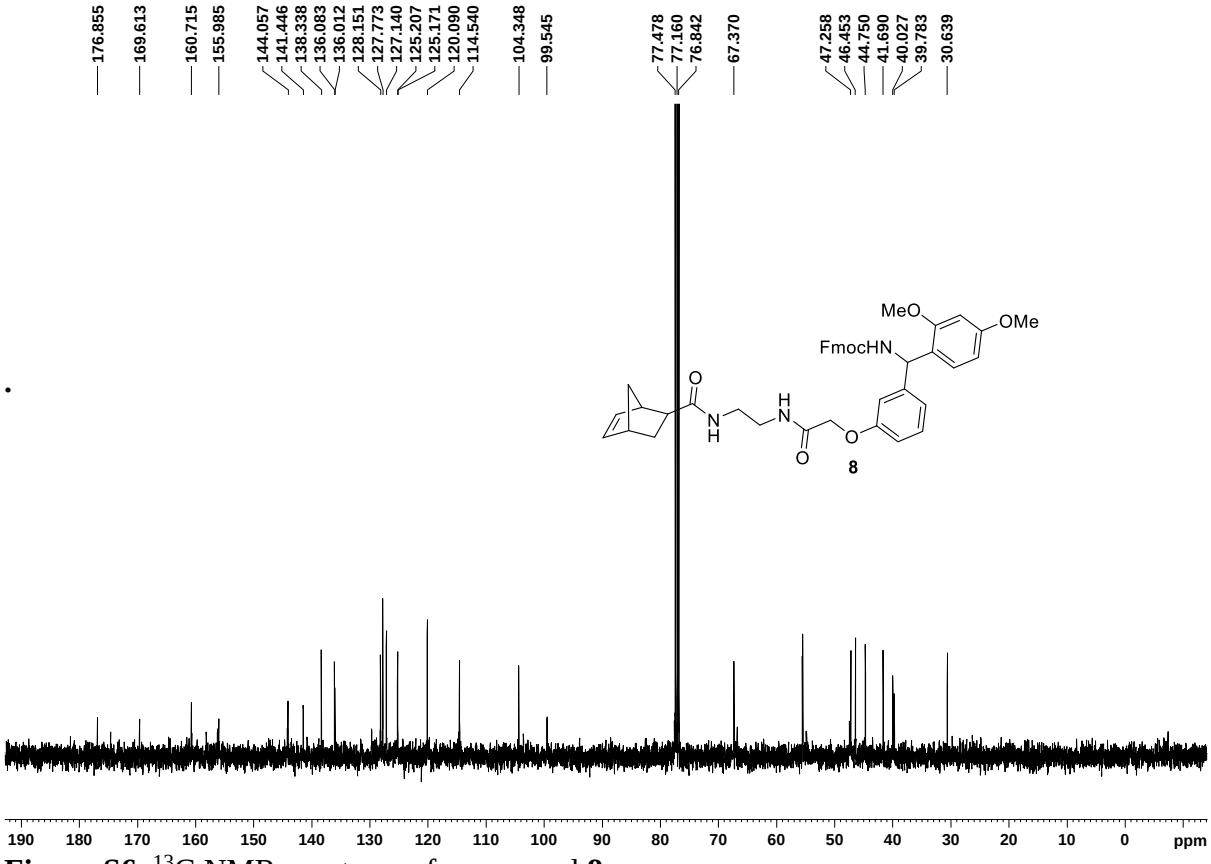


Figure S6. ^{13}C NMR spectrum of compound **8**.

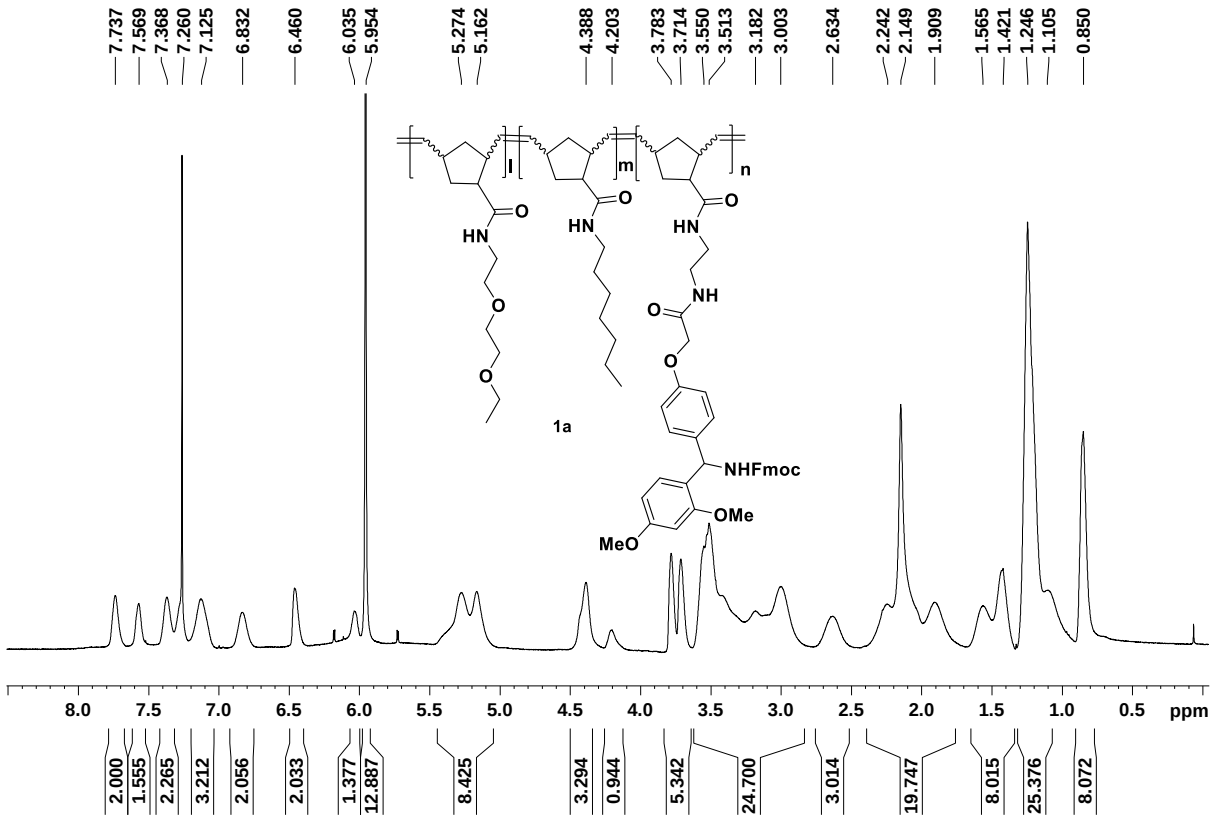


Figure S7. ^{1}H NMR spectrum of compound**1a**.

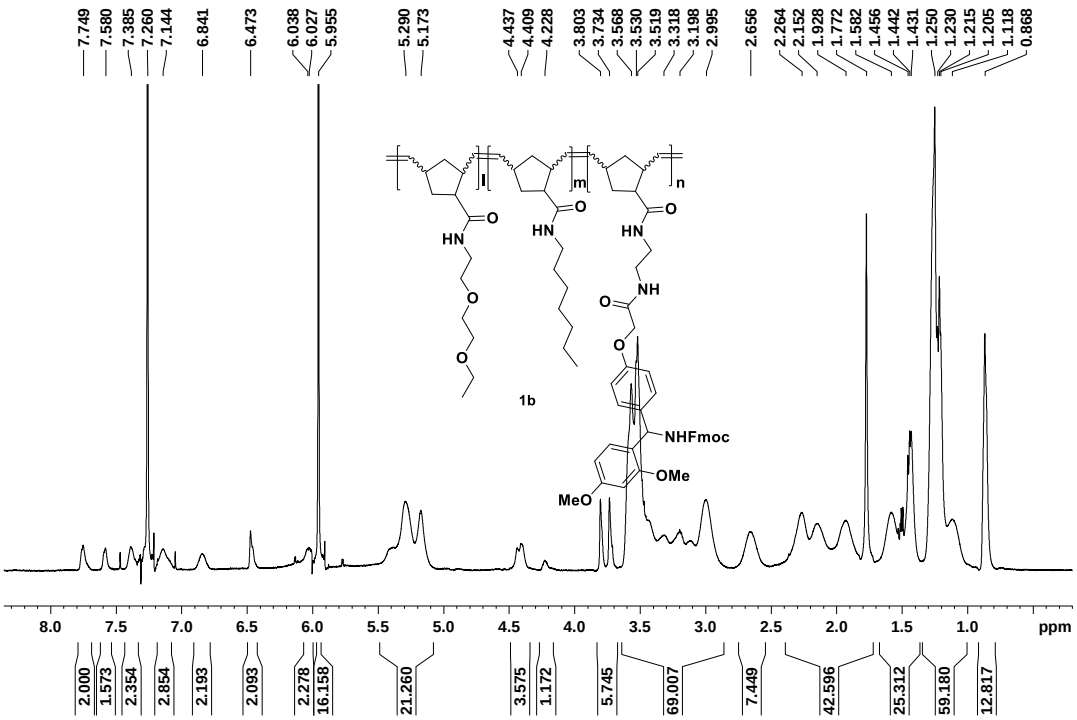


Figure S8. ^{1}H NMR spectrum of compound **1b**.

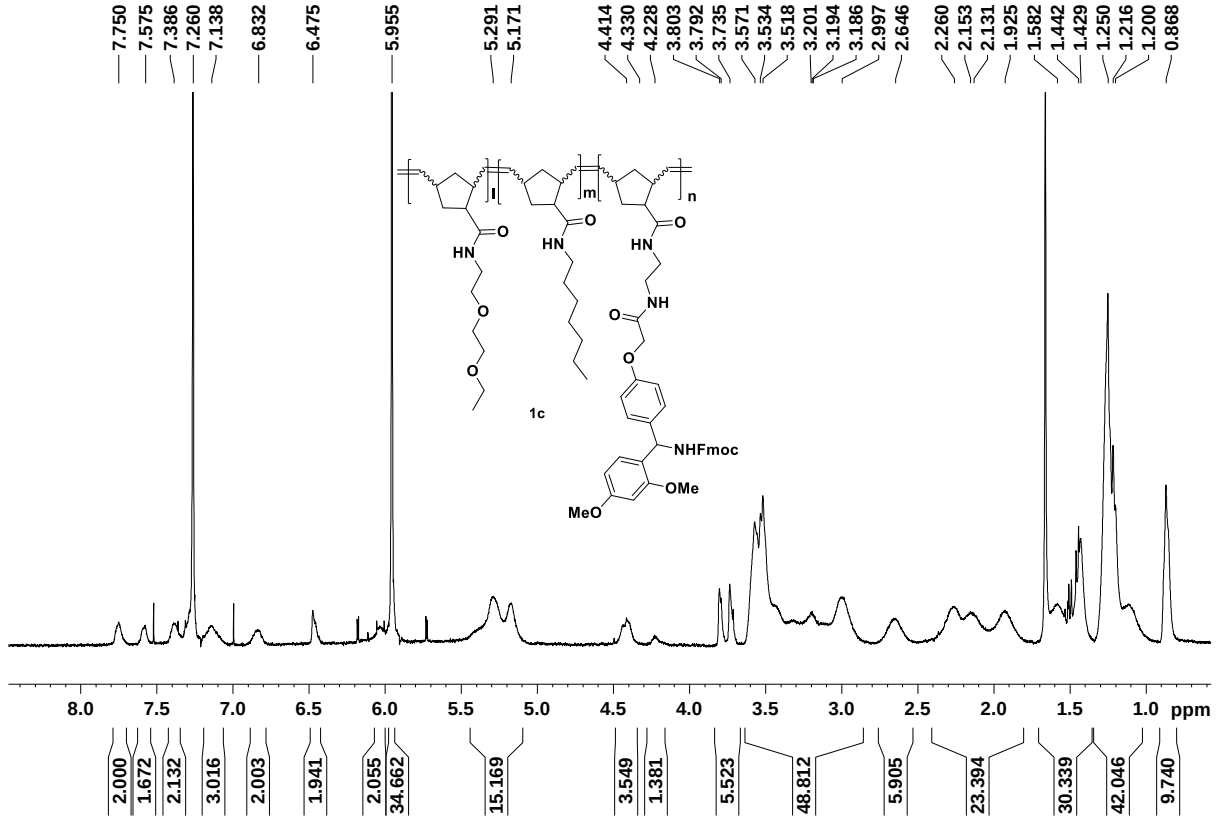


Figure S9. ^{1}H NMR spectrum of compound **1c.**

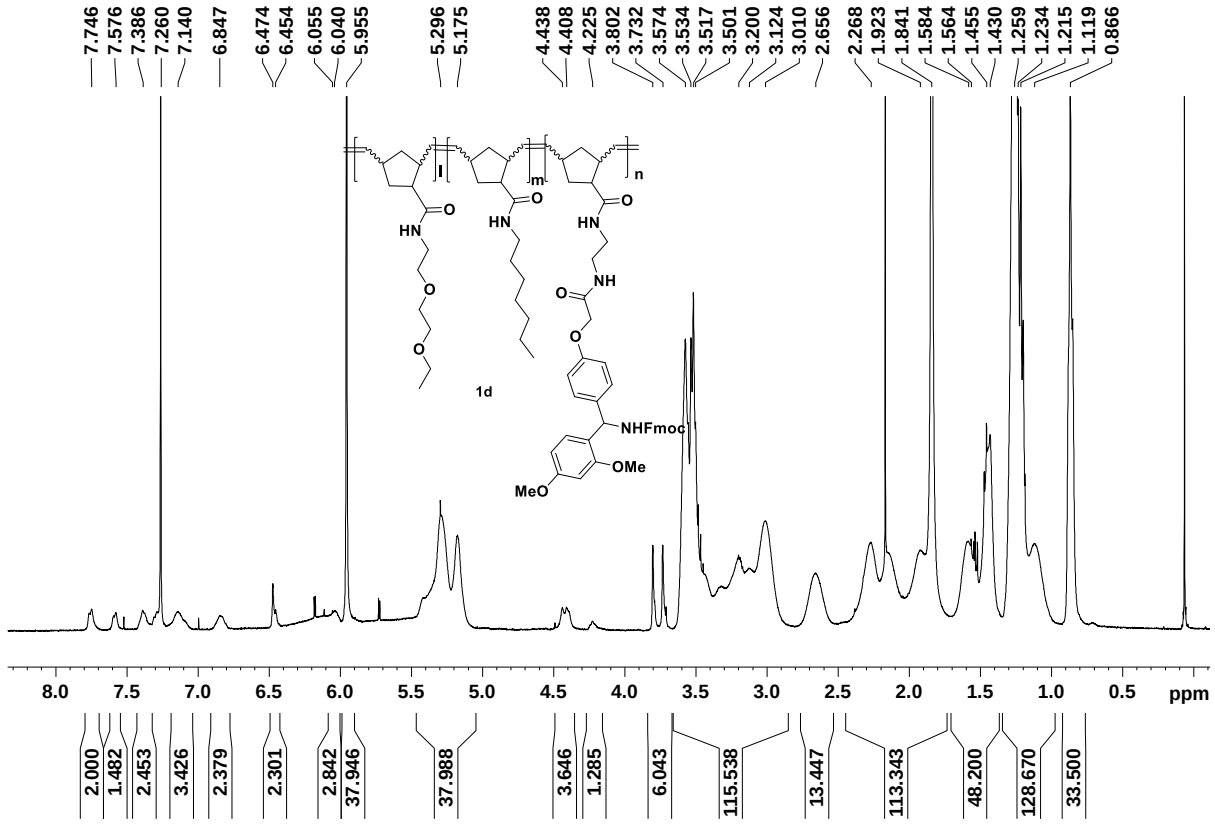


Figure S10. ^{1}H NMR spectrum of compound **1d.**

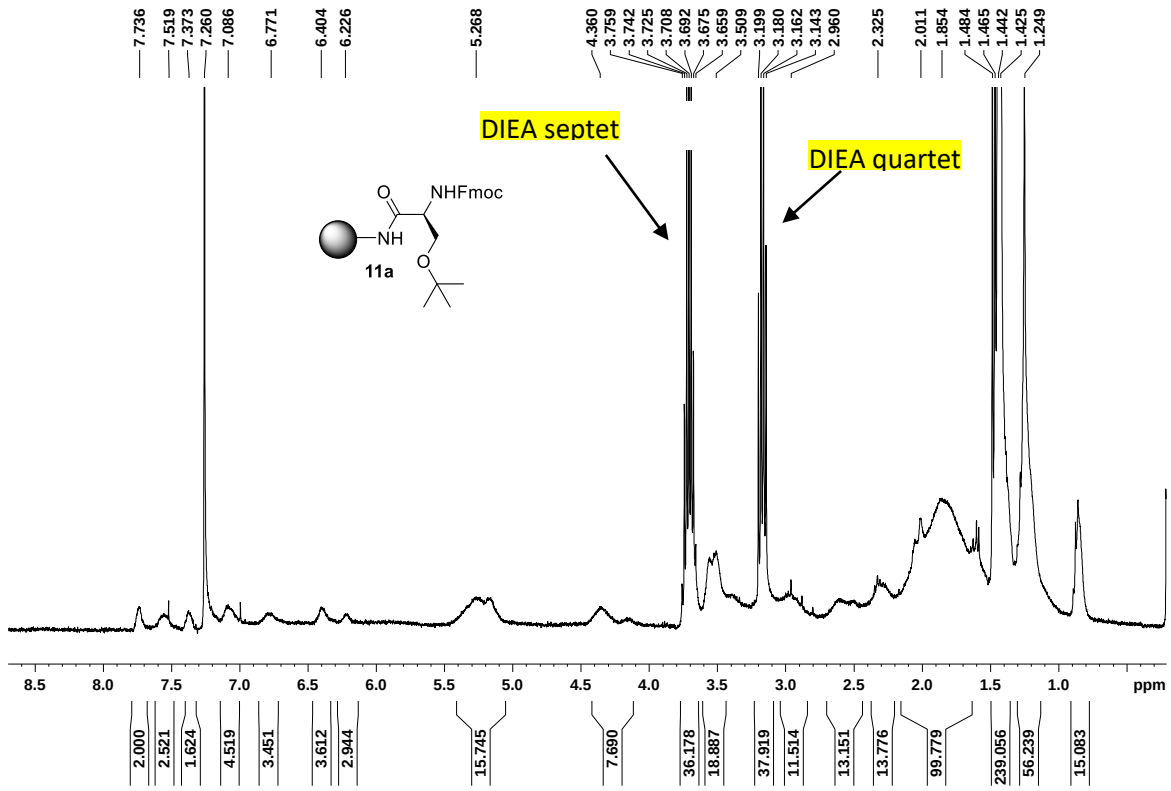


Figure S11. ^{1}H NMR spectrum of compound **11a**.

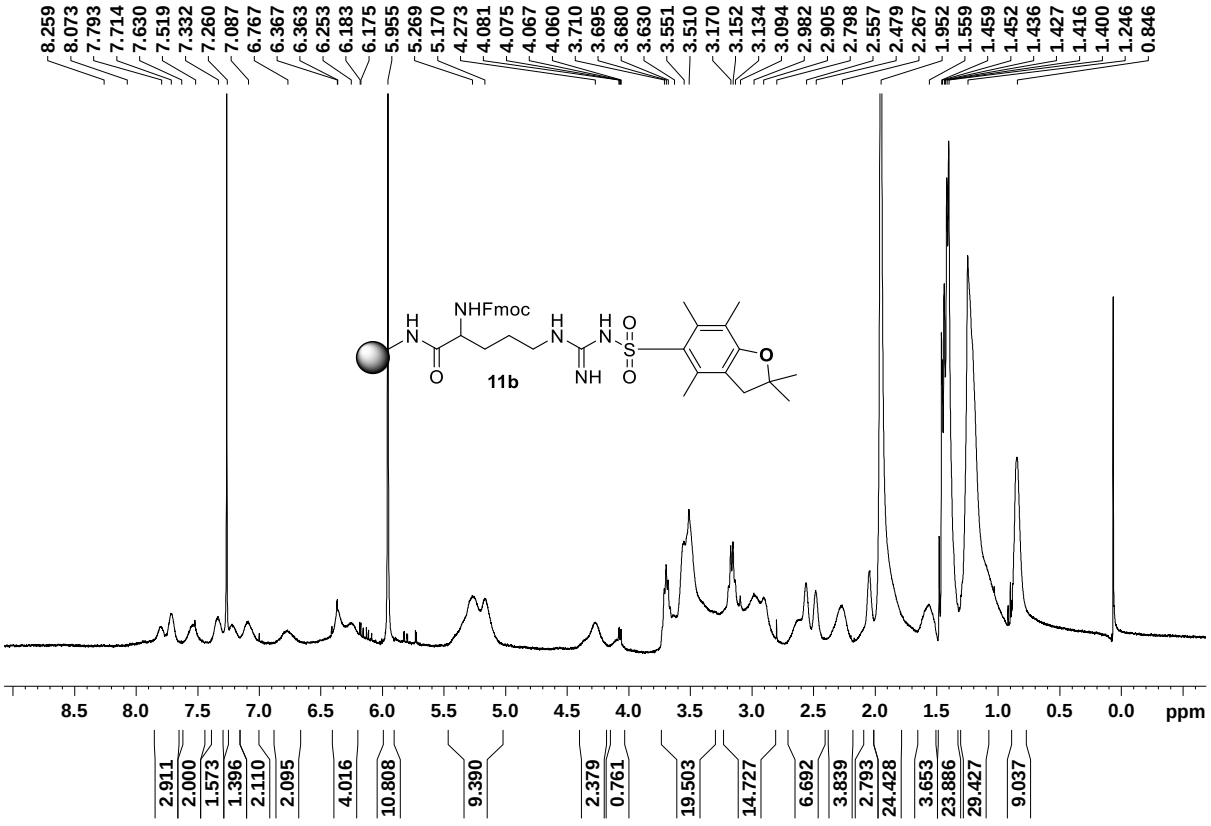


Figure S12. ^{1}H NMR spectrum of compound **11b**.

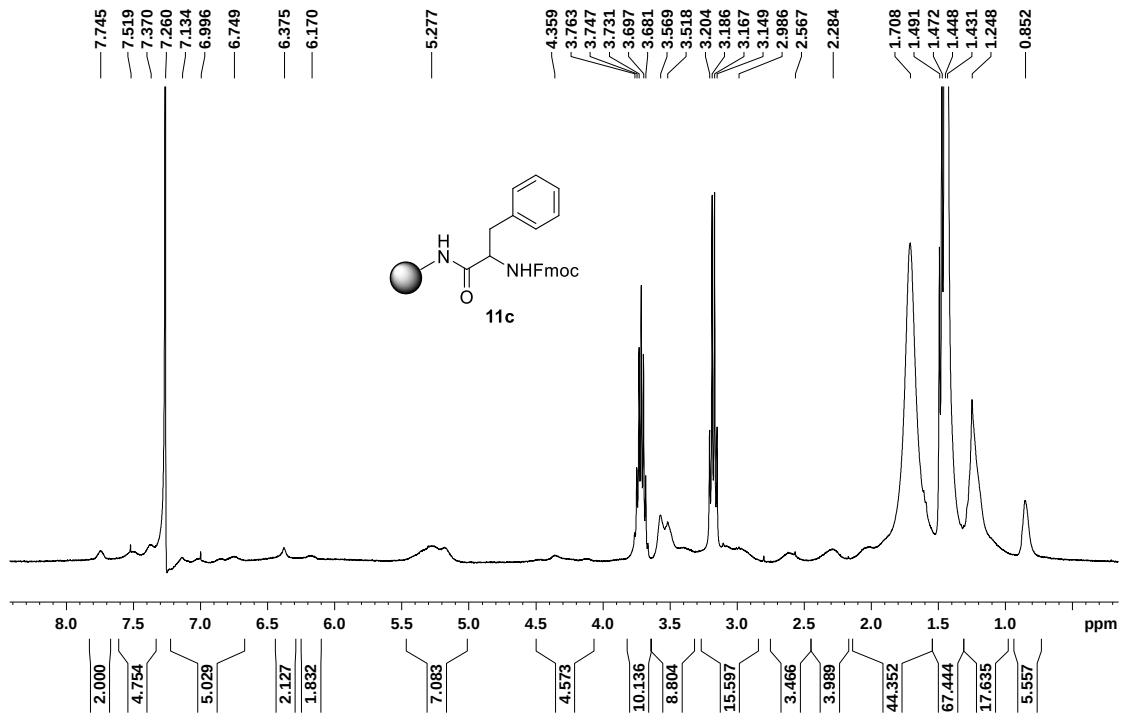


Figure S13. ^{1}H NMR spectrum of compound **11c**.

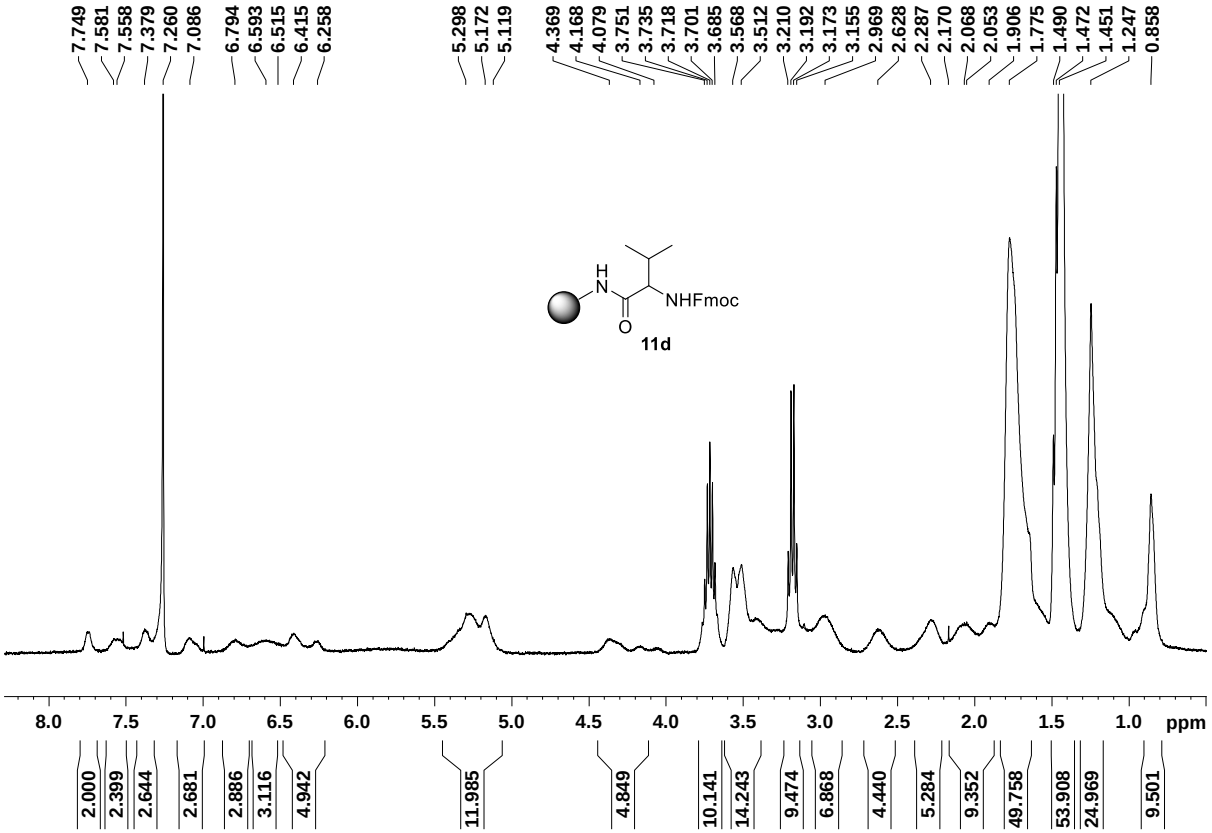


Figure S14. ^{1}H NMR spectrum of compound**11d**.

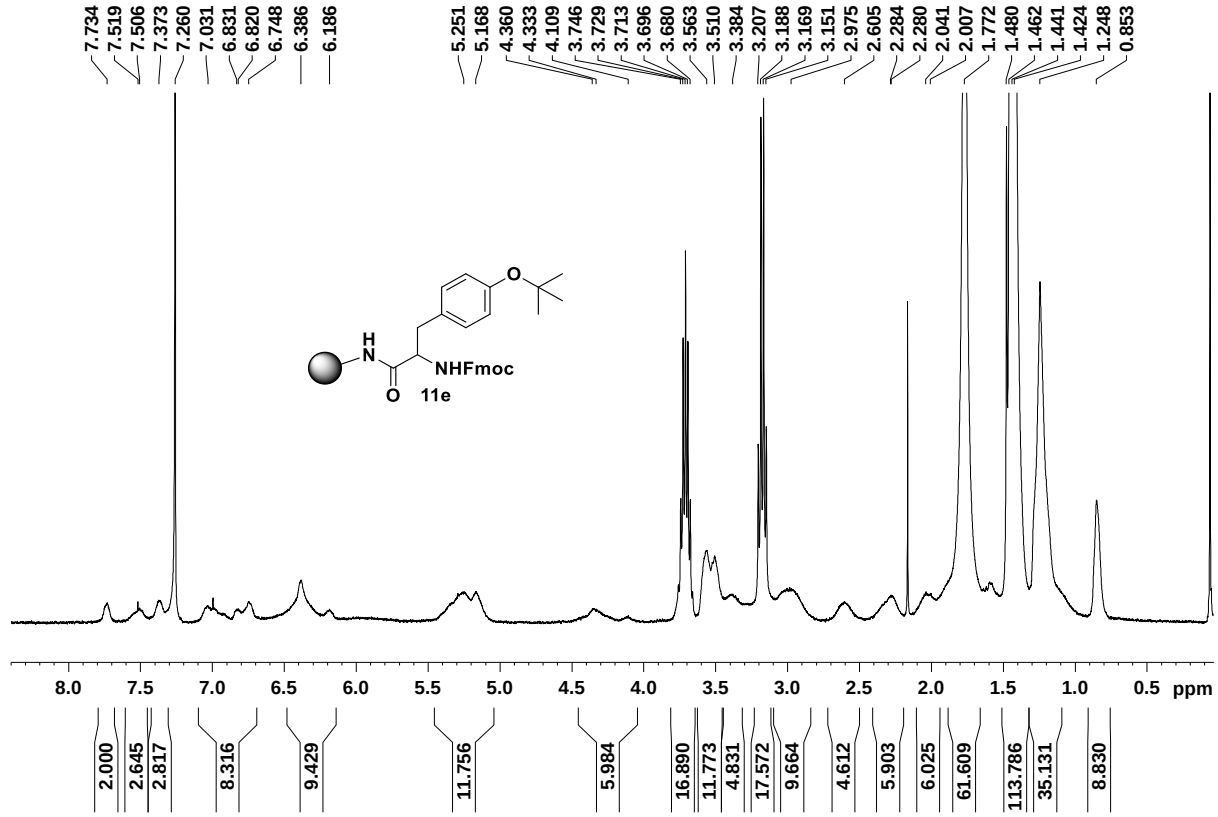


Figure S15. ^{1}H NMR spectrum of compound **11e**.

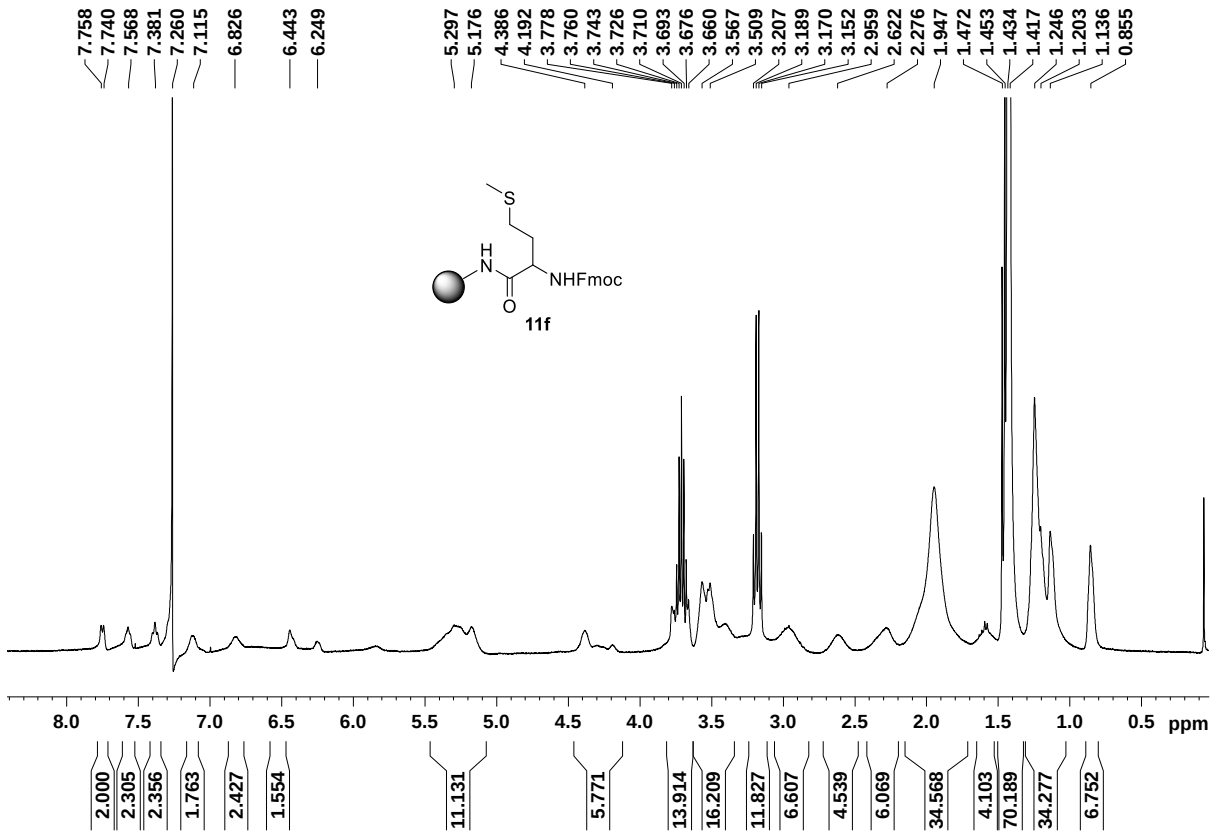


Figure S16. ^{1}H NMR spectrum of compound **11f**.

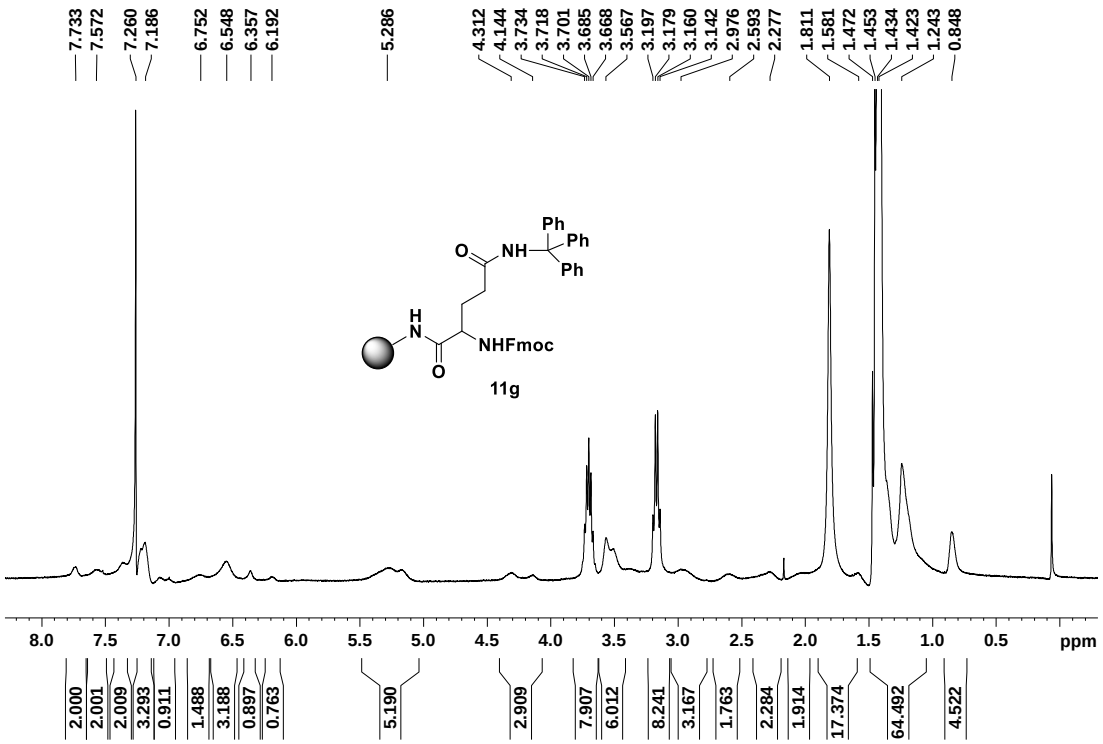


Figure S17. ^{1}H NMR spectrum of compound **11g**.

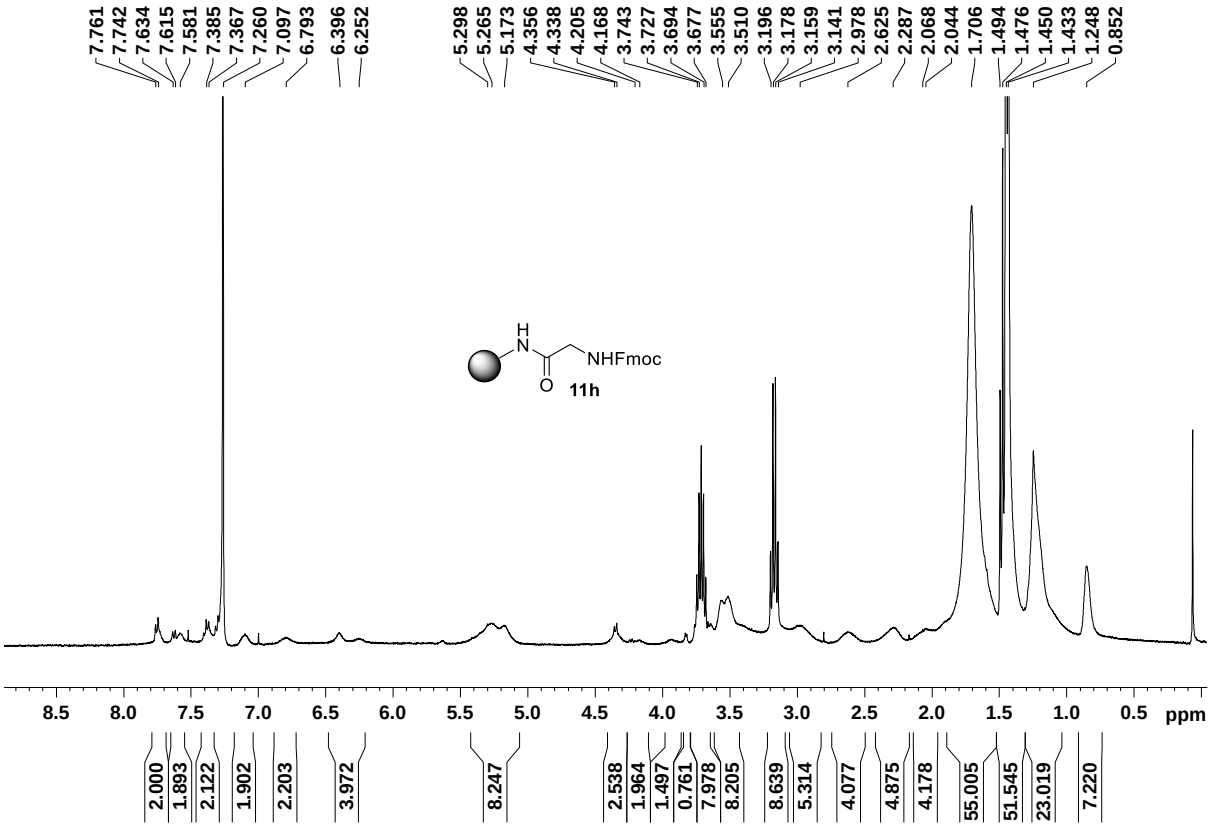
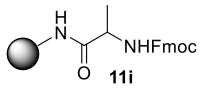


Figure S18. ^{1}H NMR spectrum of compound**11h**.



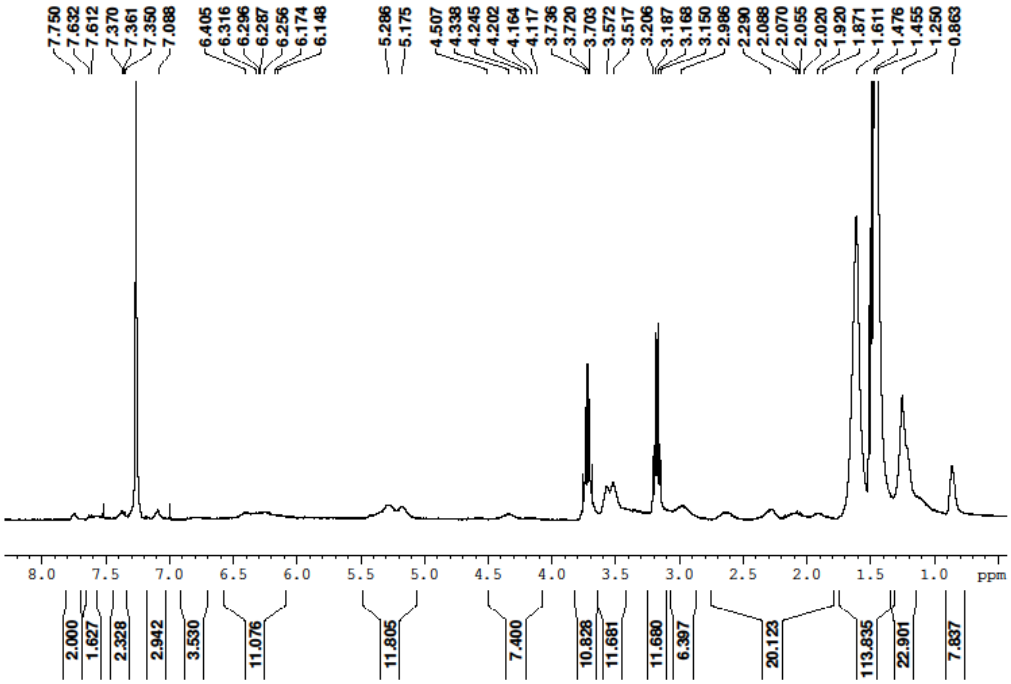


Figure S19. ^{1}H NMR spectrum of compound **11i**

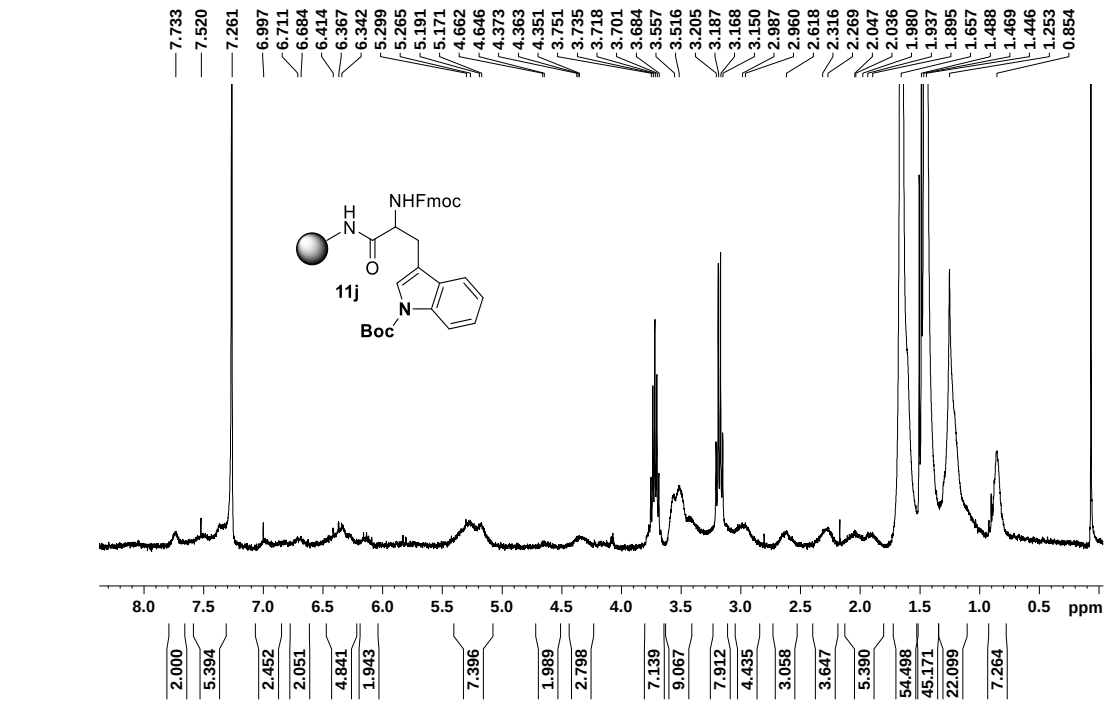


Figure S20. ^{1}H NMR spectrum of compound **11j**.

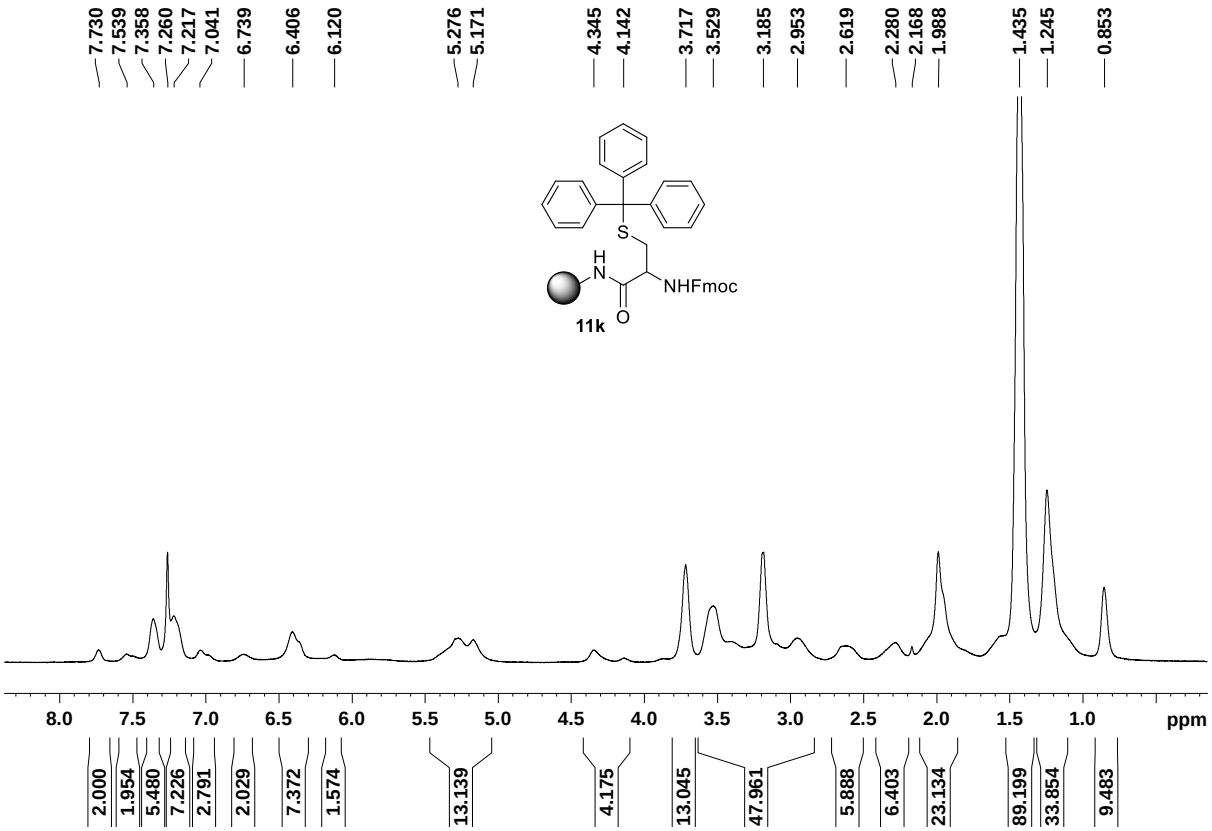


Figure S21. ^{1}H NMR spectrum of compound **11k**.

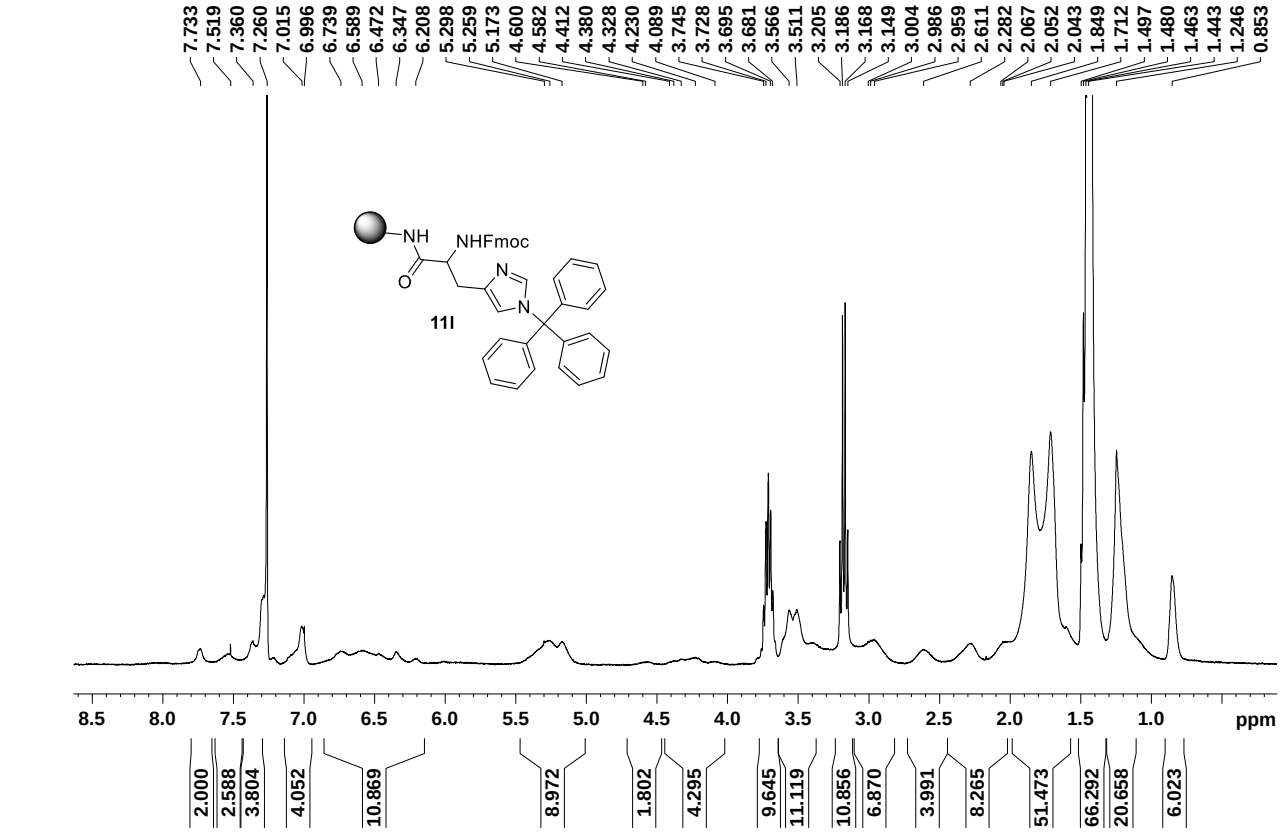


Figure S22. ^{1}H NMR spectrum of compound **11l**.

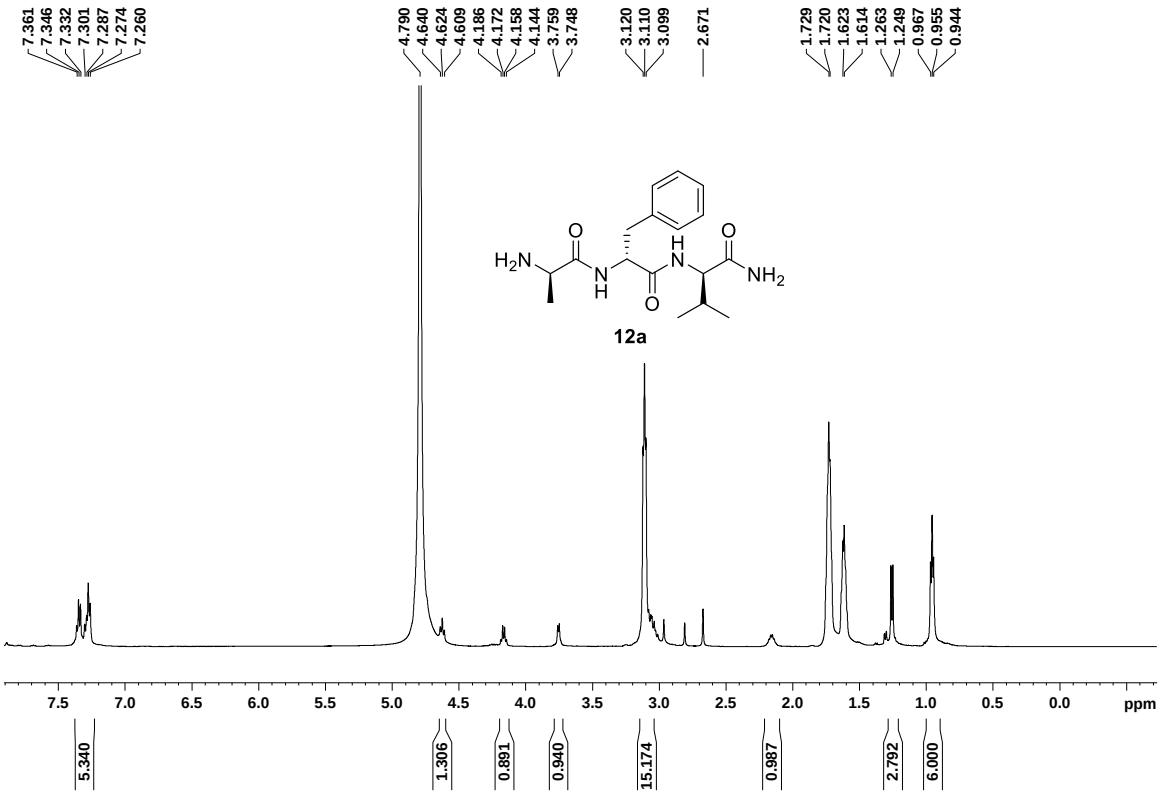


Figure S23. ^{1}H NMR spectrum of compound **12a**

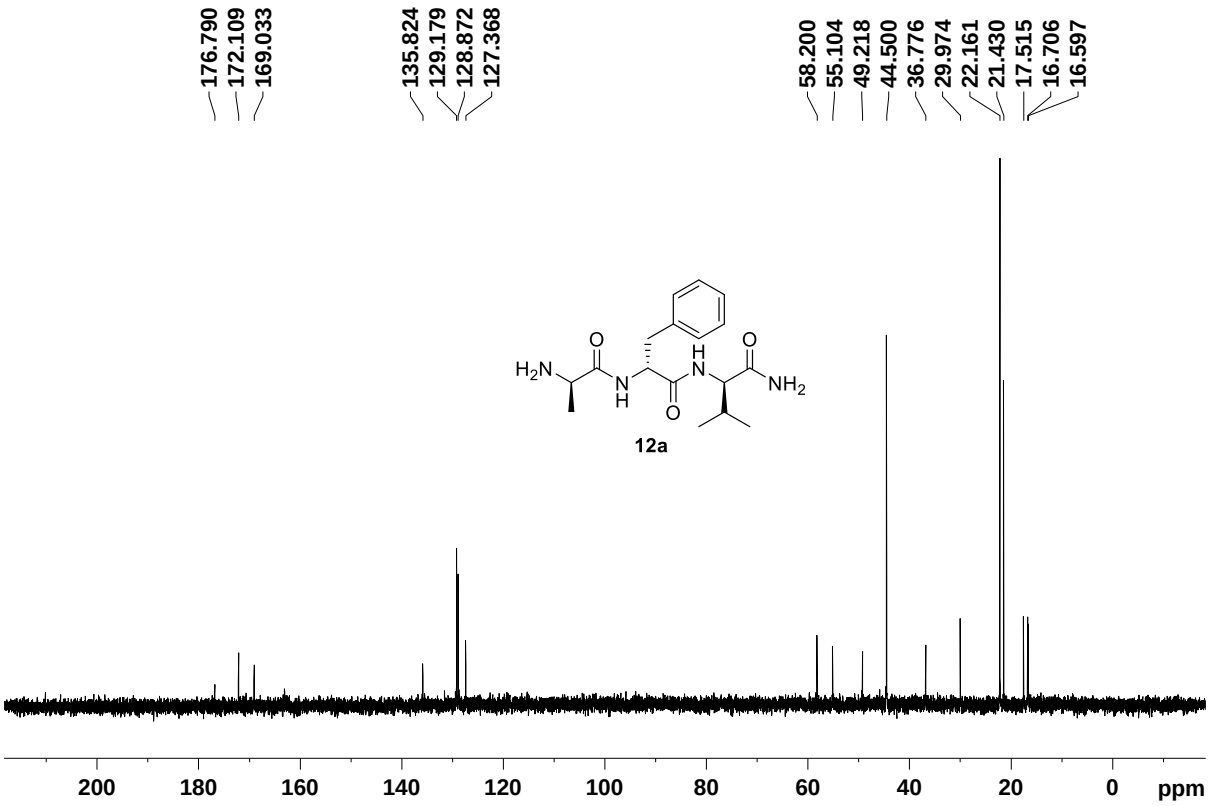


Figure S24. ^{13}C NMR spectrum of compound **12a**

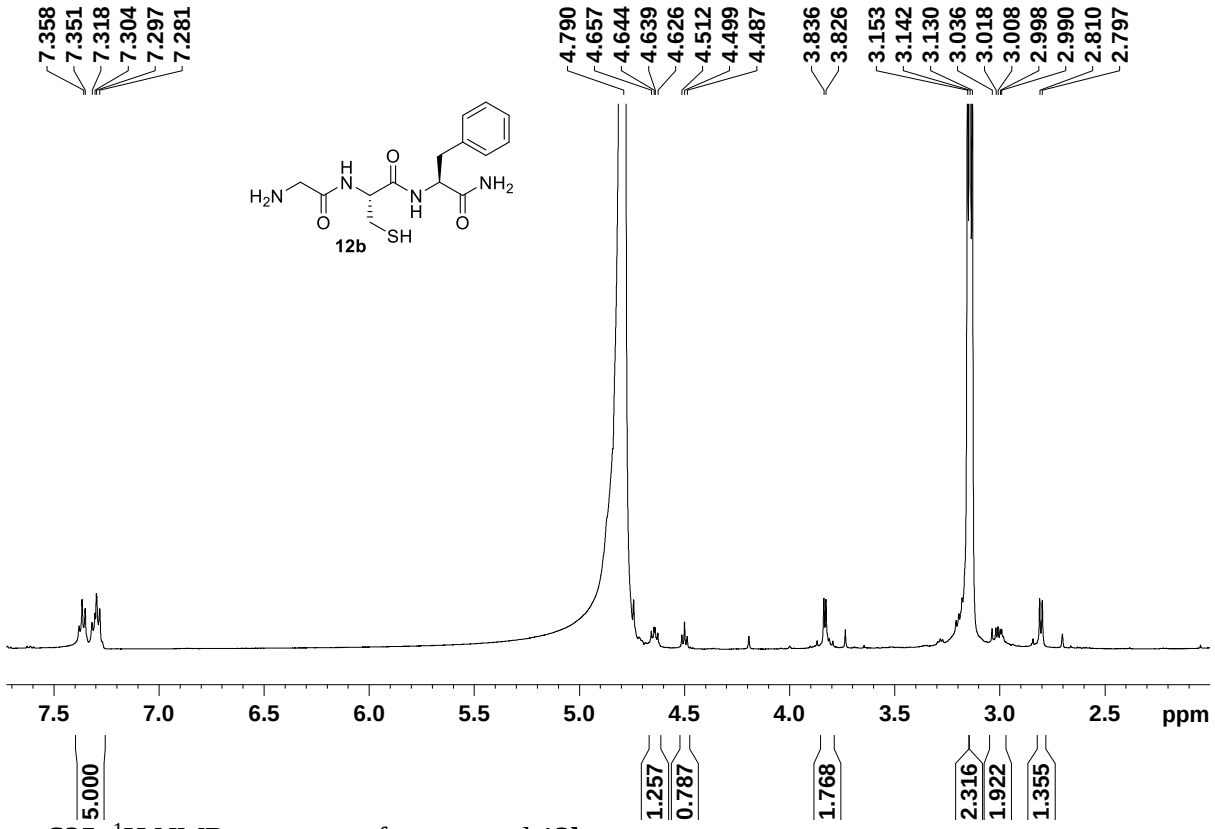


Figure S25. ^{1}H NMR spectrum of compound **12b**.

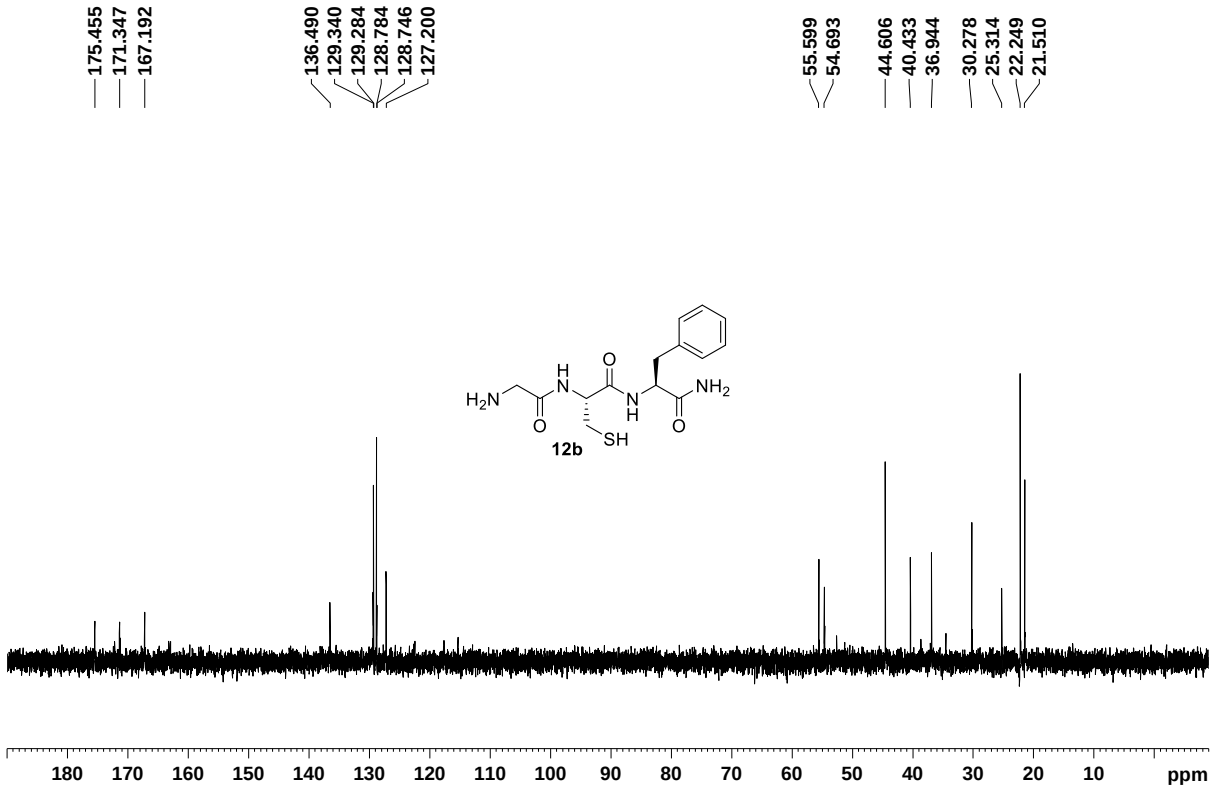


Figure S26. ^{13}C NMR spectrum of compound **12b**.

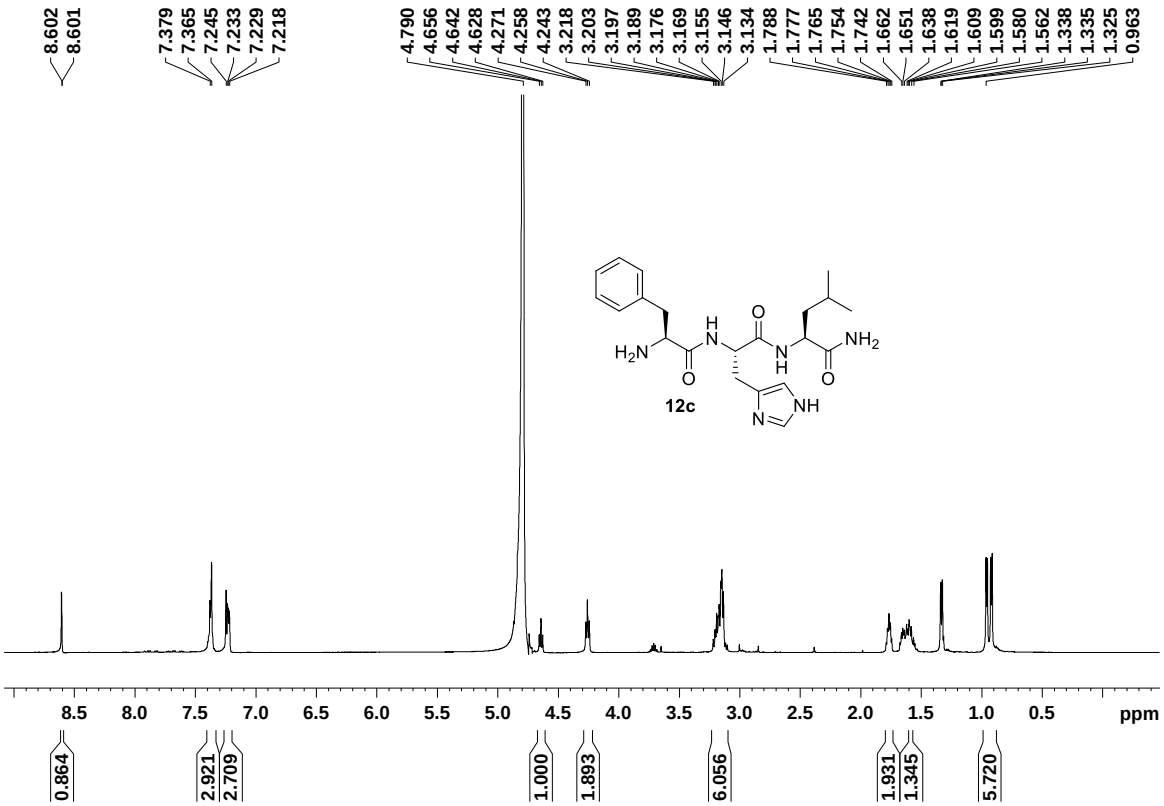


Figure S27.[1]H NMR spectrum of compound **12c**.

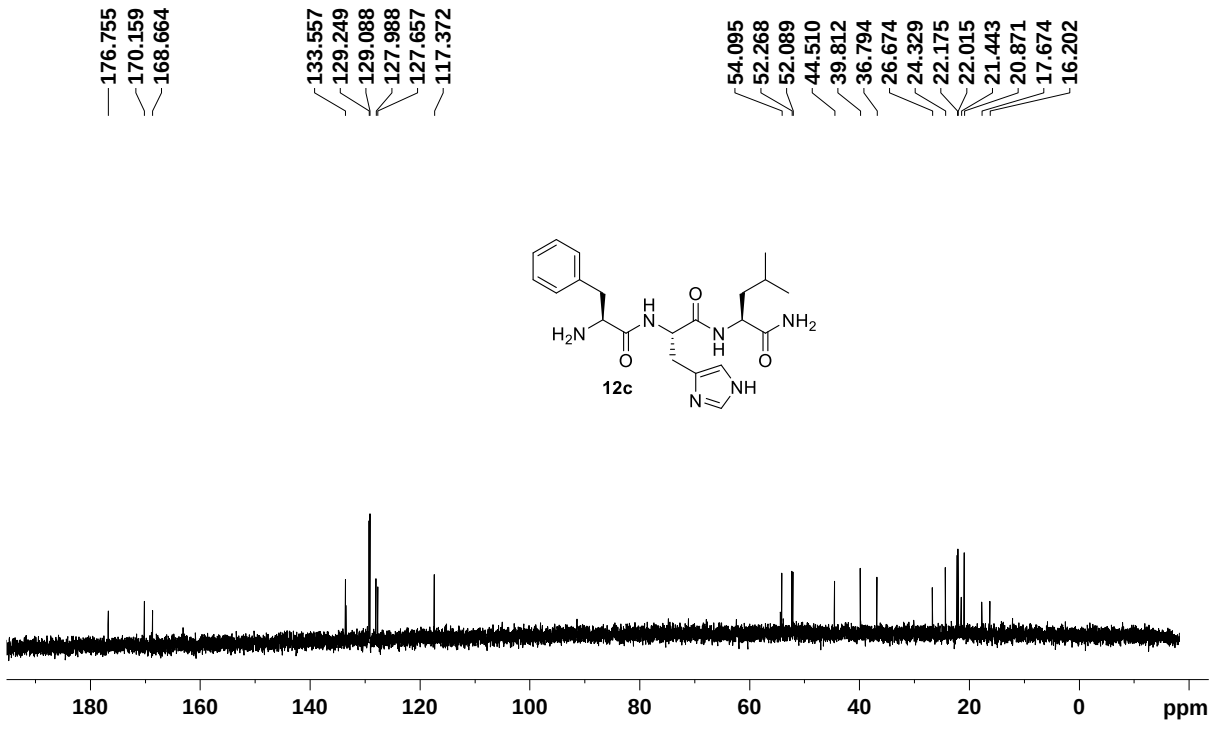


Figure S28 [13]C NMR spectrum of compound **12c**.

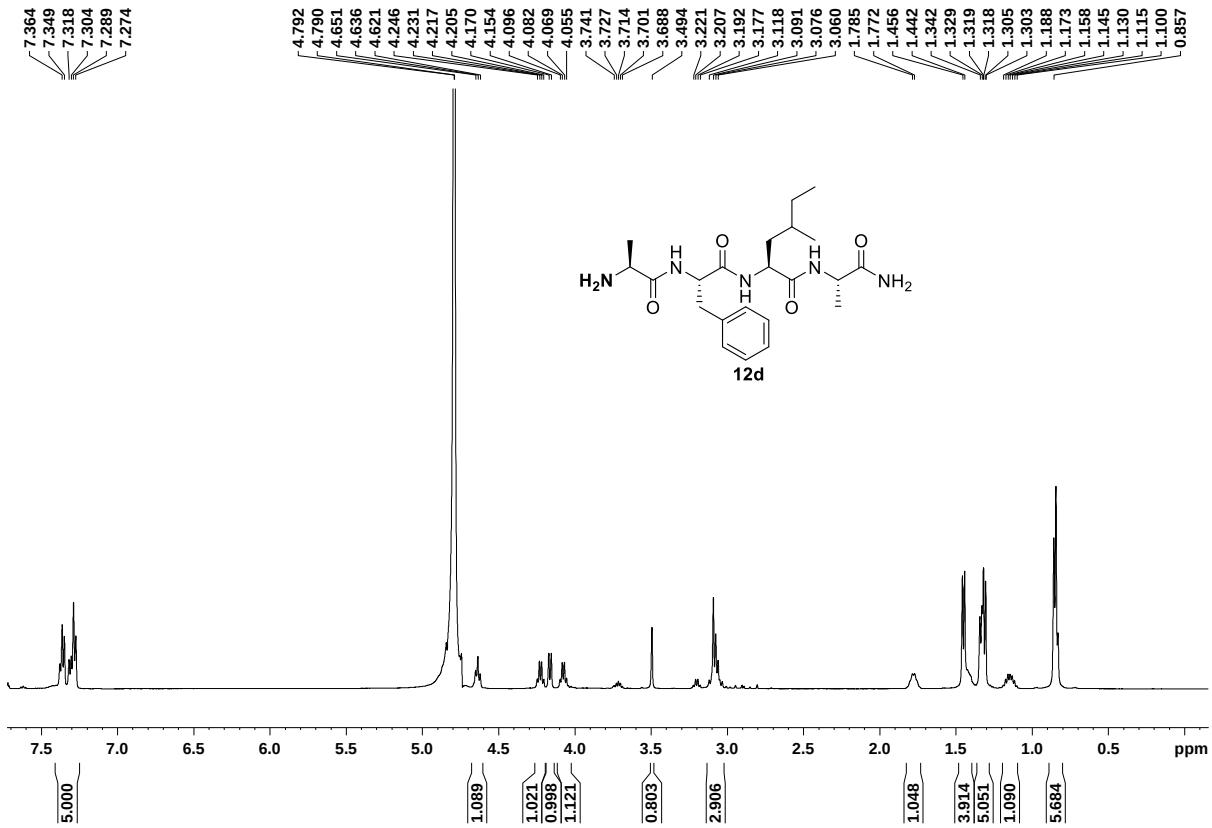


Figure S29 ^{1}H NMR spectrum of compound **12d**.

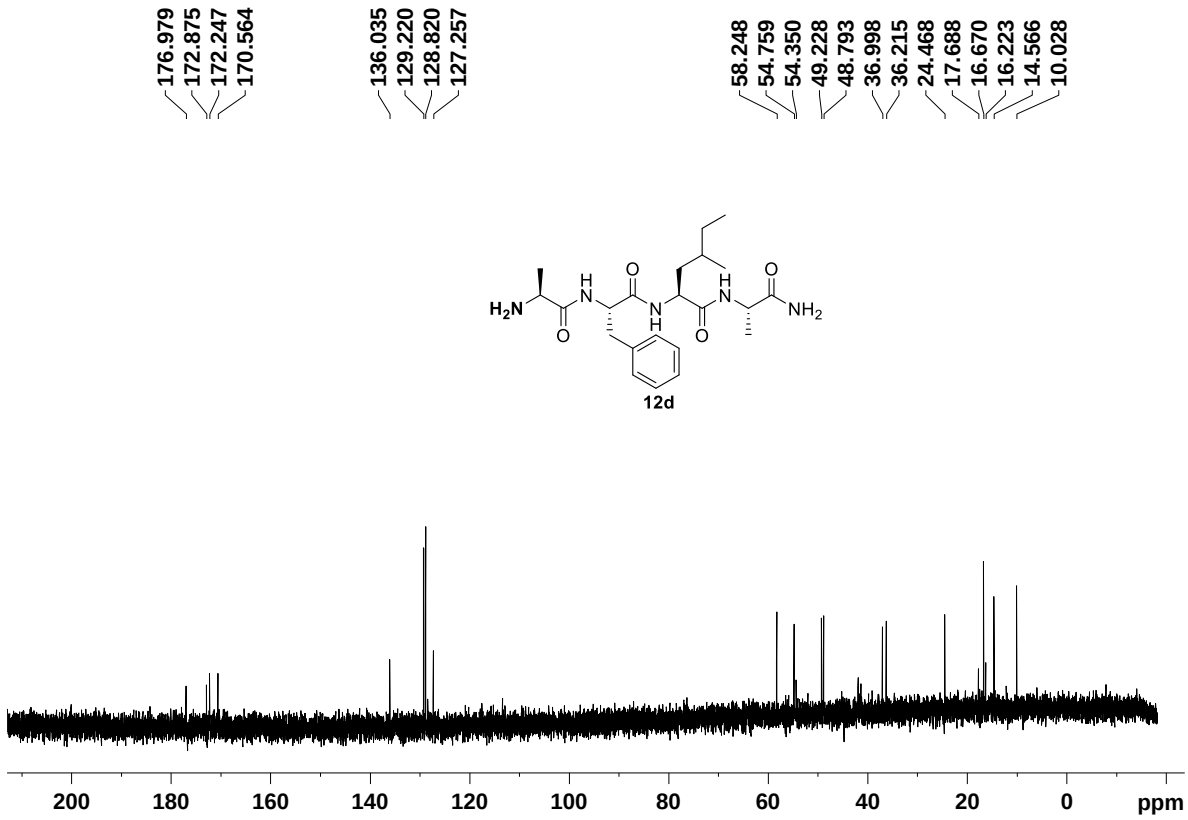


Figure S30 ^{13}C NMR spectrum of compound **12d.**

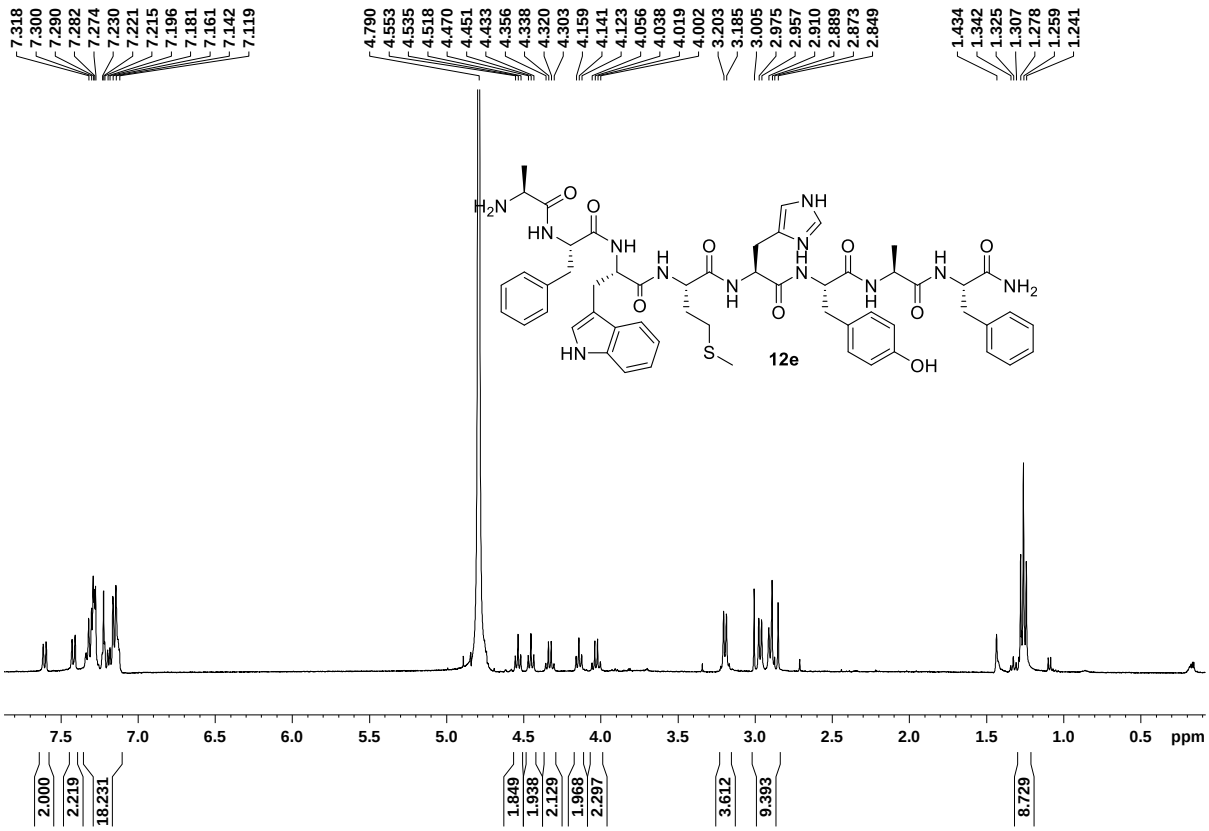


Figure S31 ^{1}H NMR spectrum of compound **12e.**

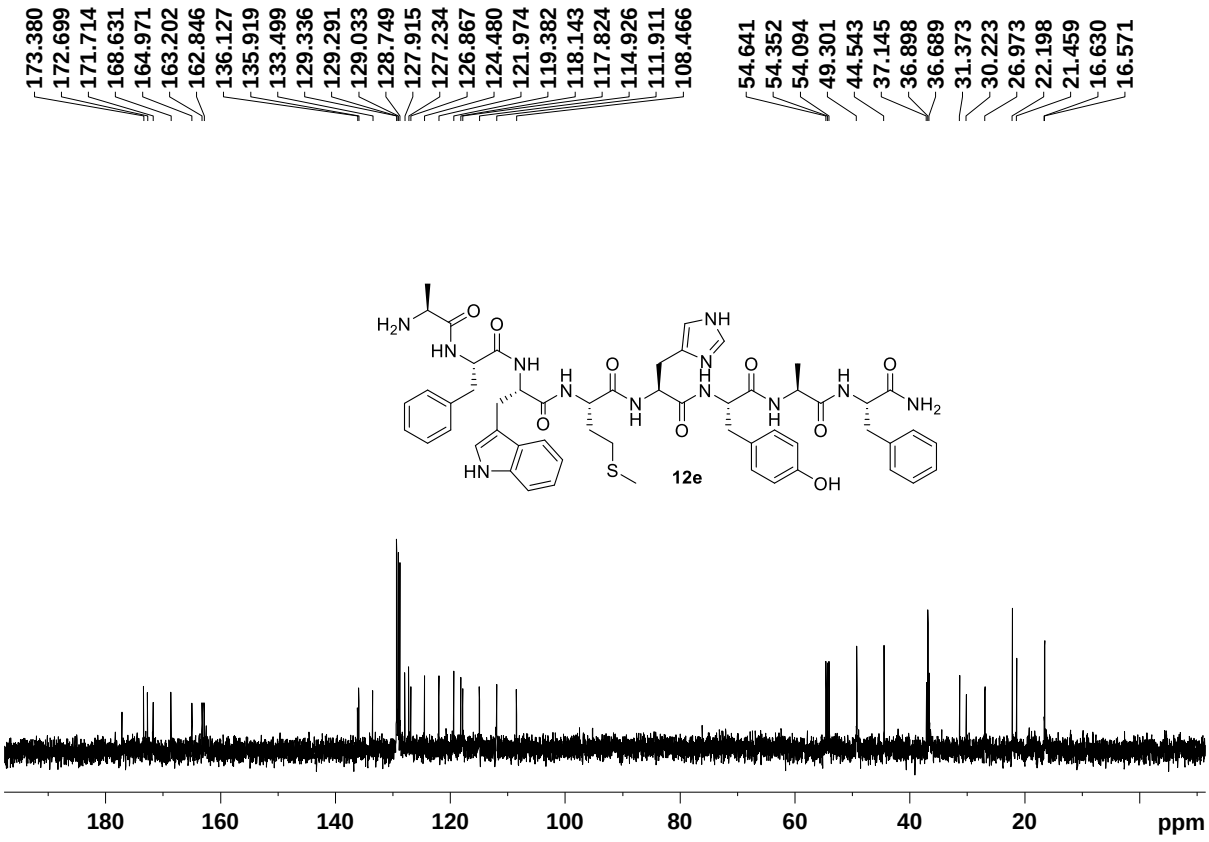


Figure S32^{13}C NMR spectrum of compound **12e.**

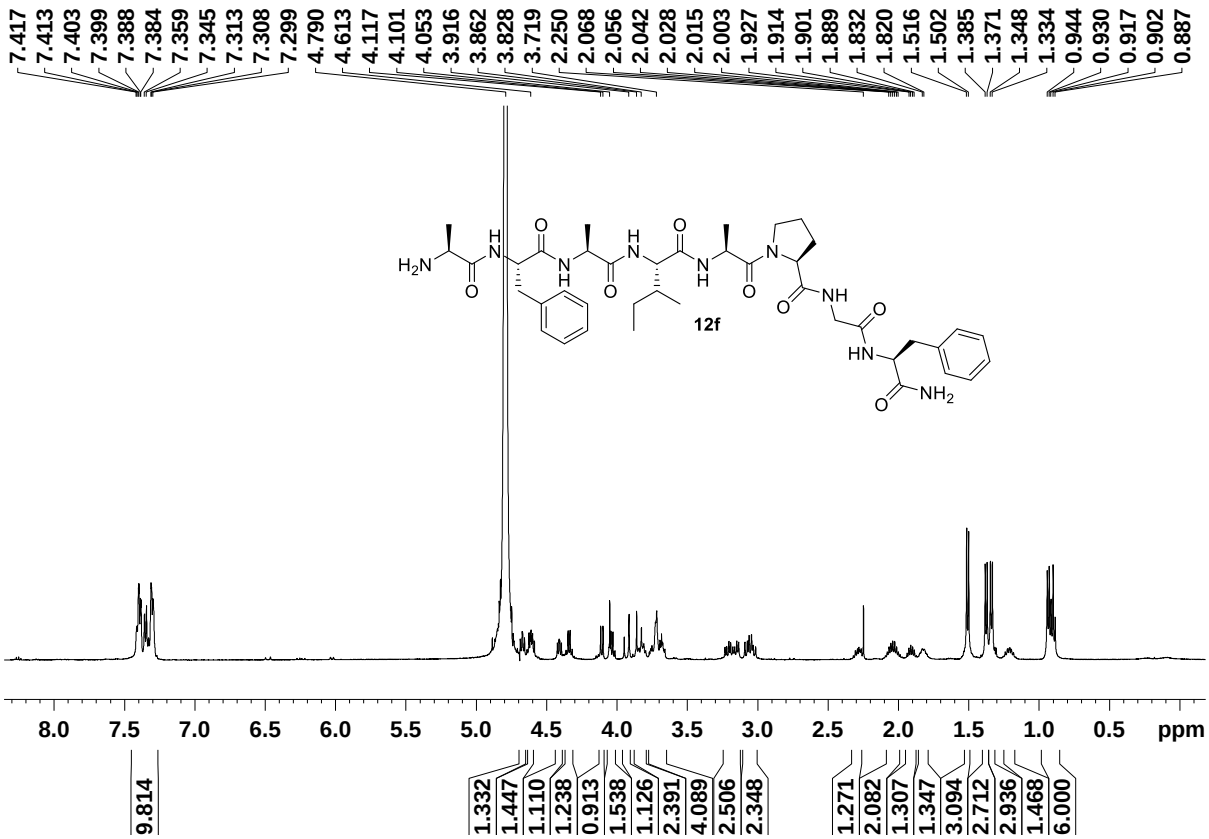


Figure S33 ^{1}H NMR spectrum of compound **12f.**

Representative example illustrating removal of amino acids during washes after peptide synthesis

The general procedure for attachment of the first amino acid was followed. The combined supernatants obtained after washing the support with ether were collected. The TLC of the supernatants showed the presence of the amino acid starting material (Figure S34)

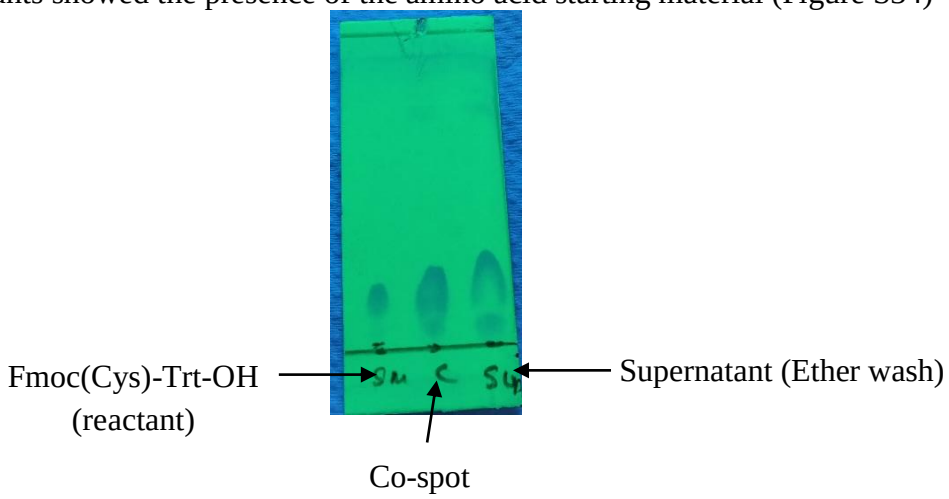


Figure S34 TLC comparing supernatant after coupling reaction with FmocCys-Trt-OH starting material (Solvent system: 50% ethylacetate/hexane).

General procedure for HPLC purification and analysis of larger oligopeptides

All peptides were purified by semi preparative RP-HPLC (Reversed Phase High Performance Liquid Chromatography) on a Shimadzu system with water (0.1% TFA) and acetonitrile (0.1% TFA) as mobile phase solvents. The flow rate used for analytical RP-HPLC & semi preparative RP-HPLC were 1 mL/min and 4.5 mL/min respectively. Peptide was injected at a concentration of 1.0 mg/mL for analytical HPLC and 10 mg/mL for semi-preparative HPLC. Peptide elution was monitored at 254 nm and 220 nm. The gradient system shown in Table S1 was used to separate the larger oligopeptides and conotoxins. Hexadexapeptide **12k** was separated using an isocratic methd (40% acetonitre/water) Note: All the LCMS spectra were acquired in Thermo Fisher Dionex ultimate 3000 UHPLC system using C-18, 5µm, 10 × 250 mm column with the flow rate of 0.5mL/min.

Table S1. Gradient method used for HPLC of peptides **12e –12-j**.

S. No.	Time (min)	Acetonitrile (%)	Water (%)
1	0	10	90
2	10	20	80
3	15	30	70
4	20	40	60
5	25	50	50
6	30	60	40
7	35	70	30

HPLC traces of peptides 12e-12k

a).

b)

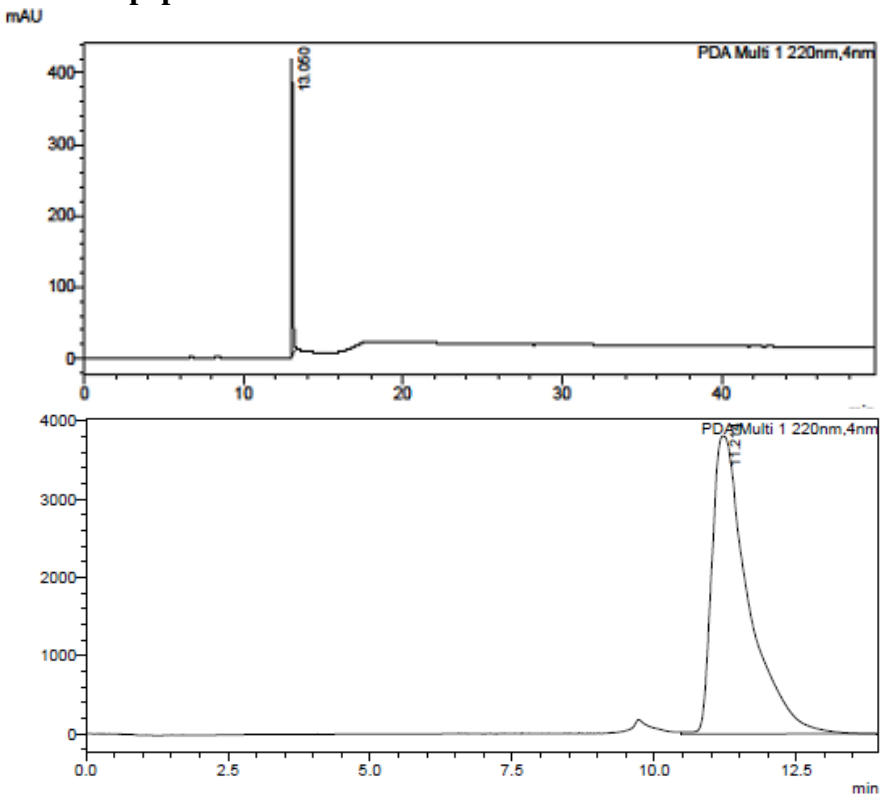


Figure S35. HPLC traces of a) crude; b) pure peptide AFWMHYAF **12e**

a)

b)

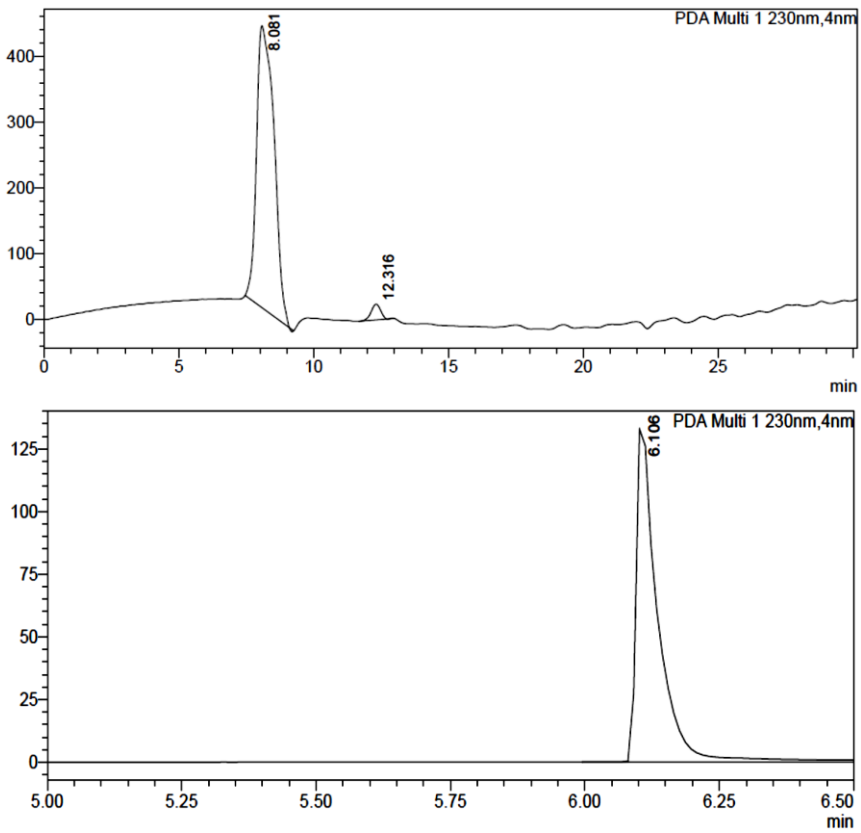


Figure S36. HPLC traces of a) crude; b) pure peptide AFAIAPGF **12f.**

a)

b)

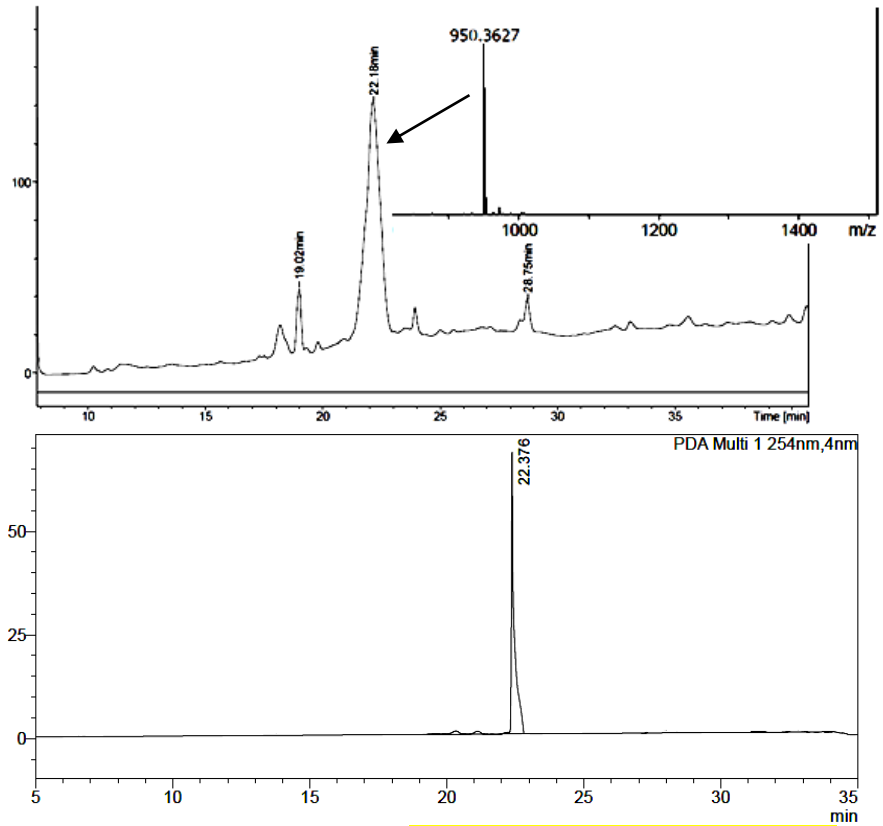


Figure S37. HPLC traces of a) crude; b) pure peptide GCPWQPYC **12g.**

a)

b)

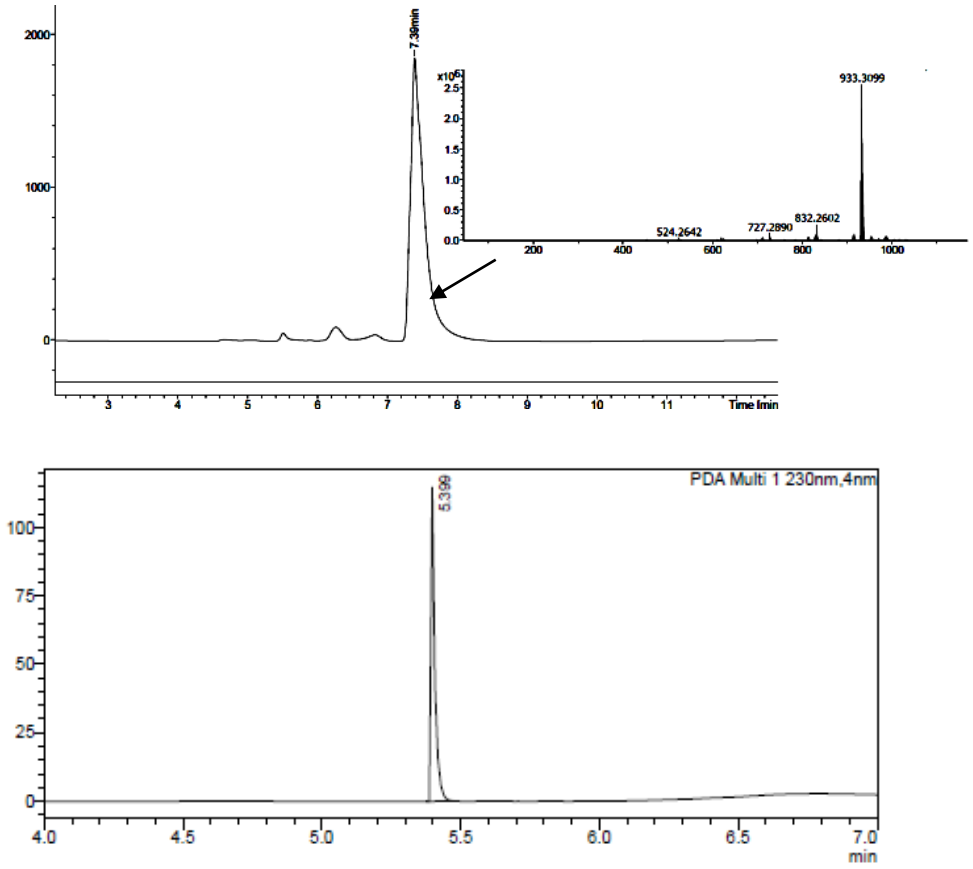
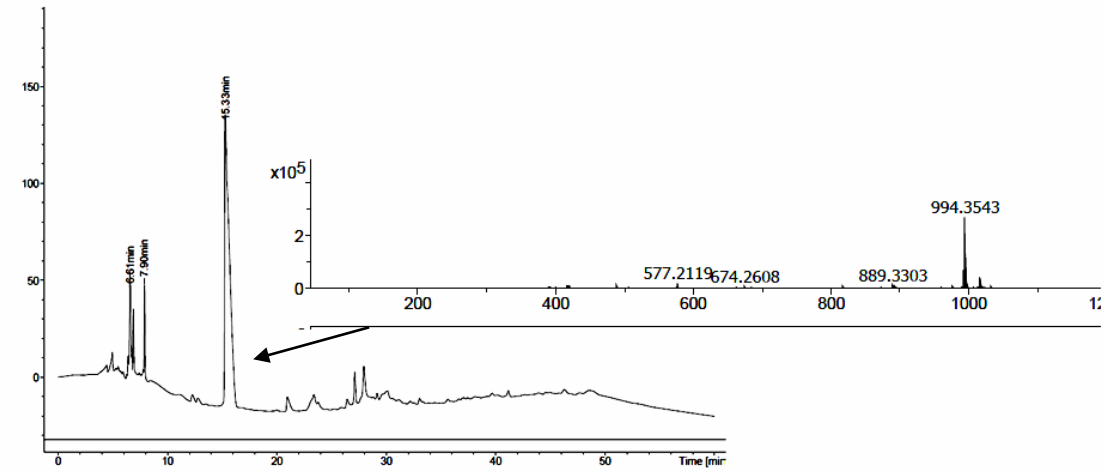


Figure S38. HPLC traces of a) crude; b) pure peptide TCFGCTPCC **12h**

a)



b)

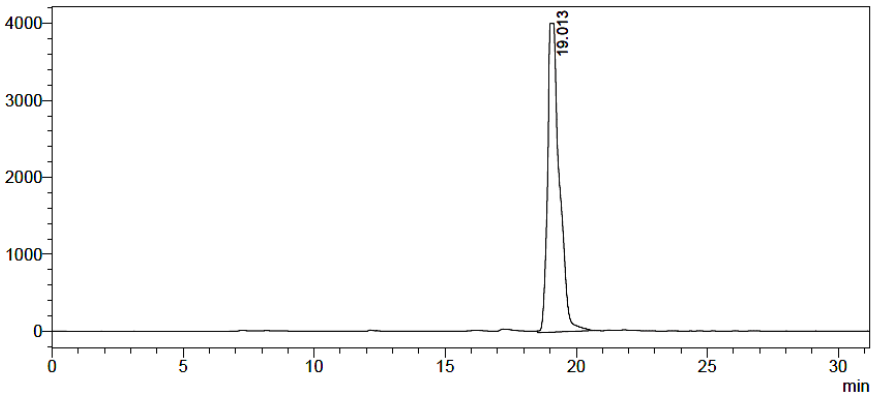
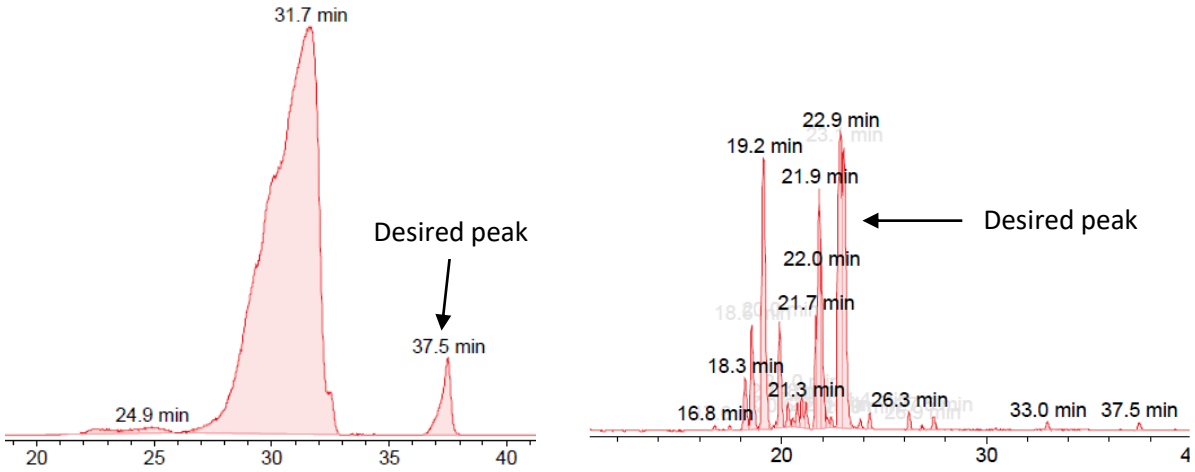
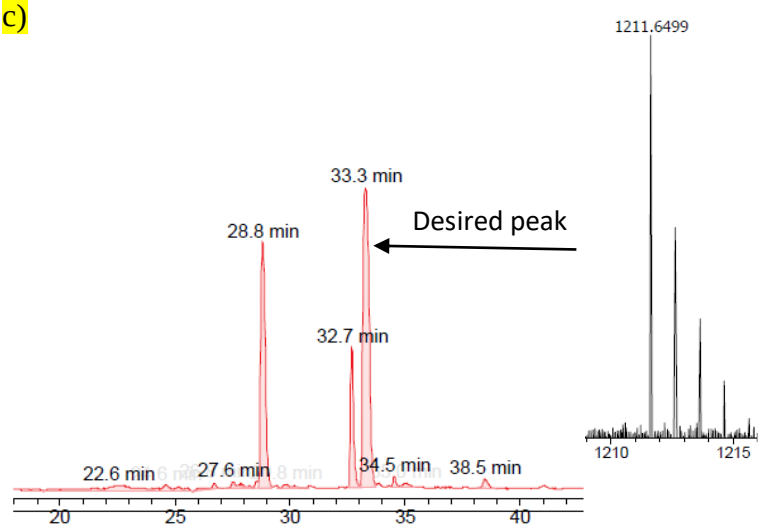


Figure S39. HPLC traces of a) crude; b) pure peptide CCPPALWCC **12i.**

a) b)



c)



d)

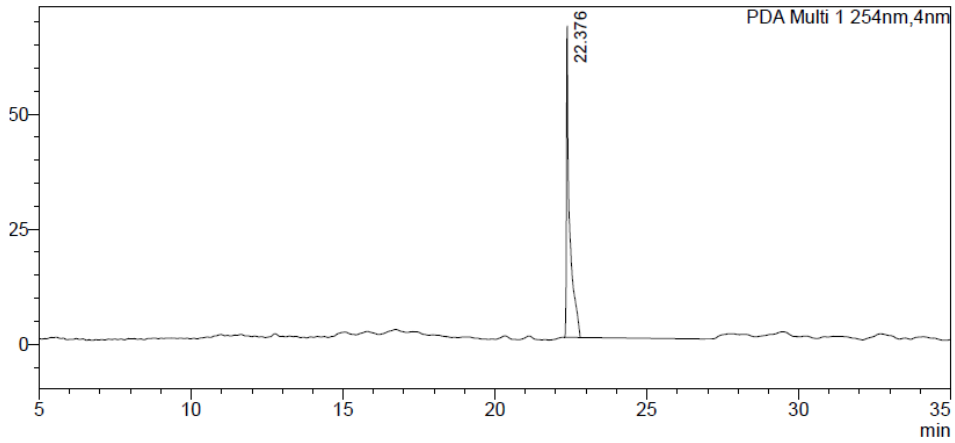
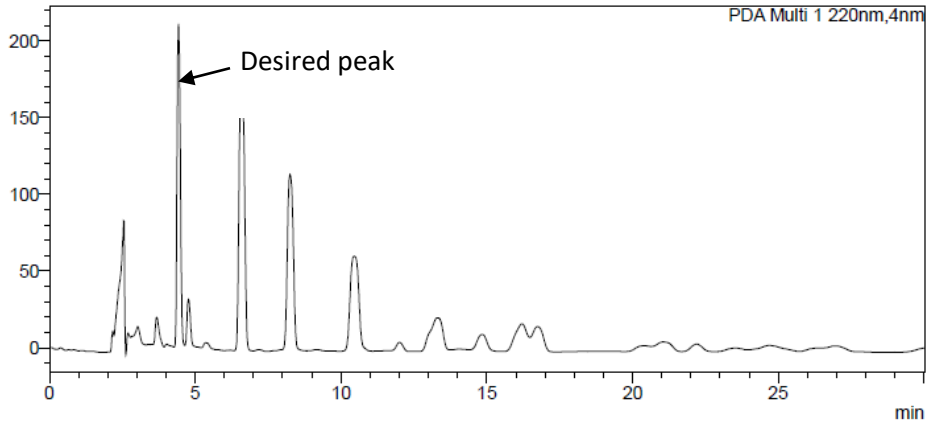


Figure S40. HPLC traces of peptide WFTTLISTIM **12j** a) crude synthesized on **1a**; b) crude synthesized on **1b**; c) crude synthesized on **1d;** d) pure peptide synthesized on **1d.**

a)



b)

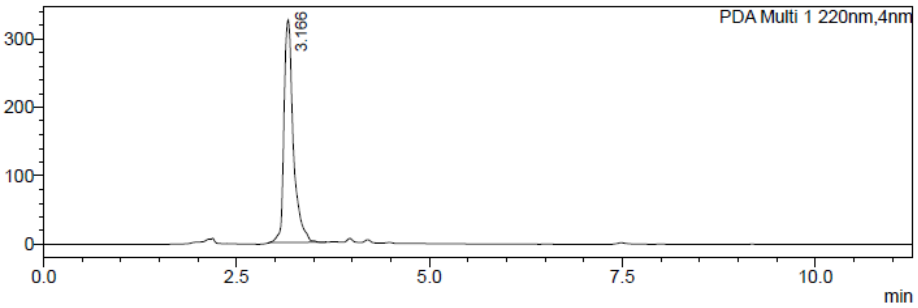


Figure S41. HPLC trace of a) crude; b) pure peptide GCCGAFACRFGCTPCC **12k.**

Mass spectra of peptides 12a-12k.

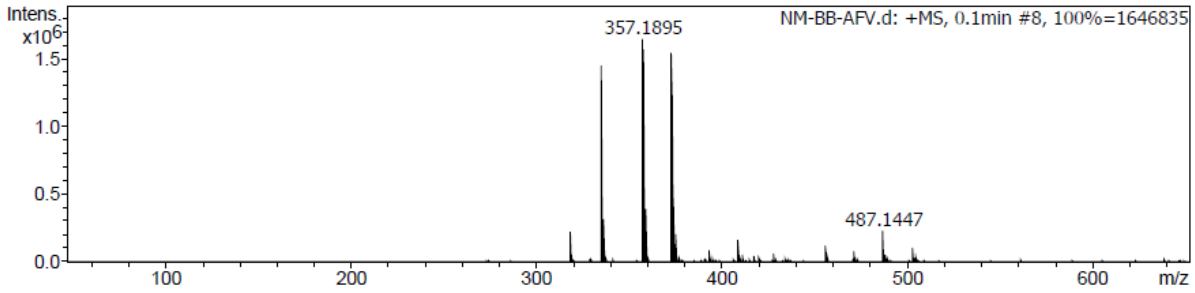


Figure S42. ESI of **12a**

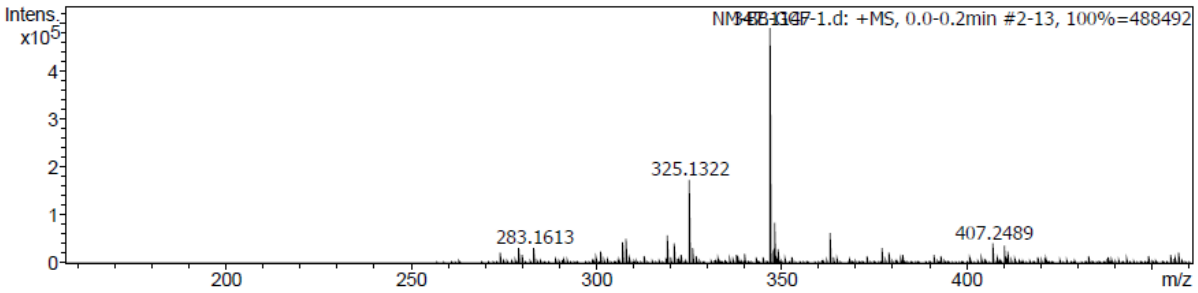


Figure S43. ESI of **12b**.

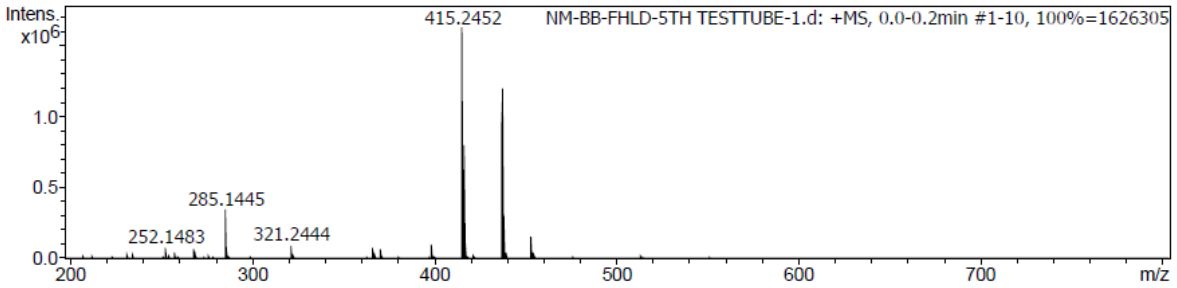


Figure S44. ESI of **12c**.

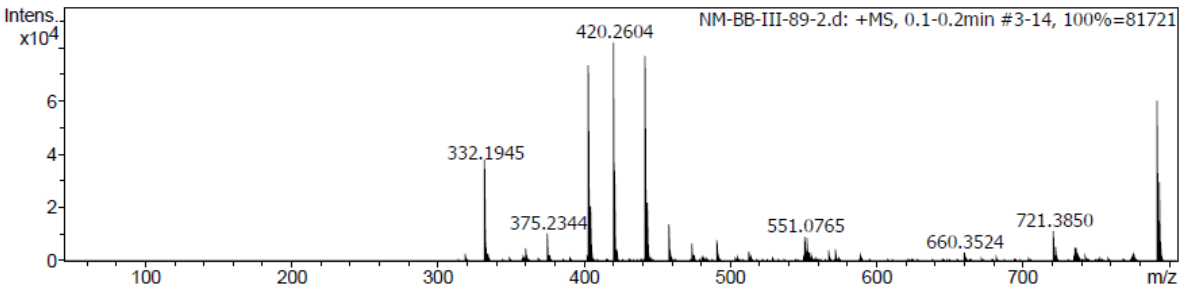


Figure S45. ESI of **12d**.

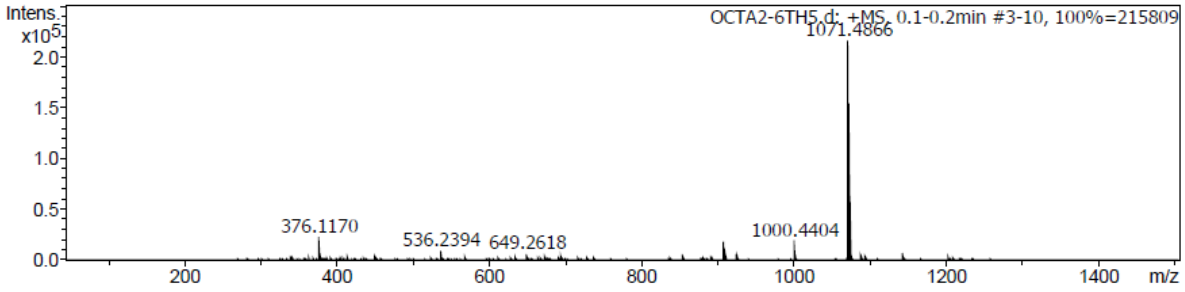


Figure S46. ESI of **12e**

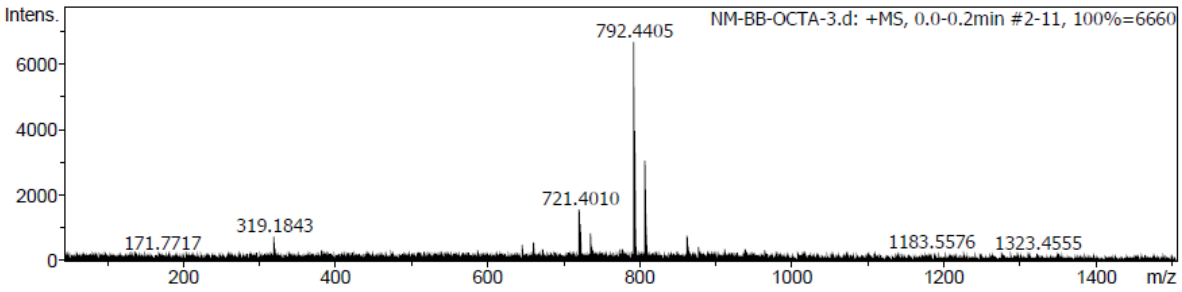


Figure S47. ESI of **12f**

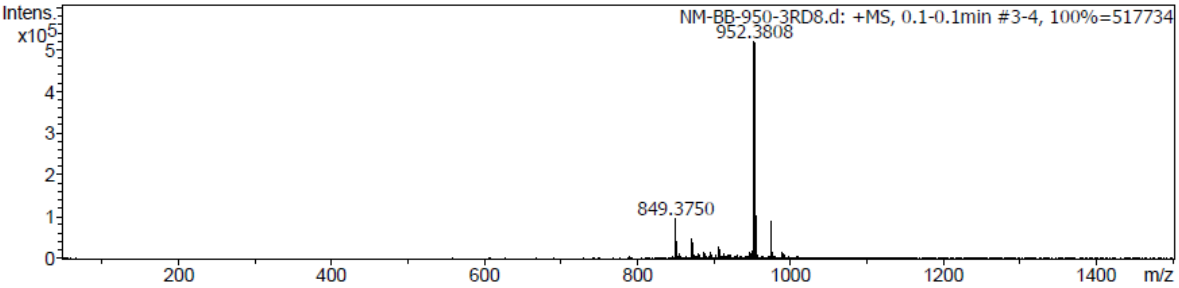


Figure S48. ESI of **12g**

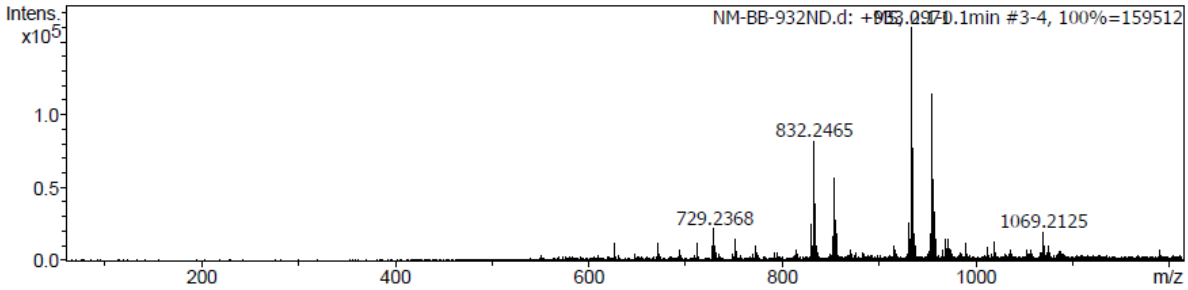


Figure S49. ESI of **12h**

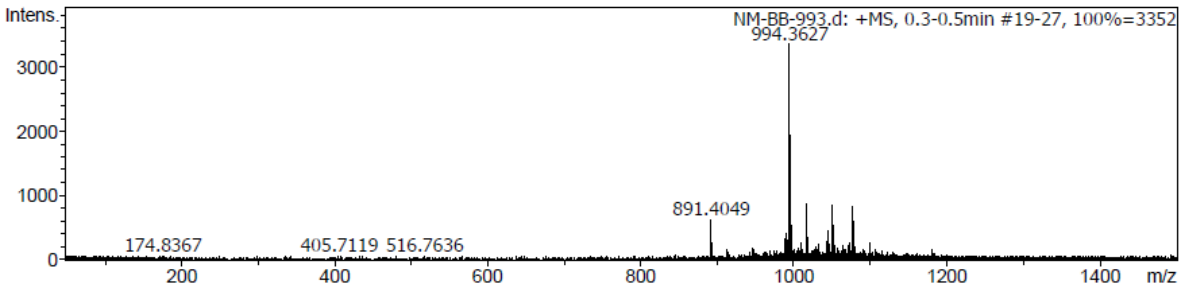


Figure S50. ESI of **12i**

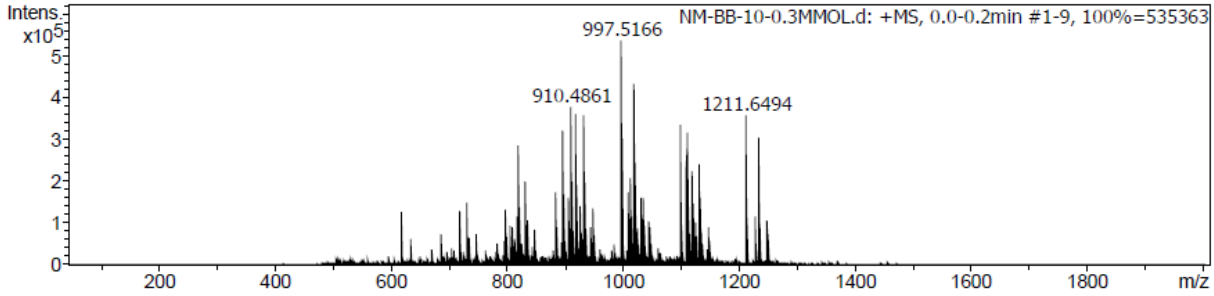


Figure S51. ESI of **12j**

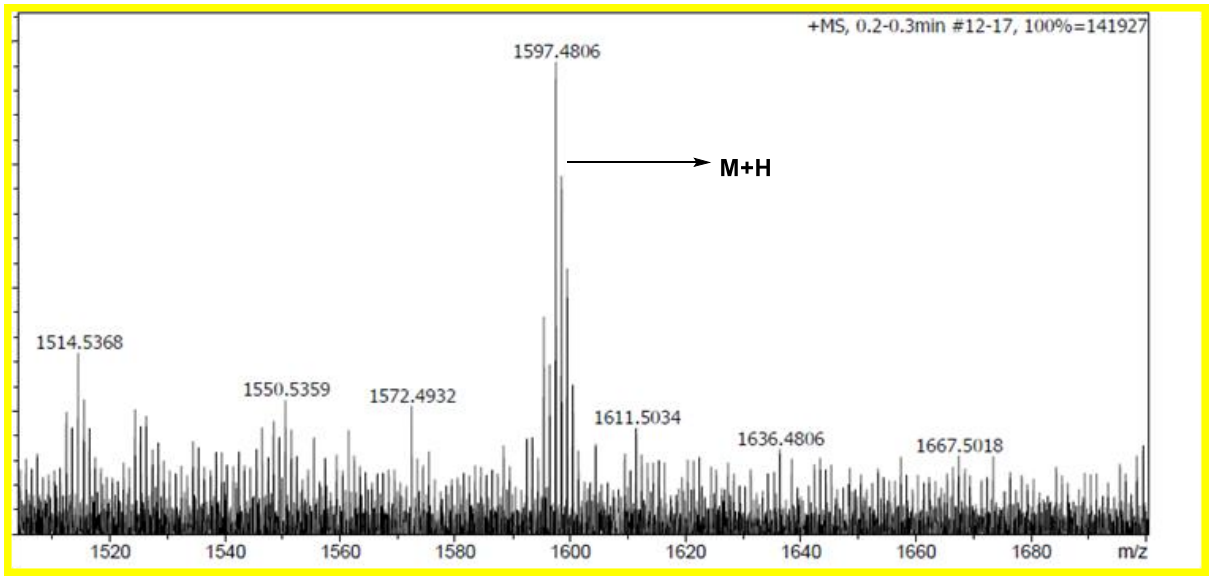


Figure S52. ESI of **12k**

DLS data for support 1b

The support **1b** was dissolved in chloroform (1.5 mg/mL)

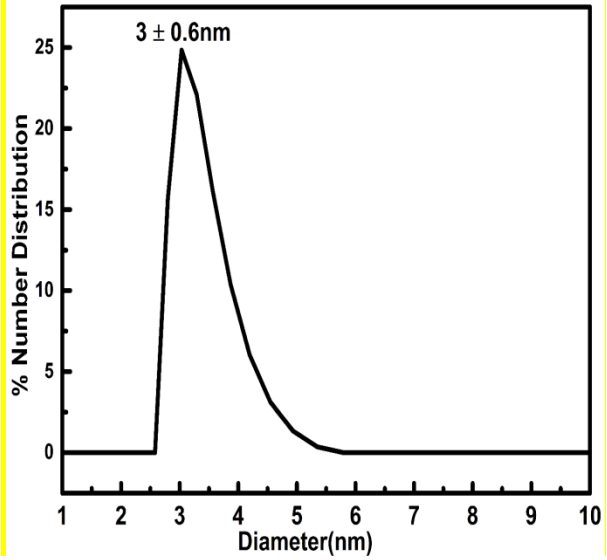


Figure S53. DLS of support **1b**