

## Supporting Information

### **An Efficient Method for Labeling Single Domain Antibody Fragments with $^{18}\text{F}$ Using Tetrazine-*Trans*-Cyclooctene Ligation and a Renal Brush Border Enzyme-Cleavable Linker**

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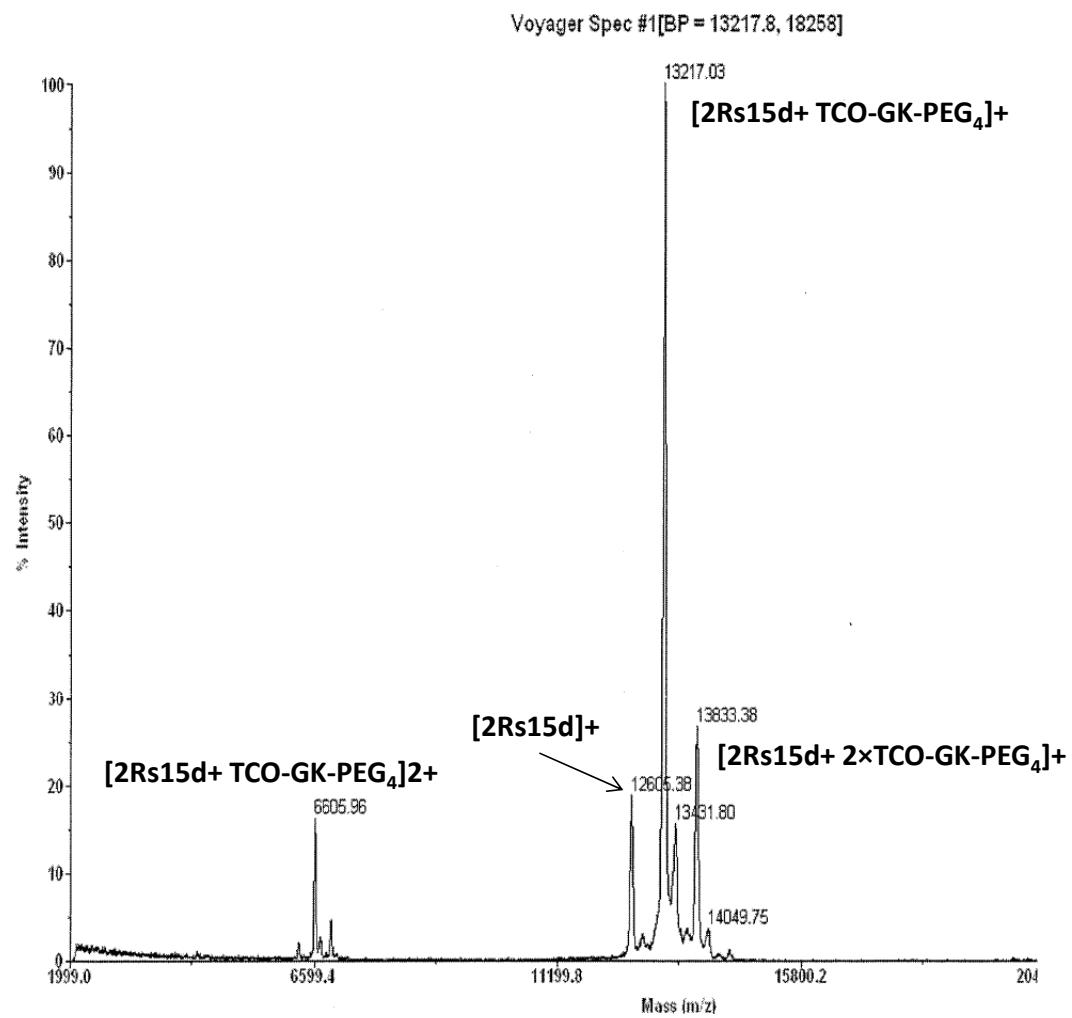


Figure S1. MALDI TOF mass spectrum of TCO-GK-PEG<sub>4</sub> derivatized 2Rs15d sdAbs

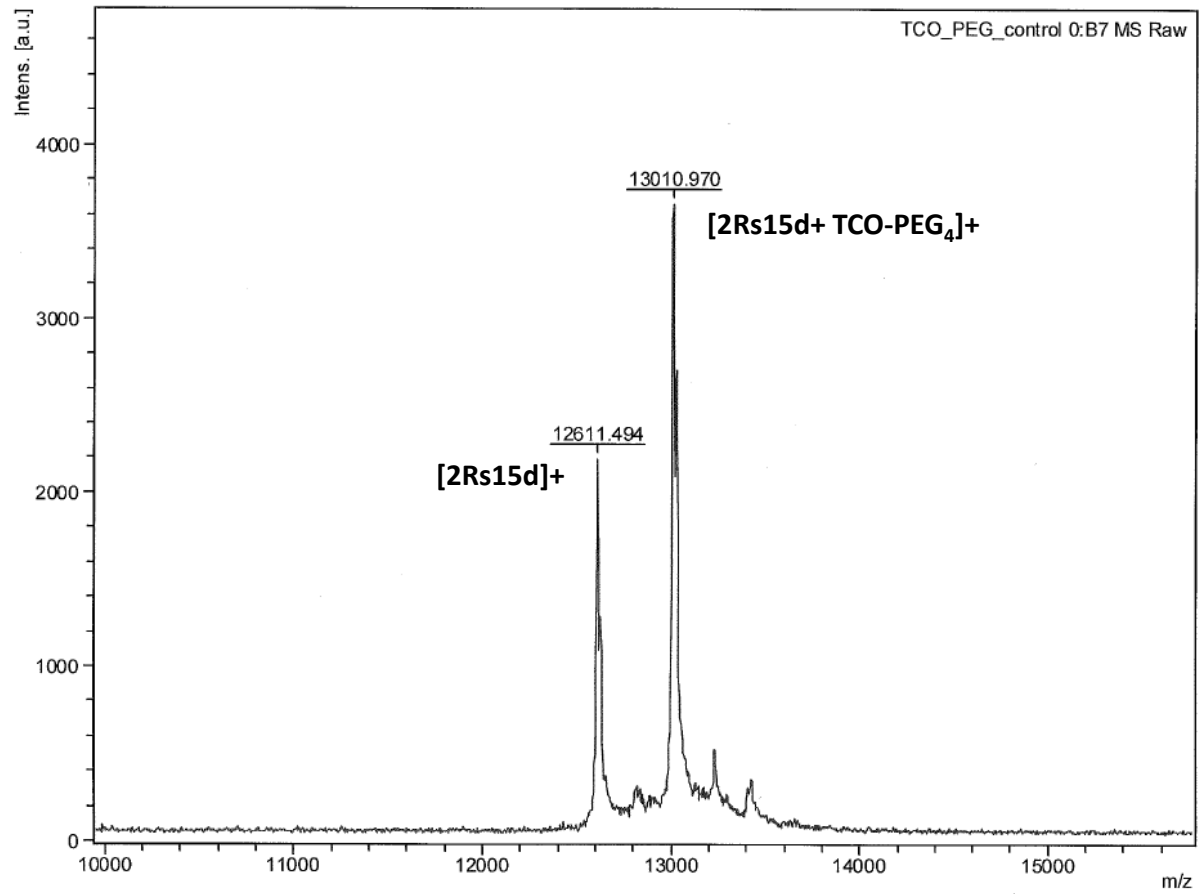


Figure S2. MALDI TOF mass spectrum of TCO-PEG<sub>4</sub> derivatized 2Rs15d sdAbs

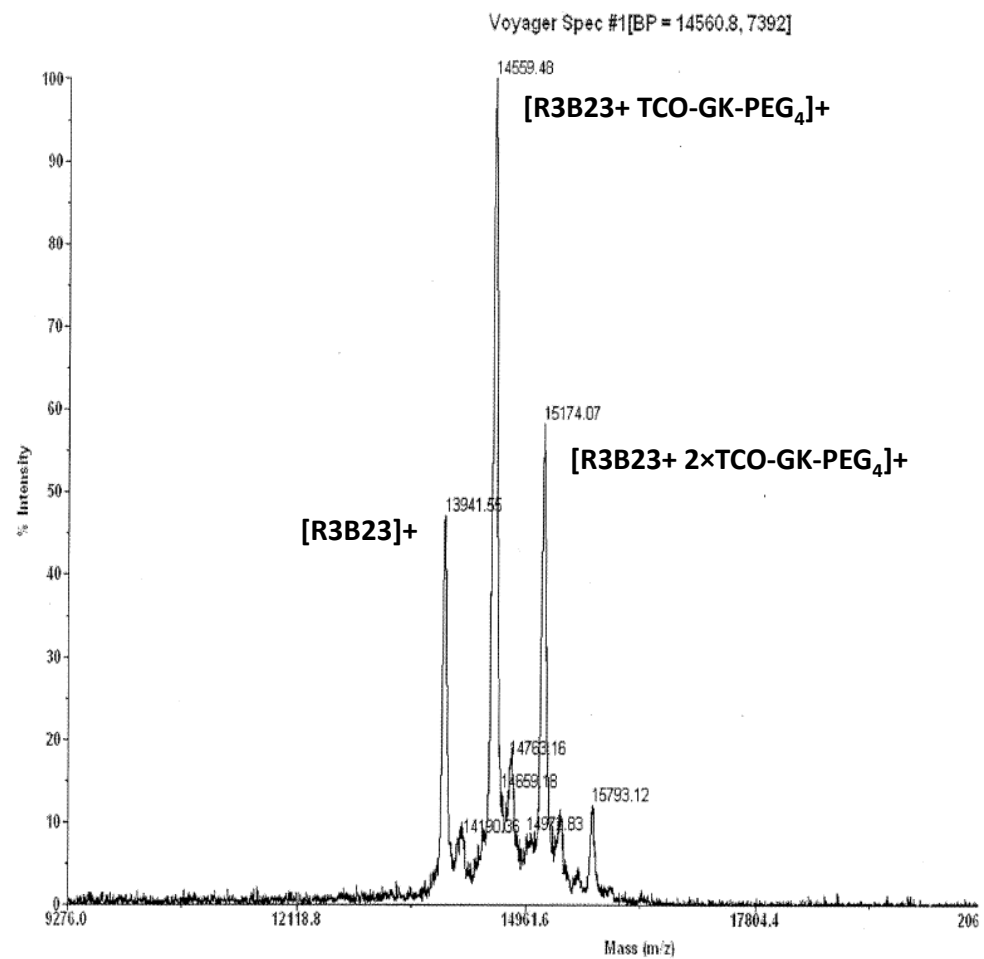


Figure S3. MALDI TOF mass spectrum of TCO-GK-PEG<sub>4</sub> derivatized R3B23 sdAbs

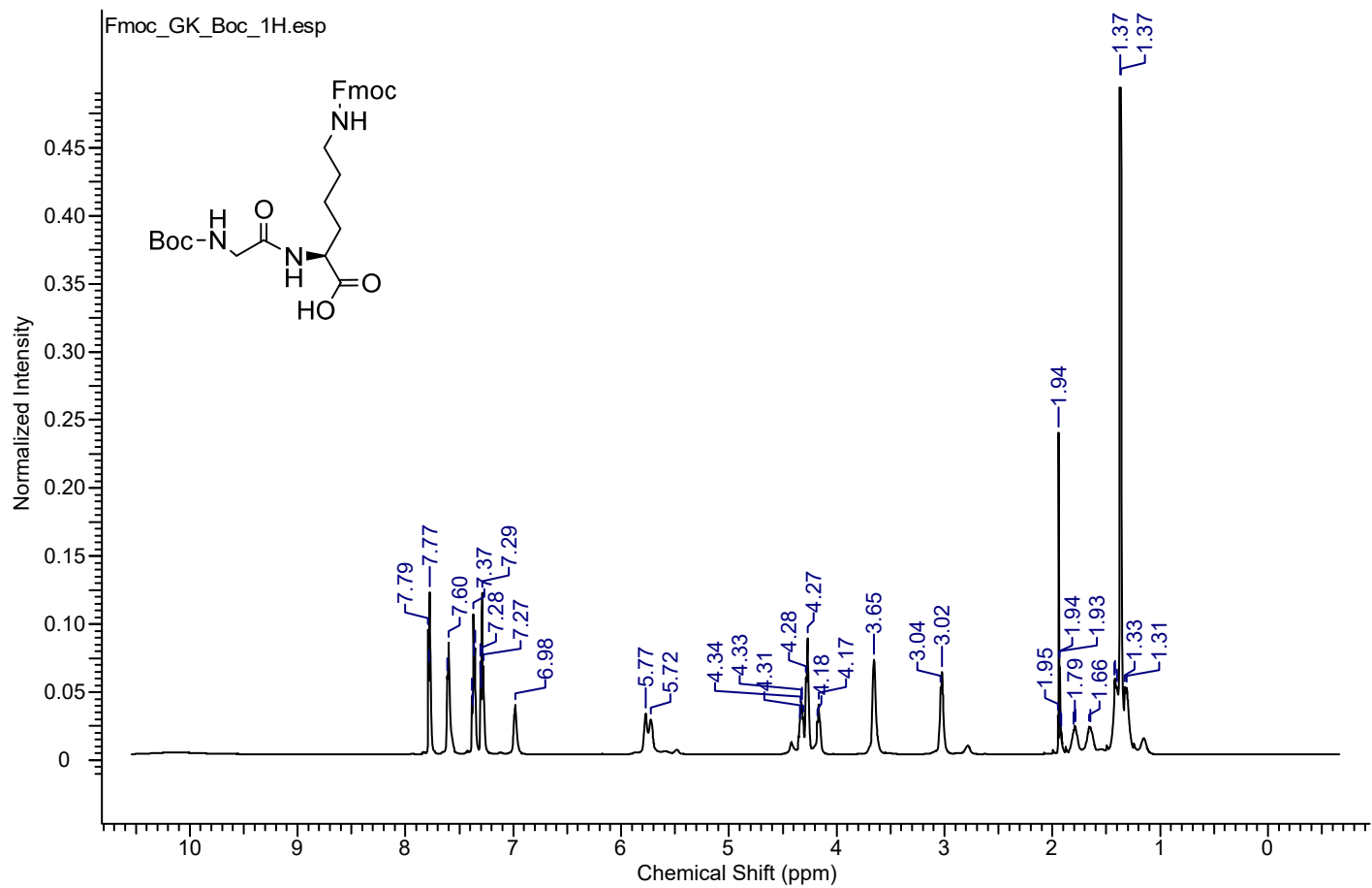


Figure S4.  $^1\text{H}$  NMR spectra of compound **3**

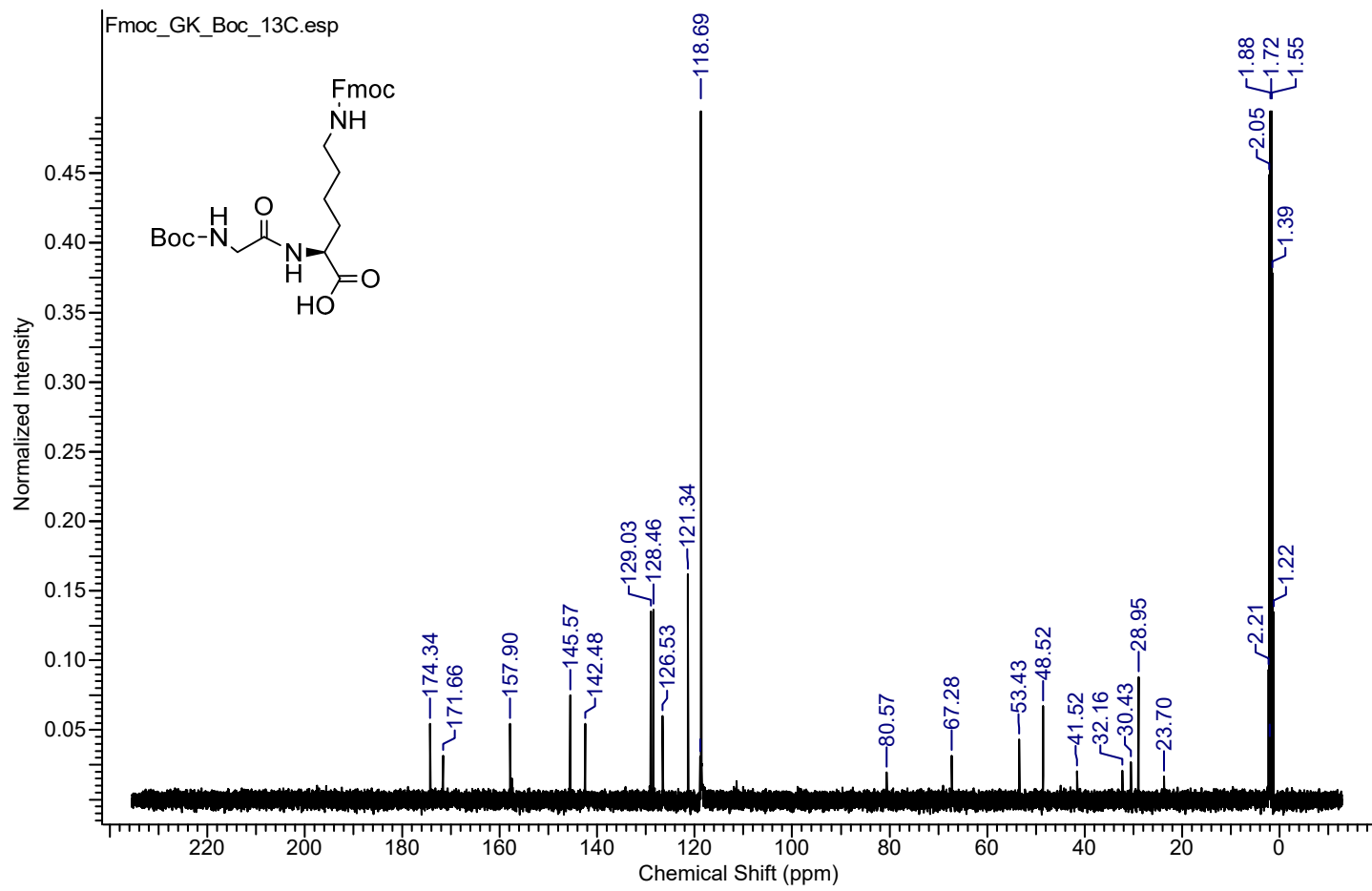


Figure S5.  $^{13}\text{C}$  NMR spectra of compound **3**

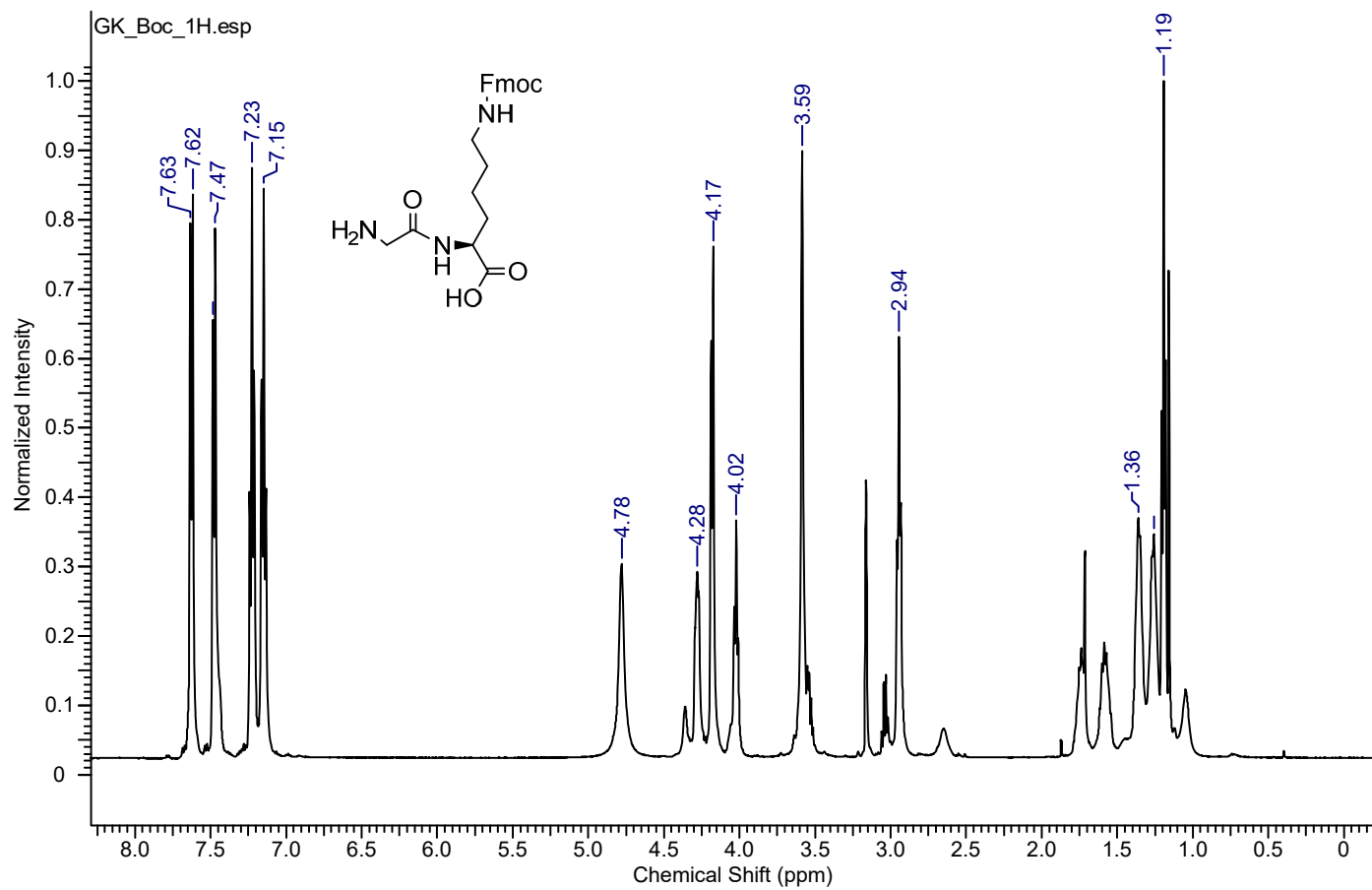


Figure S6. <sup>1</sup>H NMR spectra of compound **4**



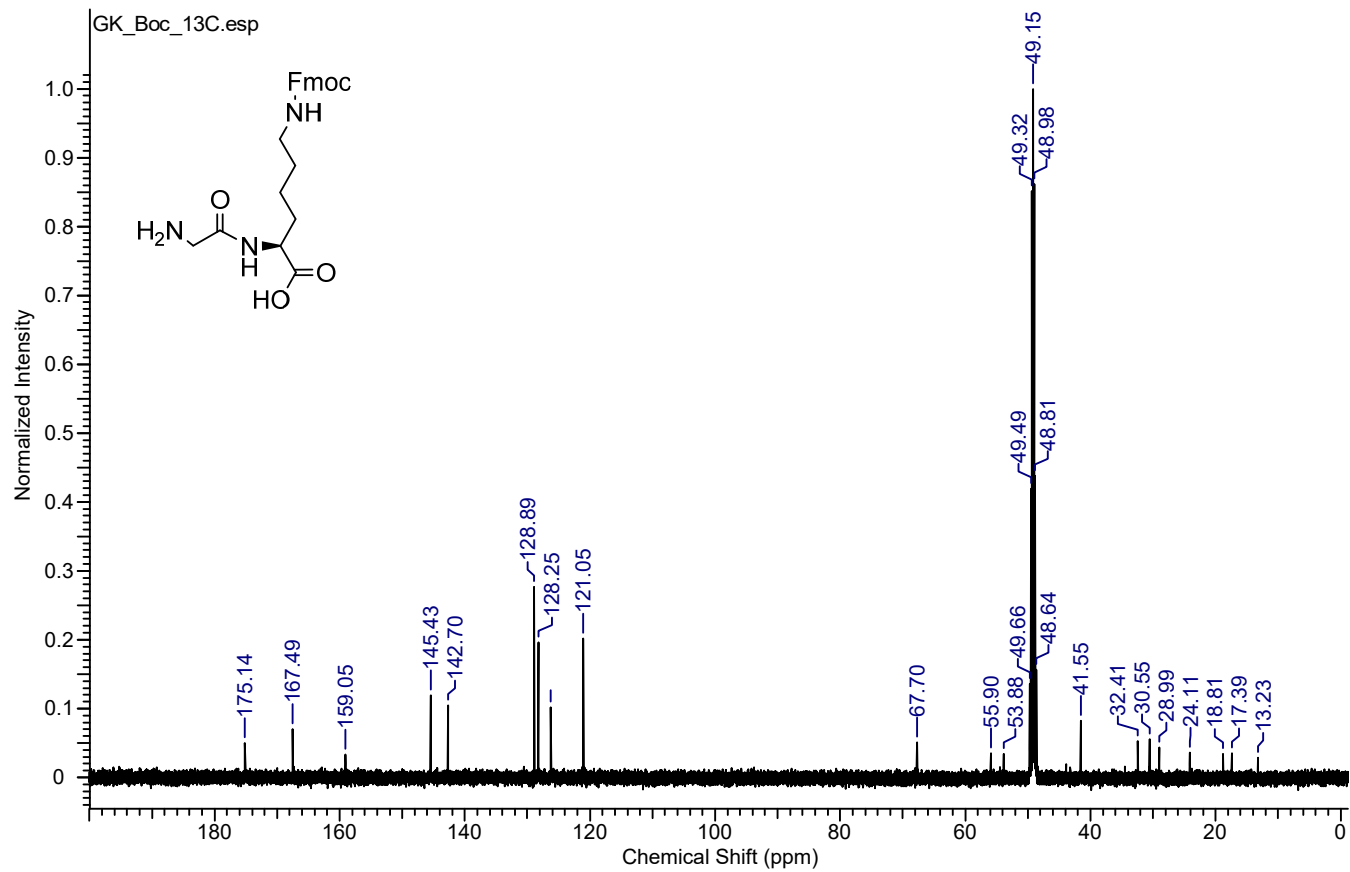


Figure S7.  $^{13}\text{C}$  NMR spectra of compound 4

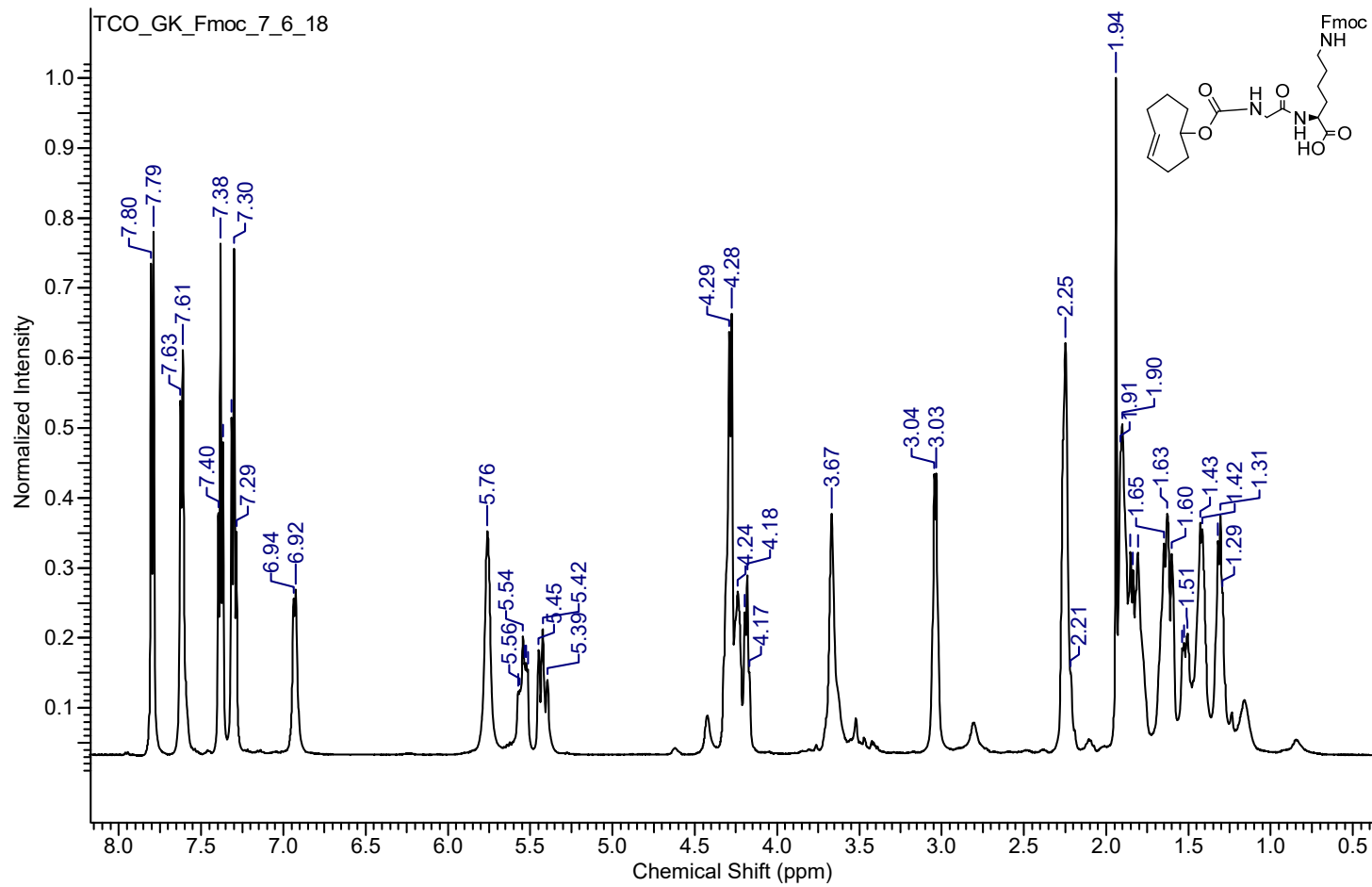


Figure S8.  $^1\text{H}$  NMR spectra of compound 5

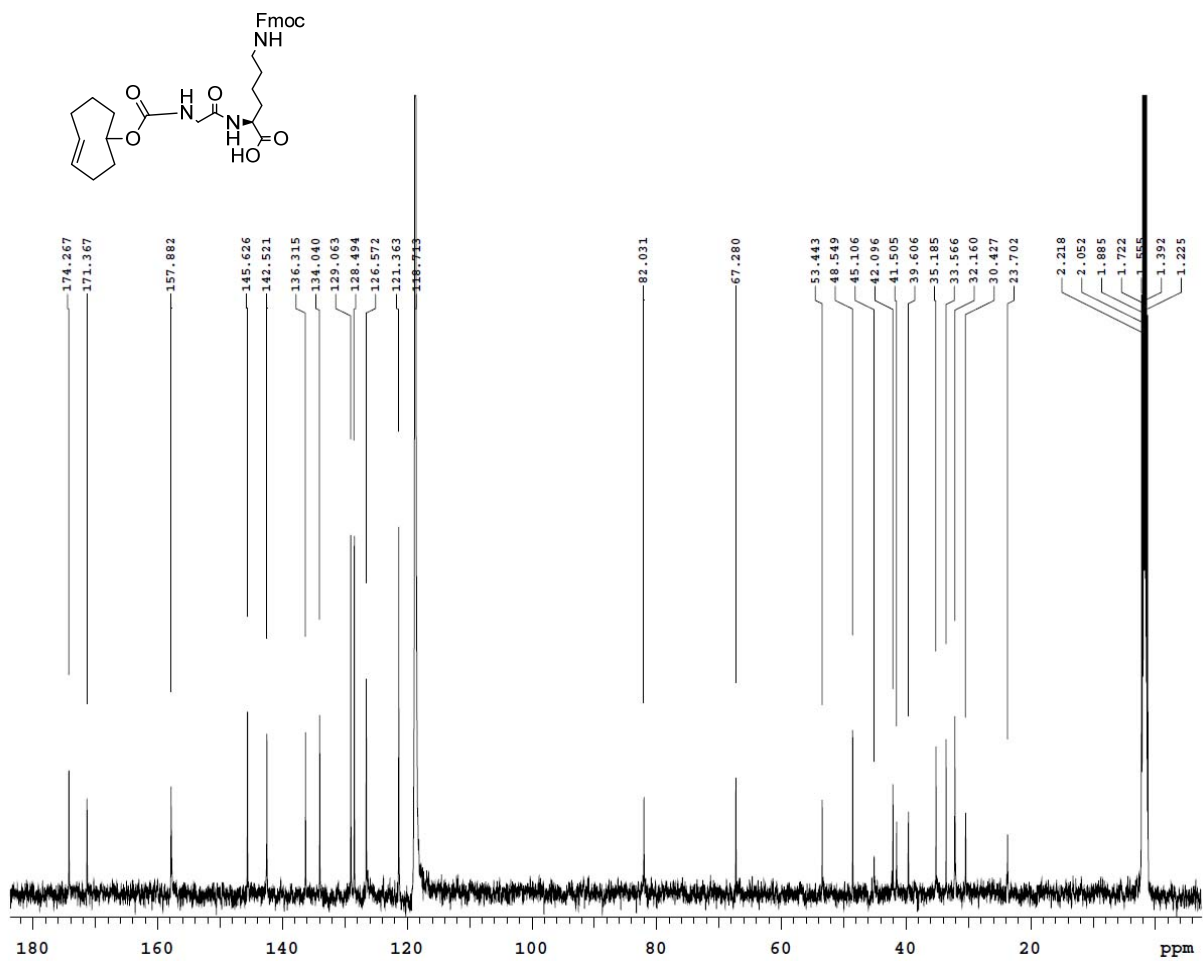


Figure S9. <sup>13</sup>C NMR spectra of compound 5

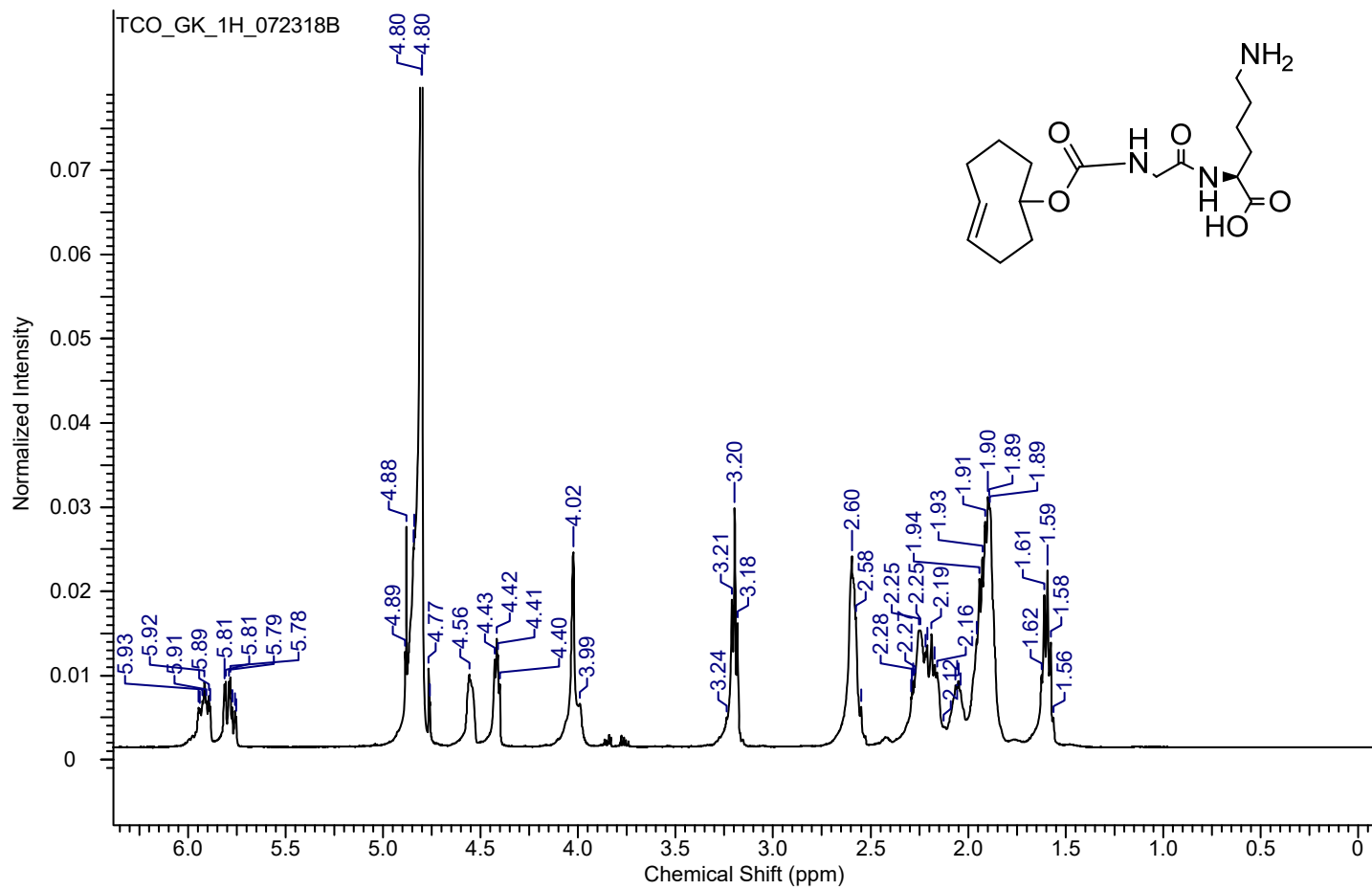


Figure S10. <sup>1</sup>H NMR spectra of compound 6

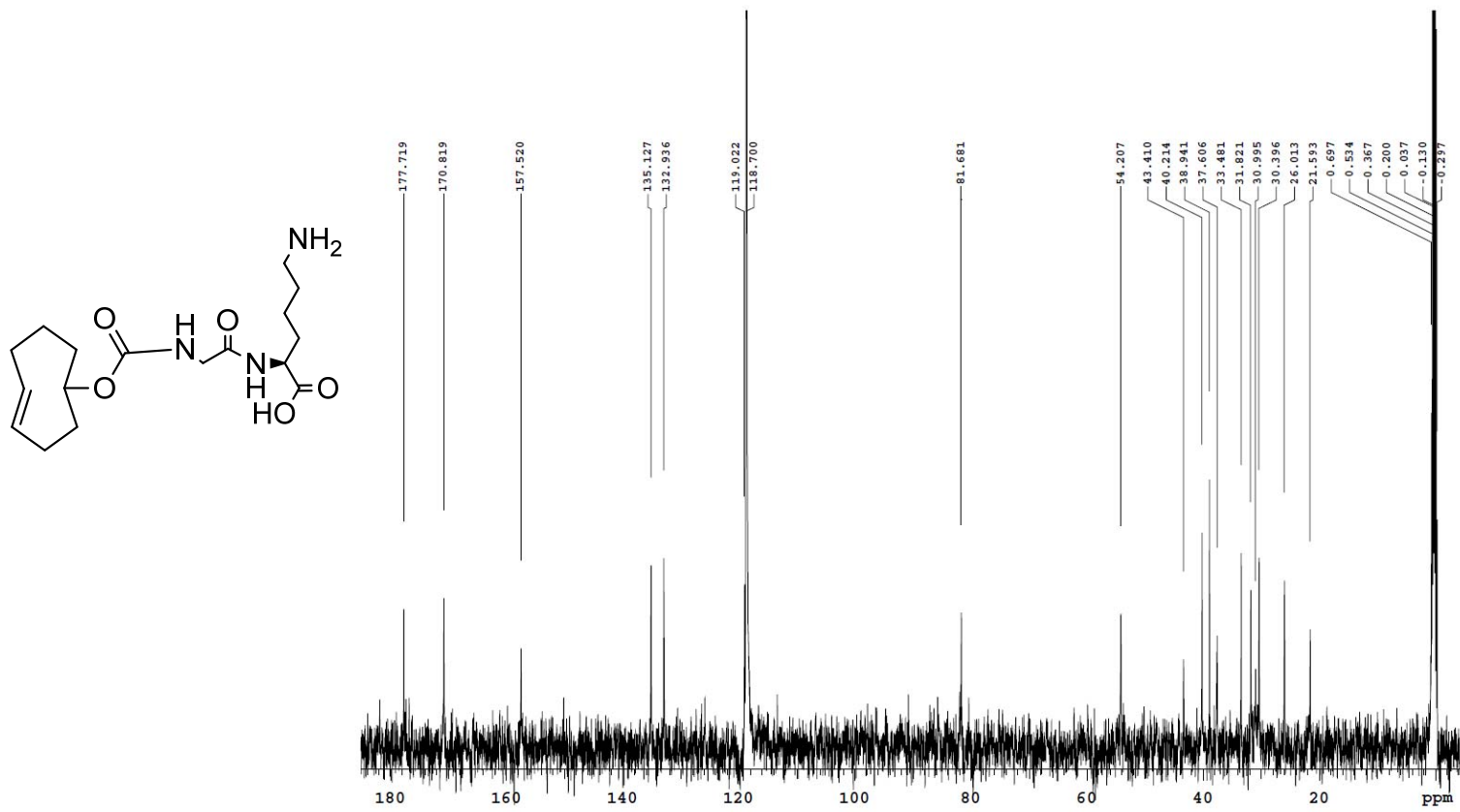


Figure S11. <sup>13</sup>C NMR spectra of compound 6

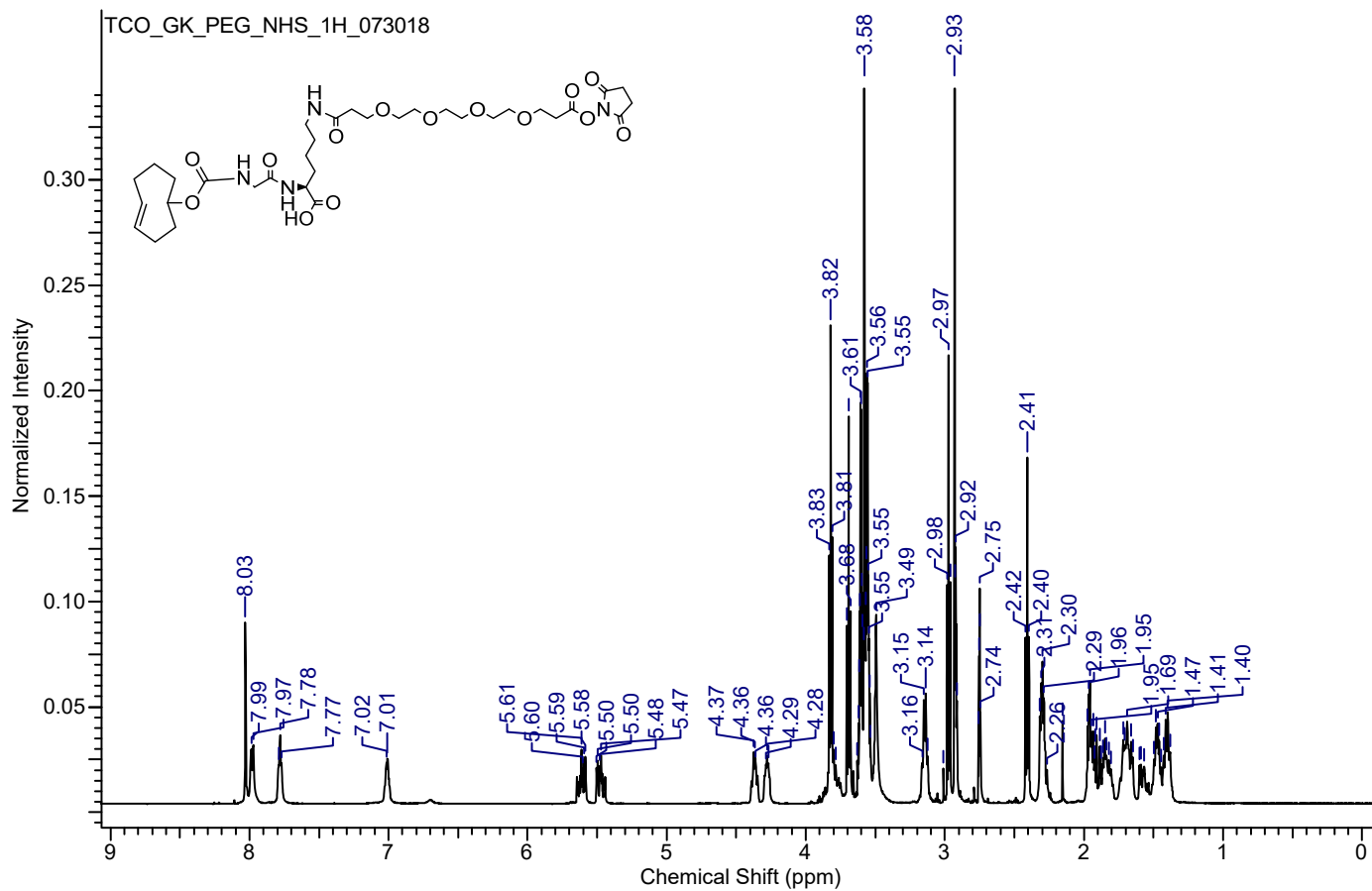


Figure S12. <sup>1</sup>H NMR spectra of compound 7

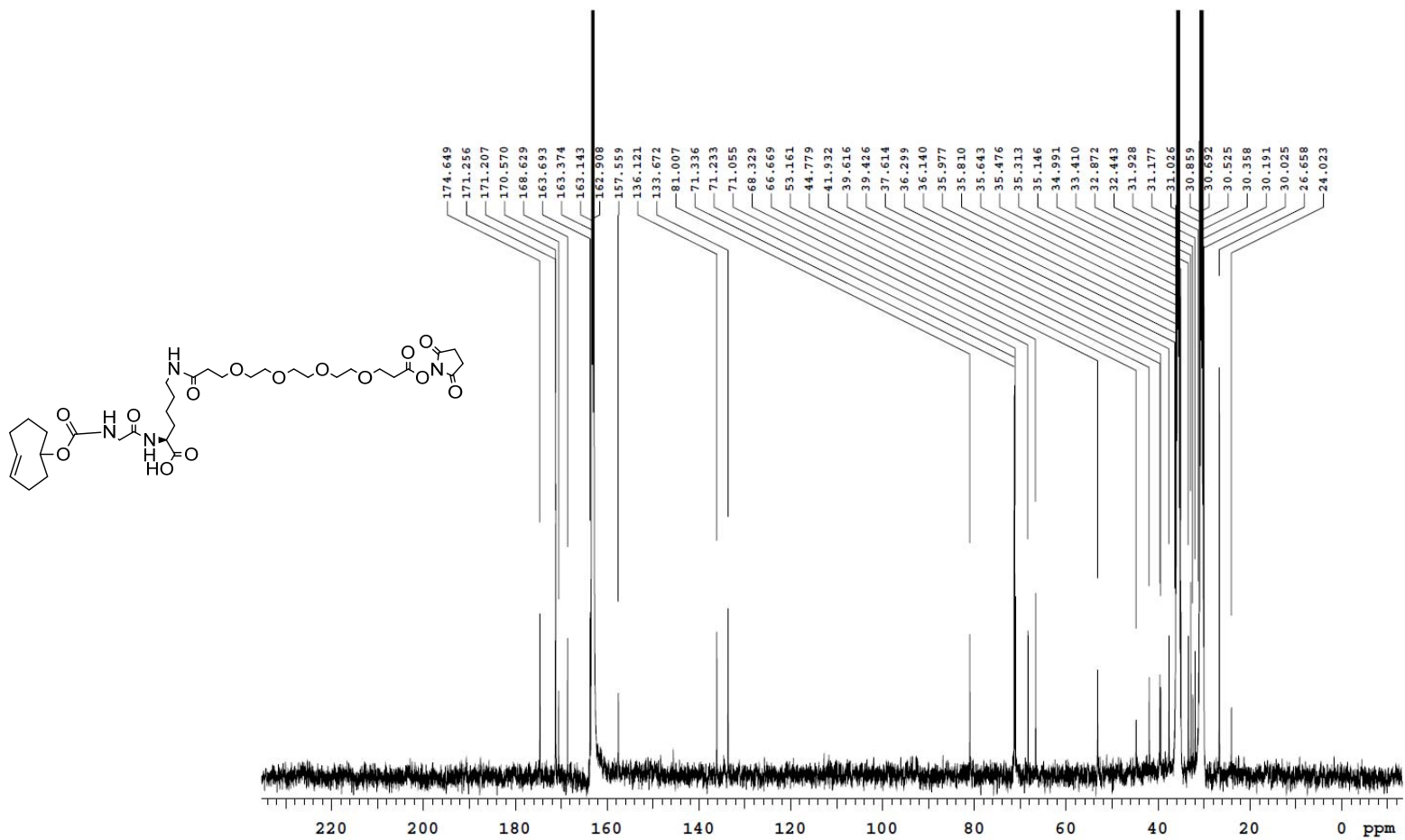


Figure S13. <sup>13</sup>C NMR spectra of compound 7

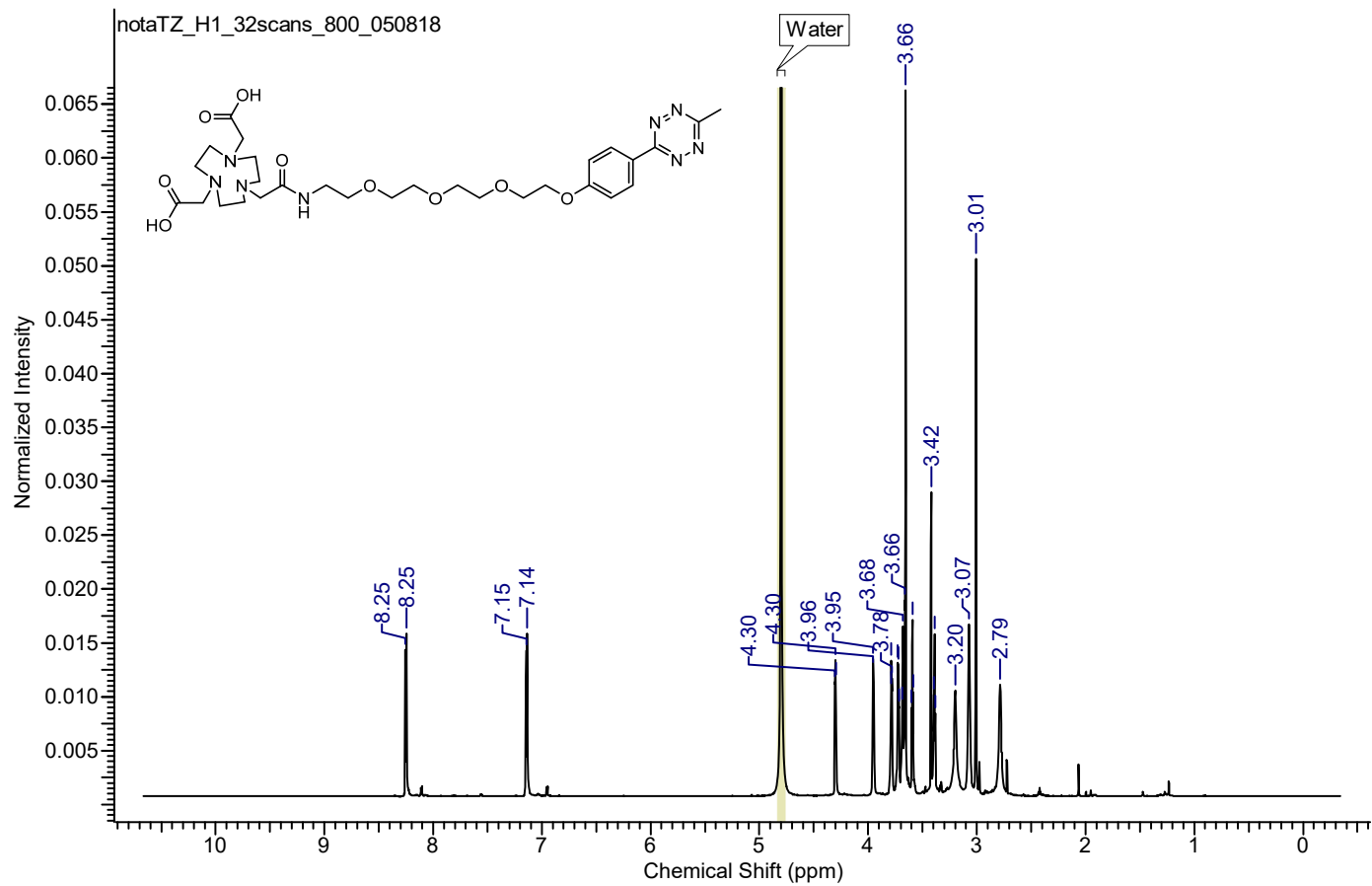


Figure S14.  $^1\text{H}$  NMR spectra of compound **10**



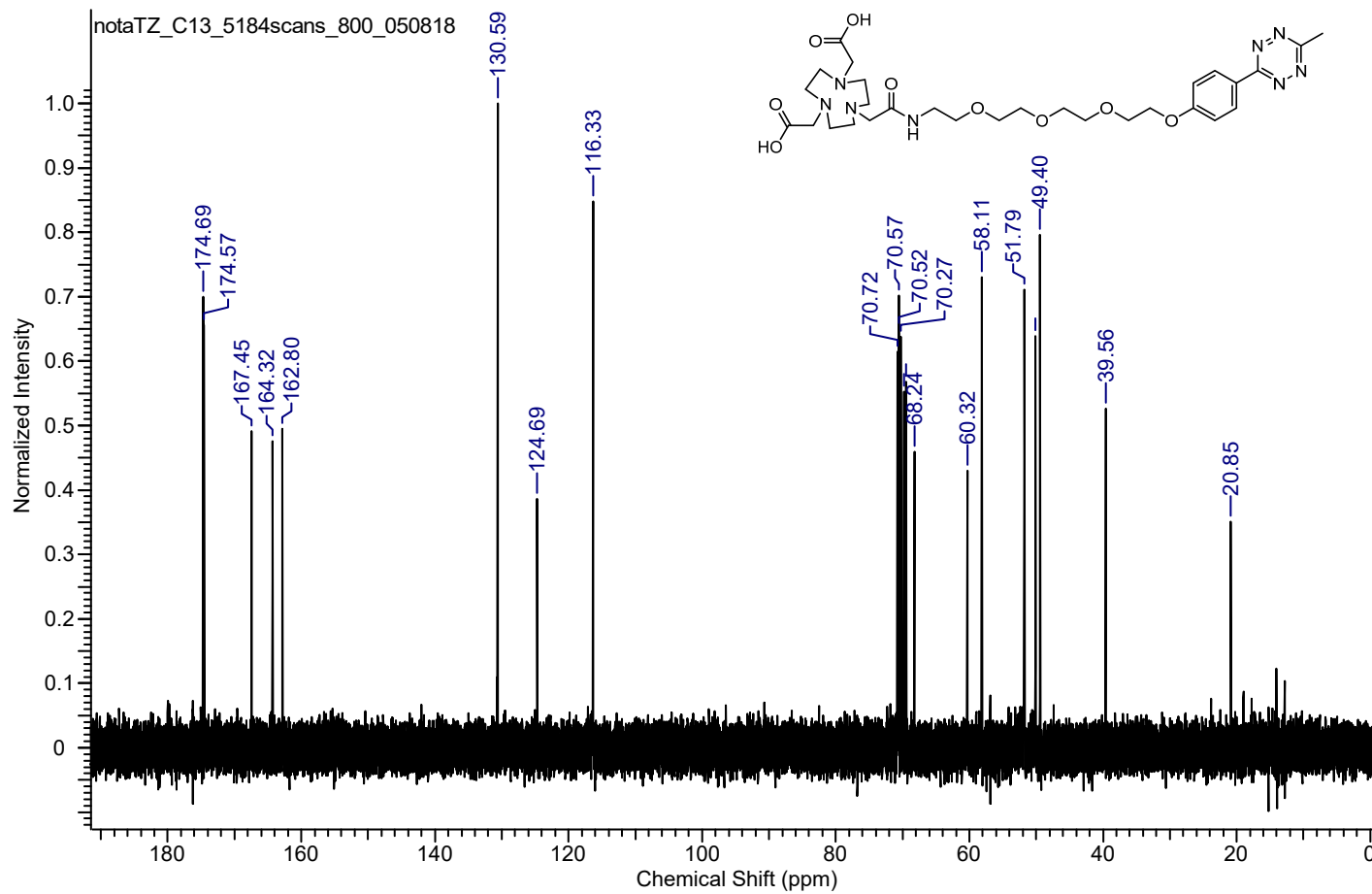


Figure S15.  $^{13}\text{C}$  NMR spectra of compound **10**