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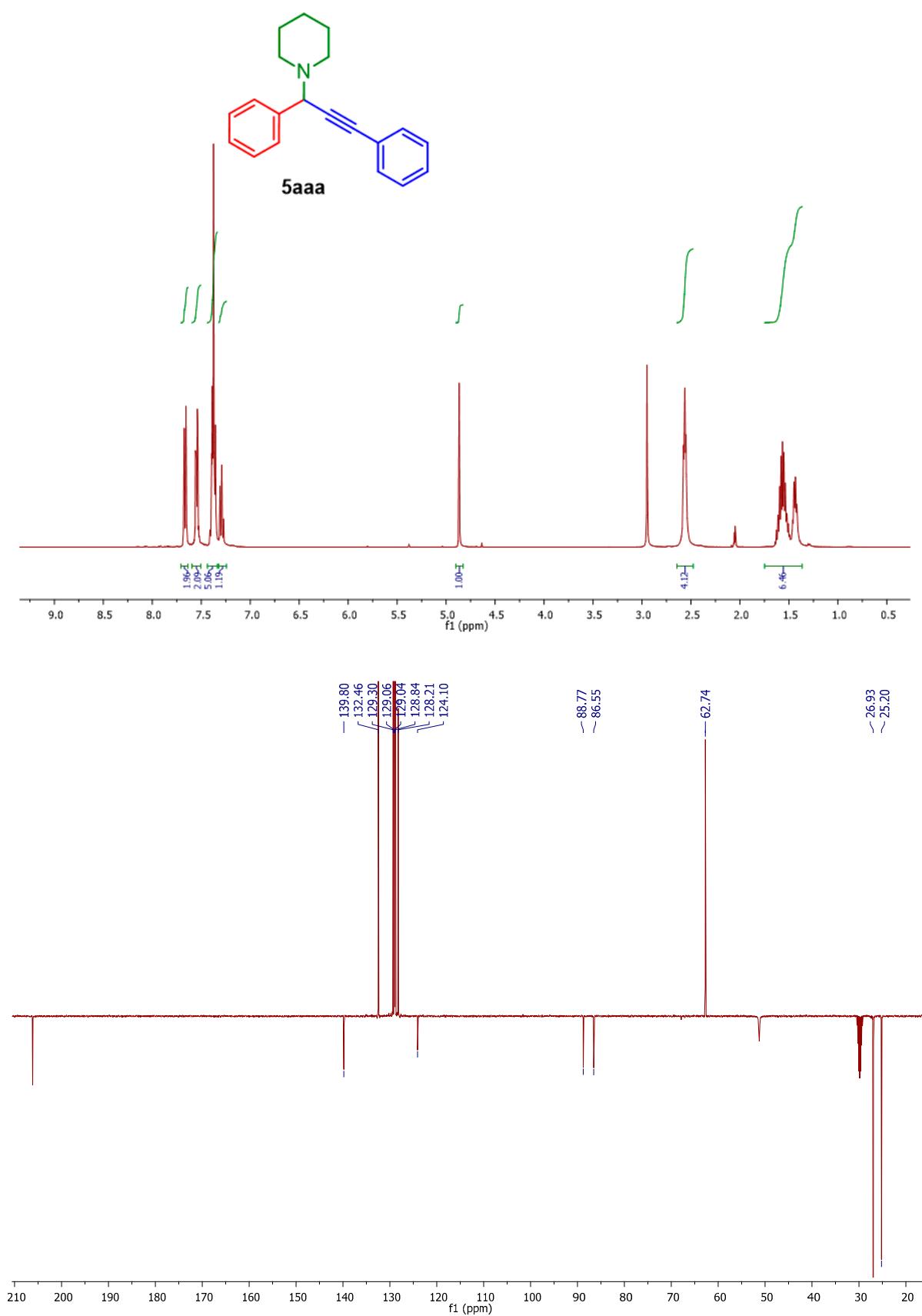
# Supplementary Materials: Unconventional Gold-Catalyzed One-Pot/Multicomponent Synthesis of Propargylamines Starting from Benzyl Alcohols

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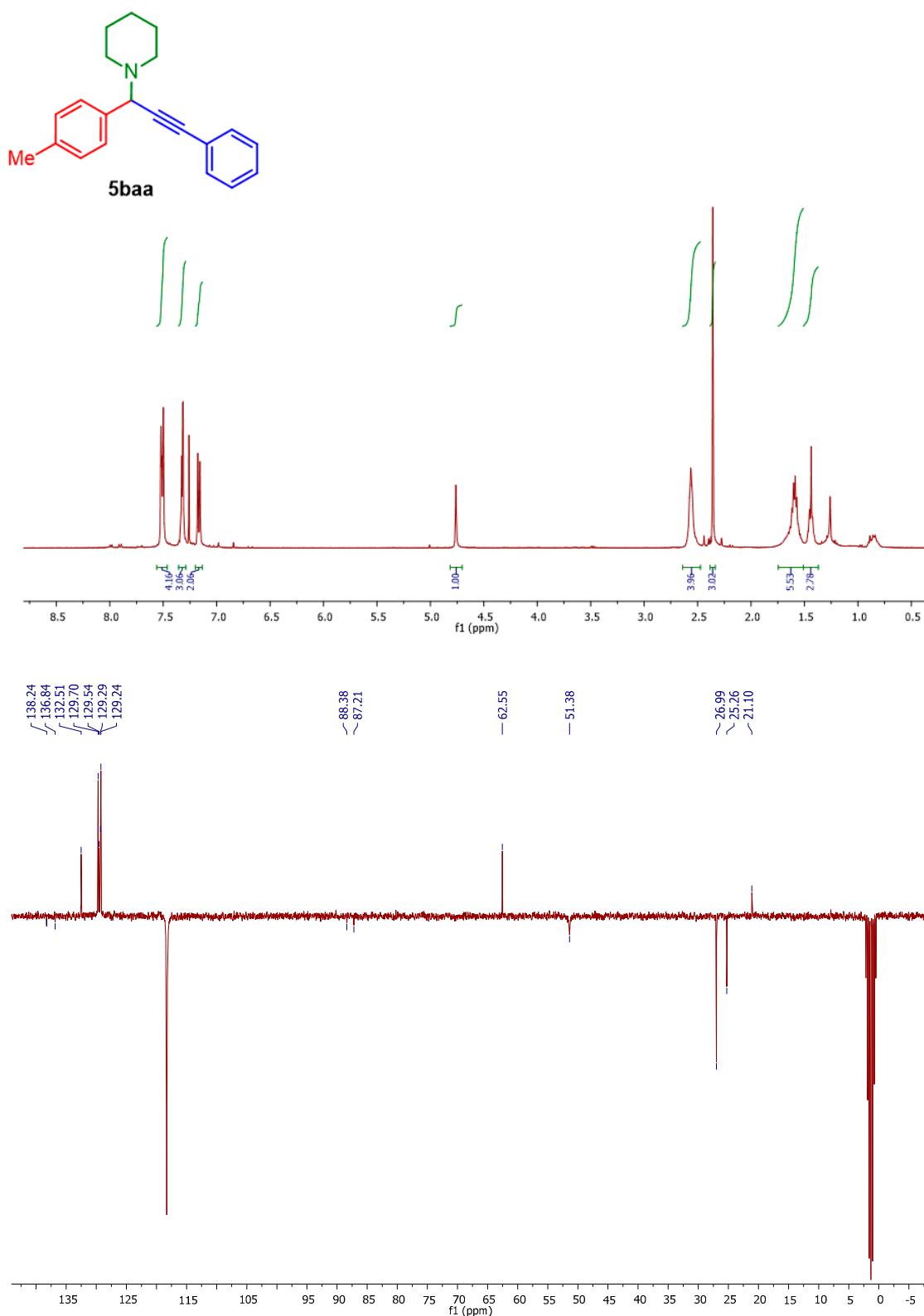
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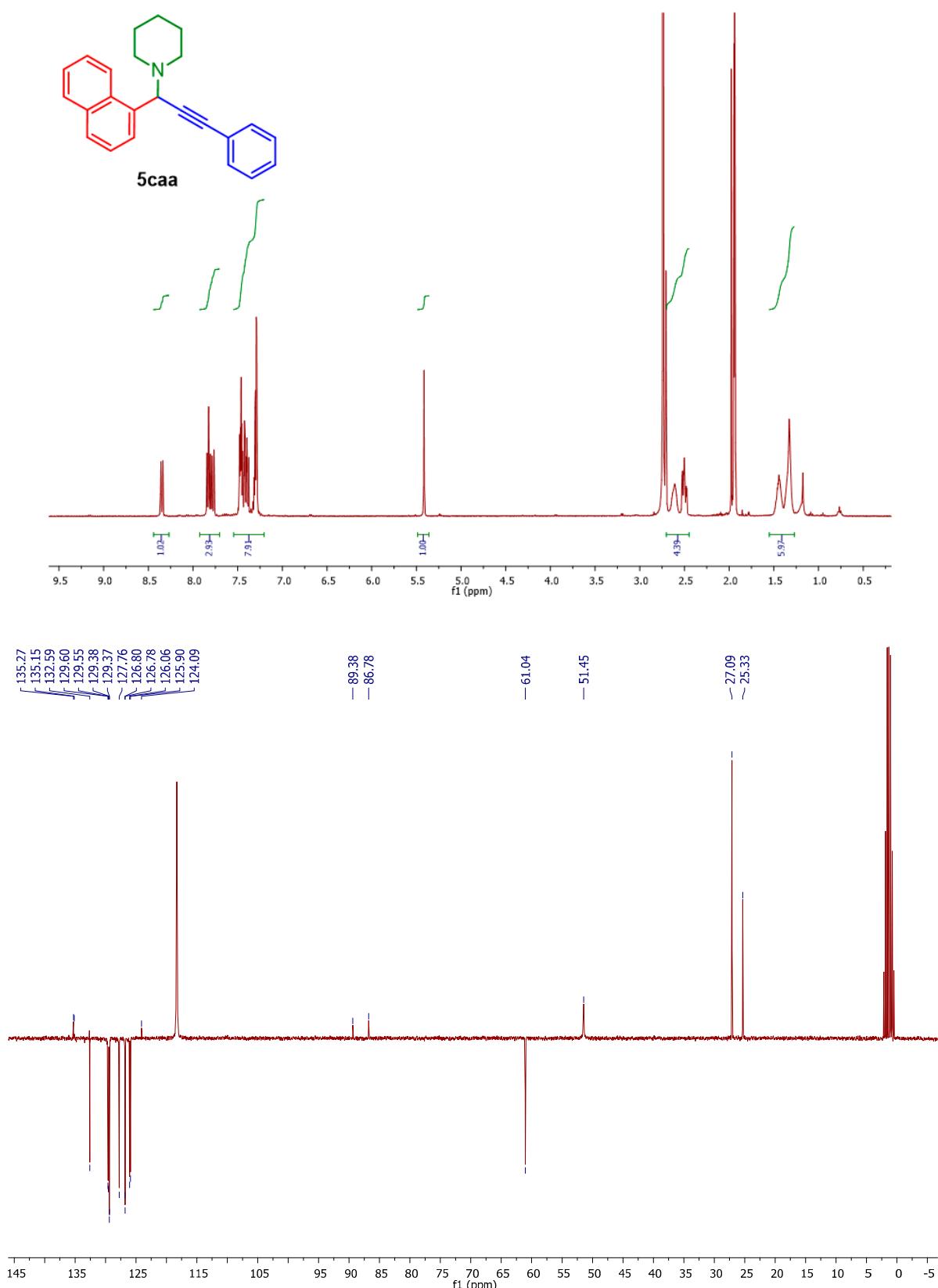
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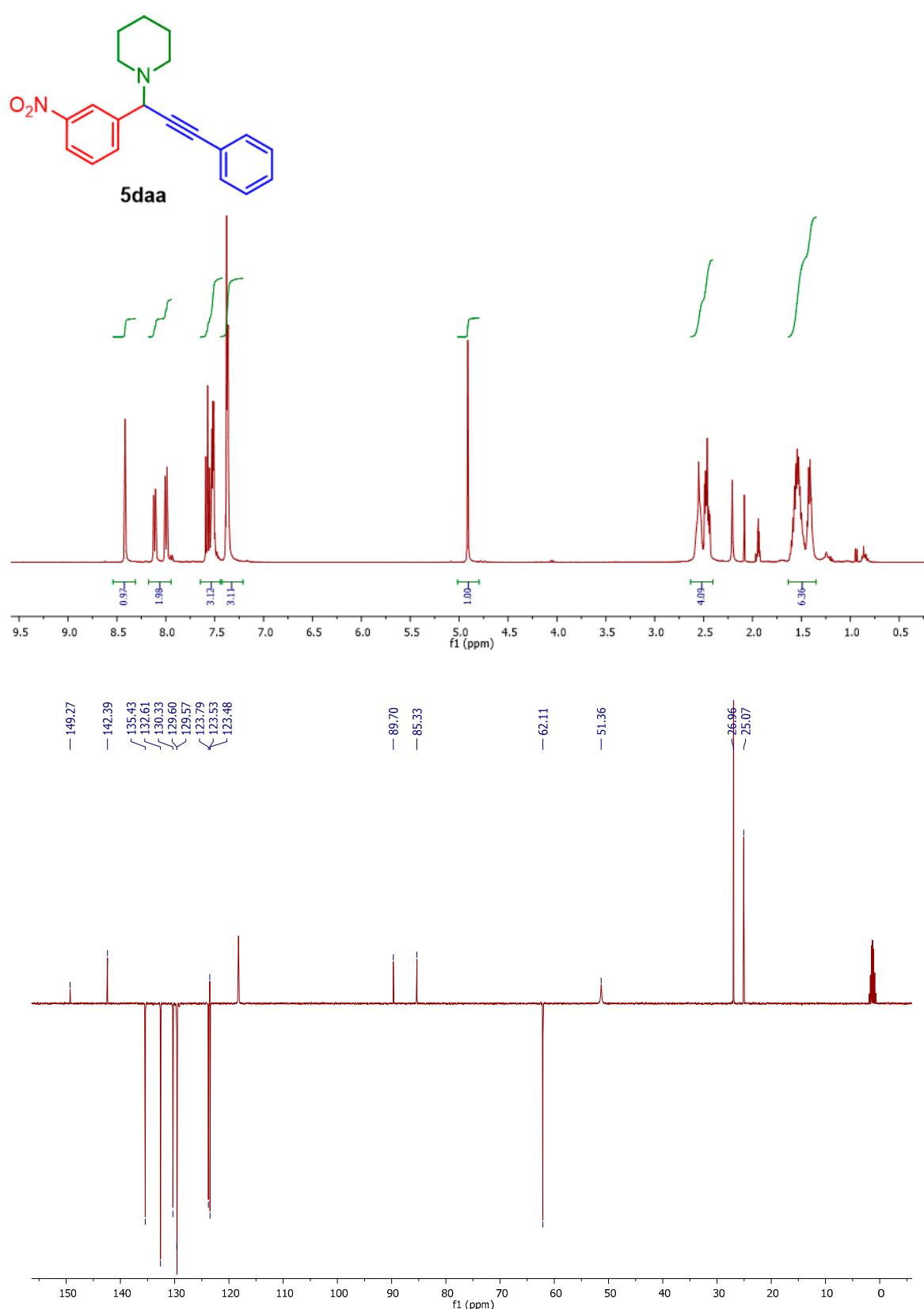
**Figure S1.** <sup>1</sup>H and <sup>13</sup>C-APT (CD<sub>3</sub>COCD<sub>3</sub>) NMR spectra of 1-(1,3-diphenylprop-2-ynyl)piperidine (**5aaa**).



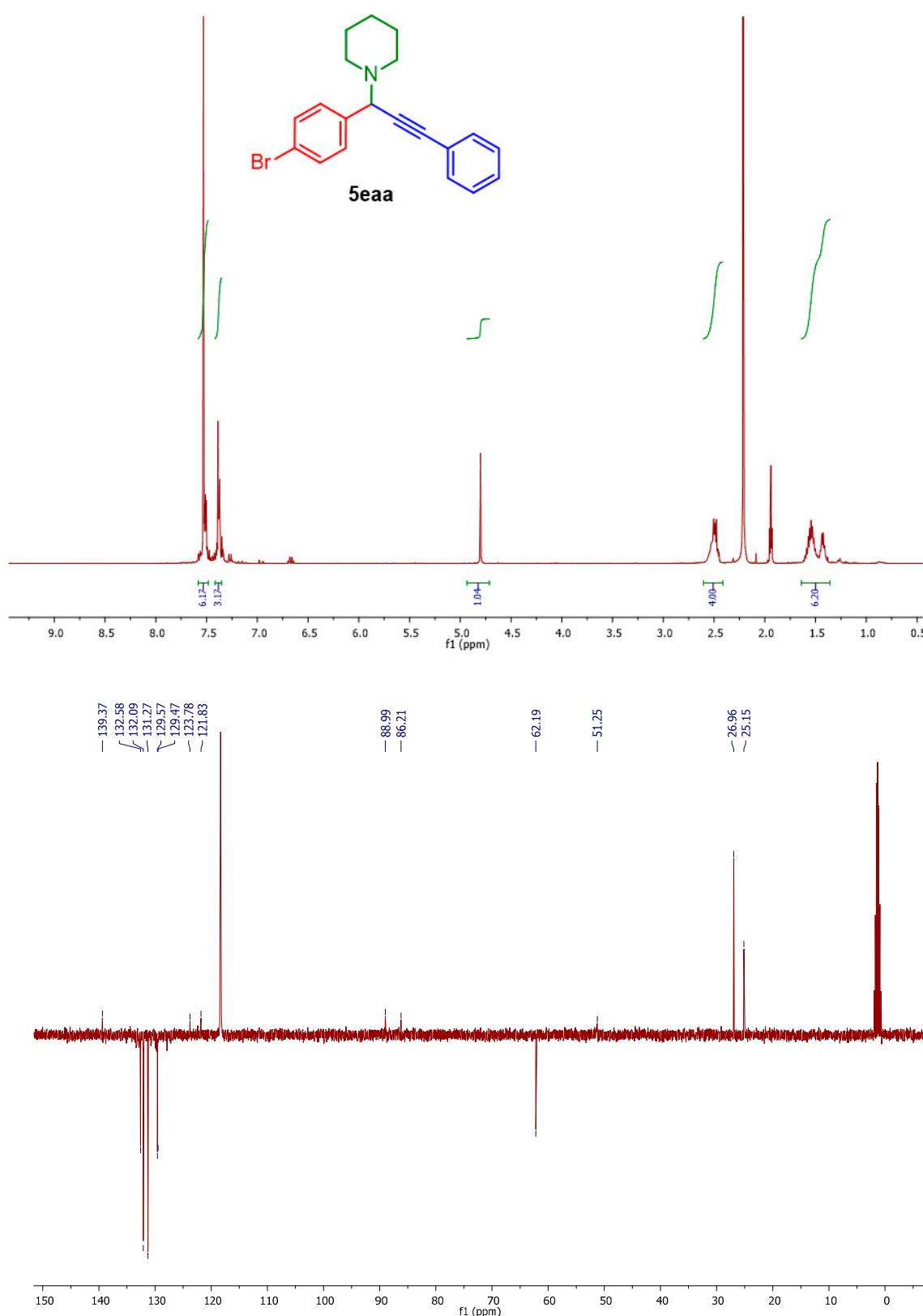
**Figure S2.** <sup>1</sup>H ( $\text{CDCl}_3$ ) and <sup>13</sup>C-APT ( $\text{CD}_3\text{CN}$ ) NMR spectra of 1-(3-phenyl-1-*p*-tolylprop-2-ynyl)piperidine (**5baa**).



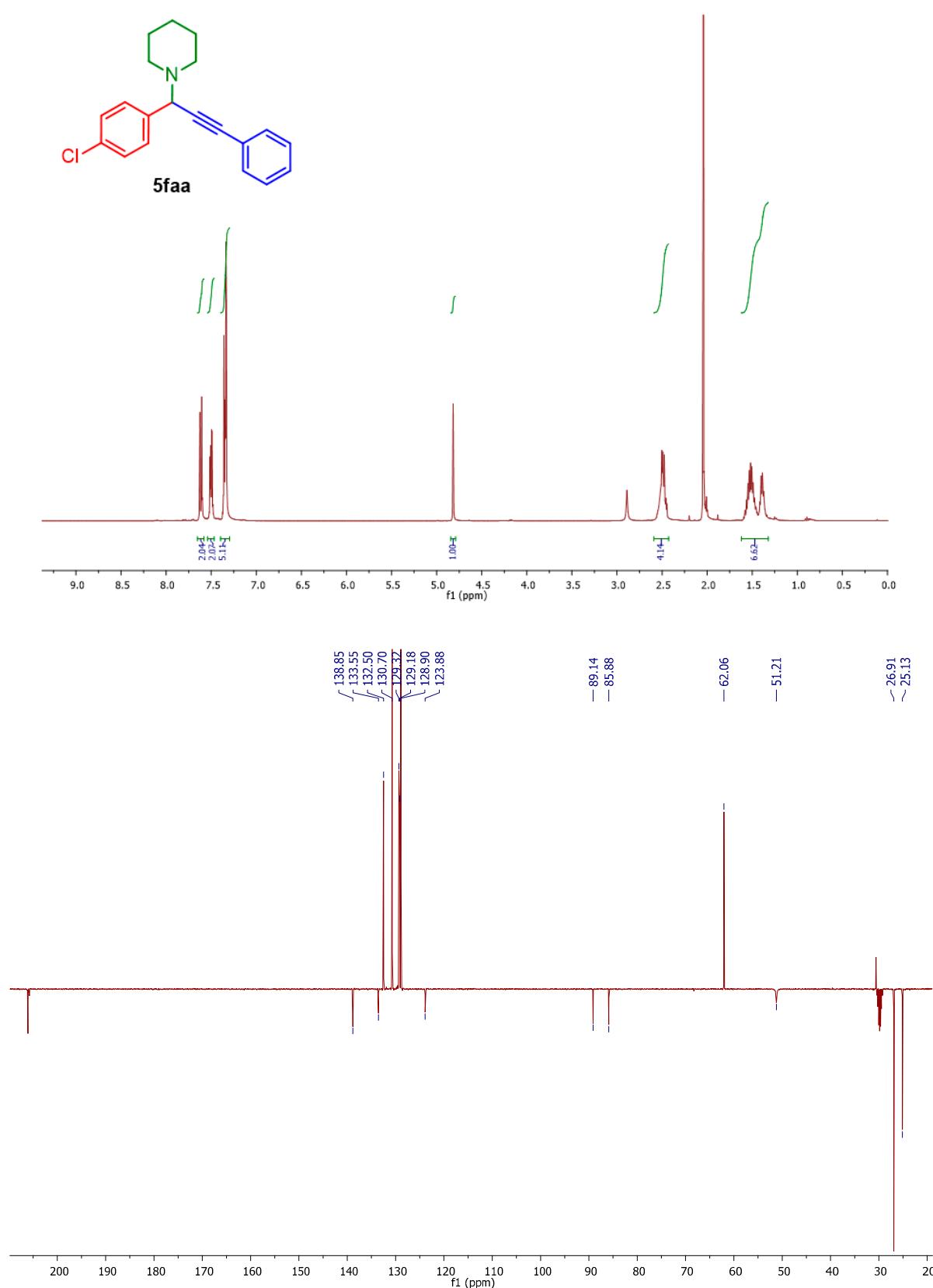
**Figure S3.** <sup>1</sup>H (CD<sub>3</sub>COCD<sub>3</sub>) and <sup>13</sup>C-APT (CD<sub>3</sub>CN) NMR spectra of 1-(1-(naphthalen-1-yl)-3-phenylprop-2-ynyl)piperidine (**5caa**).



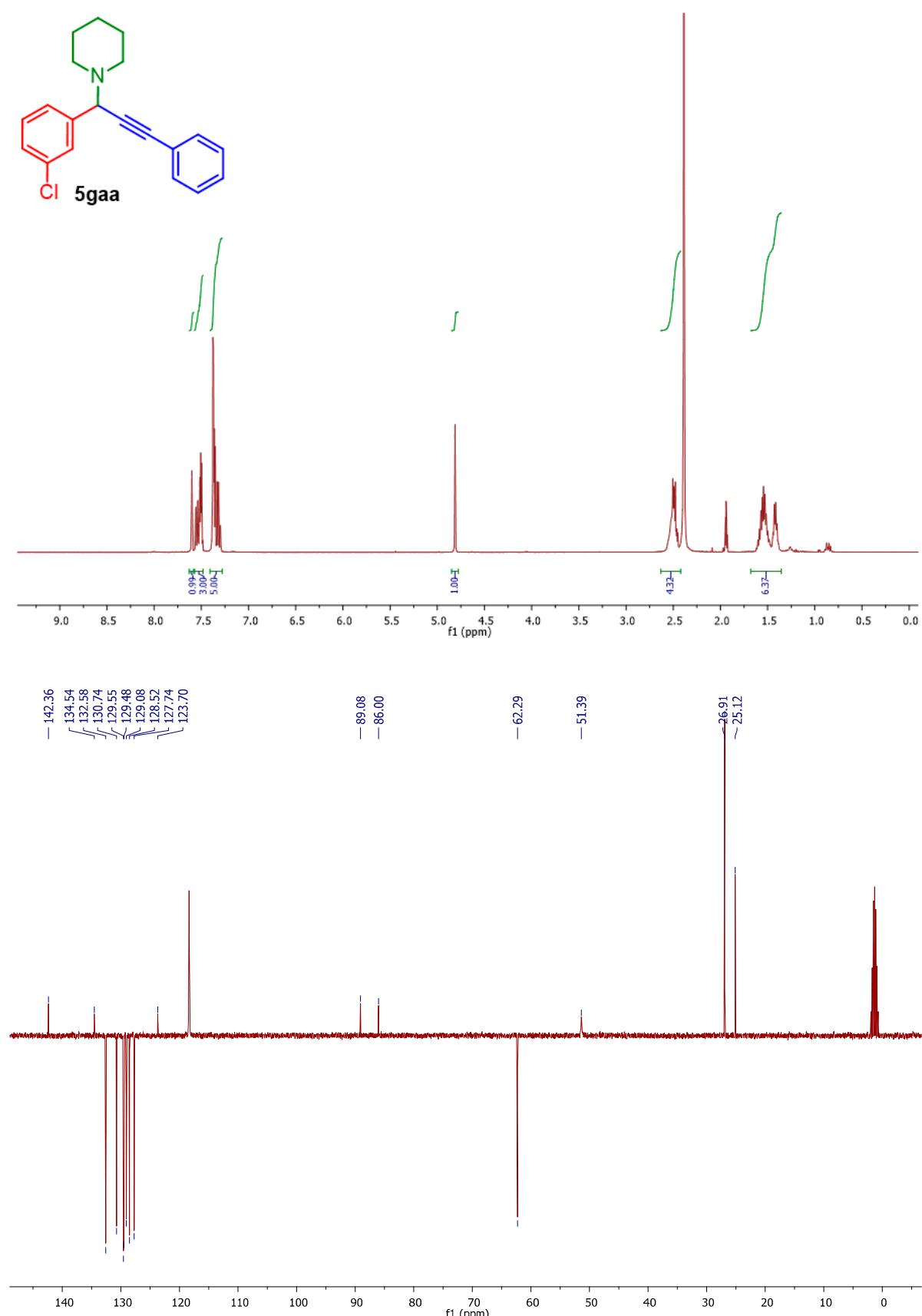
**Figure S4.** <sup>1</sup>H and <sup>13</sup>C-APT ( $\text{CD}_3\text{CN}$ ) NMR spectra of 1-(1-(3-nitrophenyl)-3-phenylprop-2-ynyl)piperidine (**5daa**).



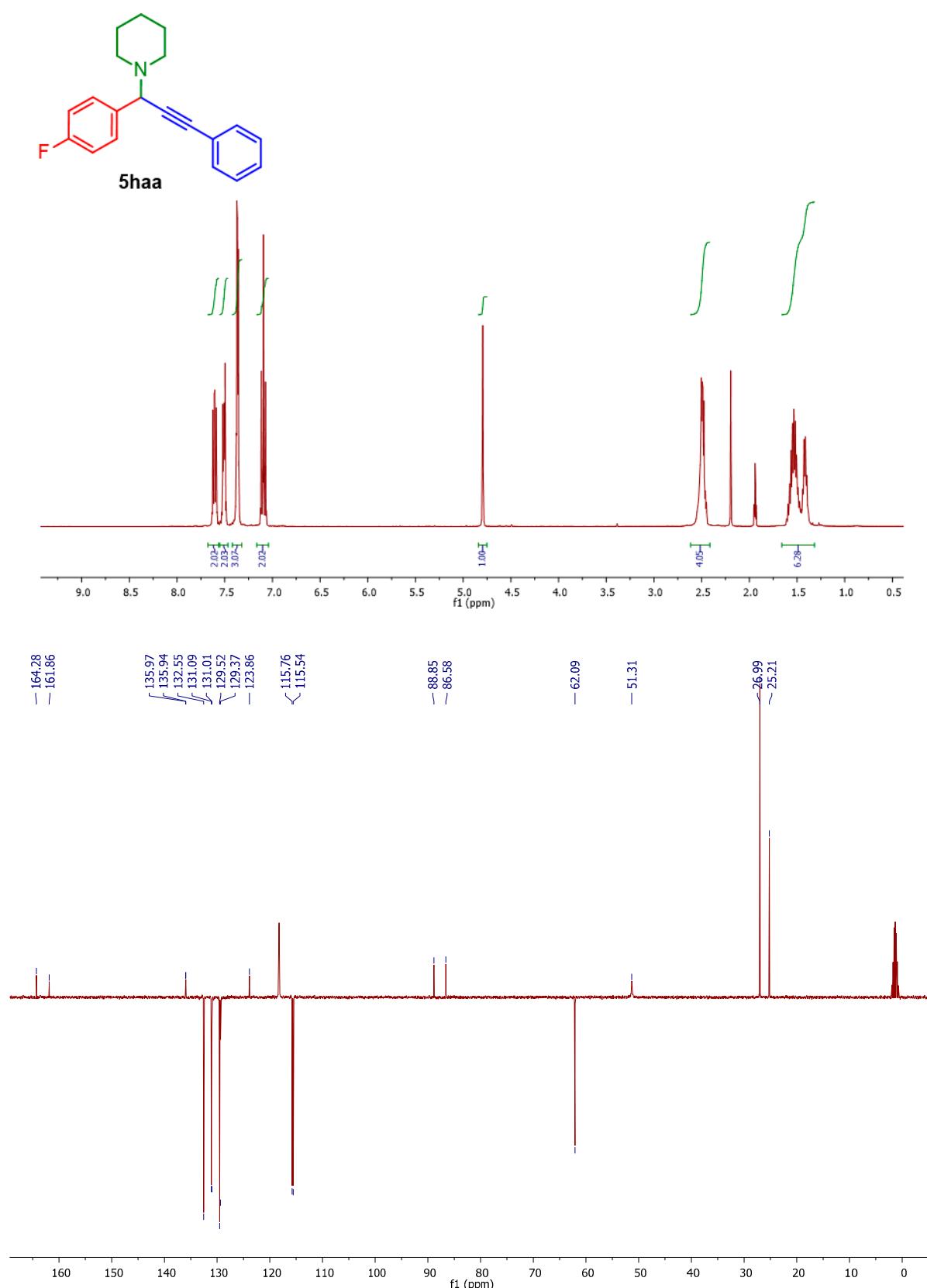
**Figure S5.** <sup>1</sup>H and <sup>13</sup>C-APT ( $\text{CD}_3\text{CN}$ ) NMR spectra of 1-(1-(4-bromophenyl)-3-phenylprop-2-ynyl)piperidine (**5eaa**).



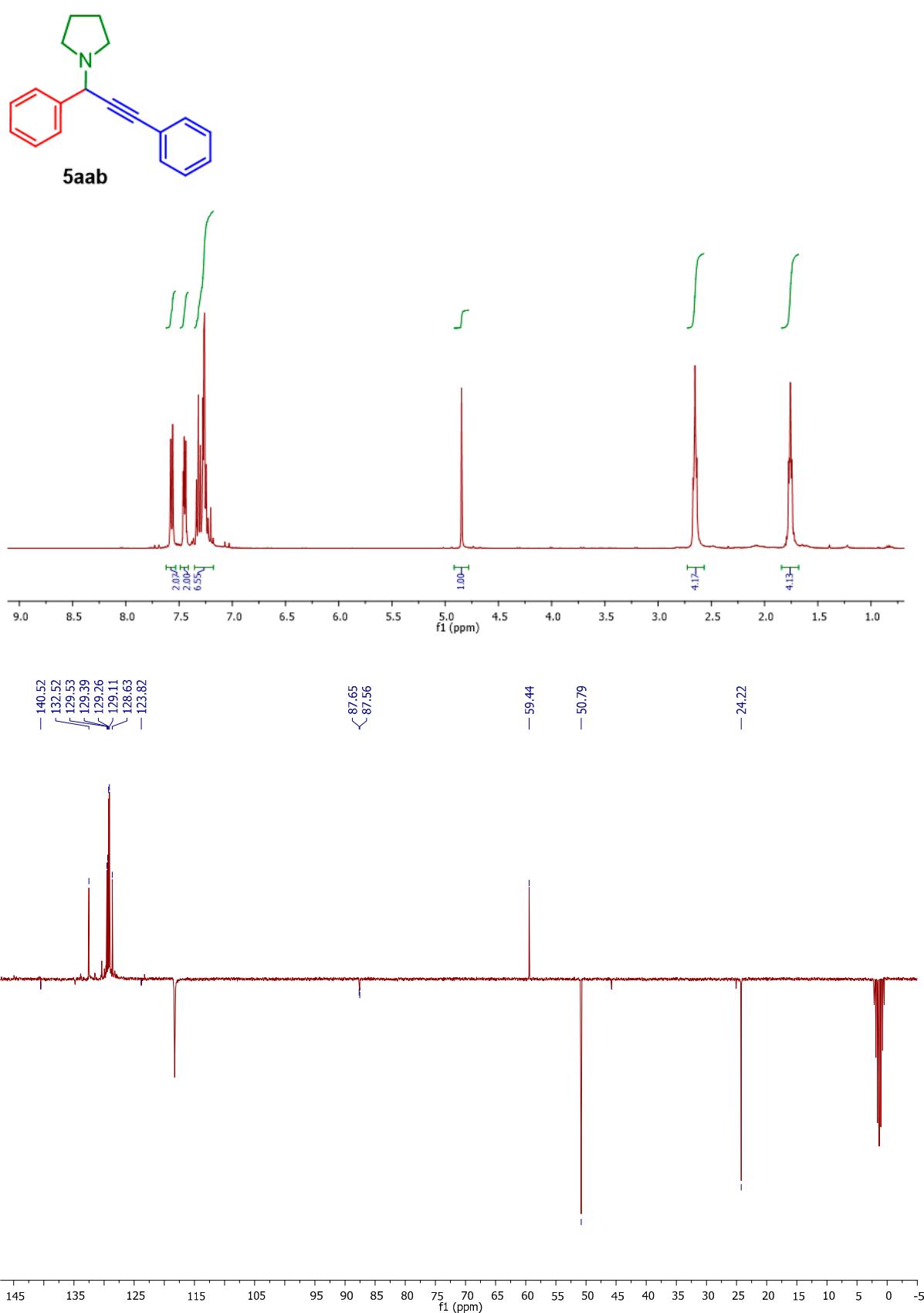
**Figure S6.**  $^1\text{H}$  and  $^{13}\text{C}$ -APT ( $\text{CD}_3\text{COCD}_3$ ) NMR spectra of 1-(1-(4-chlorophenyl)-3-phenylprop-2-ynyl)piperidine (**5faa**).



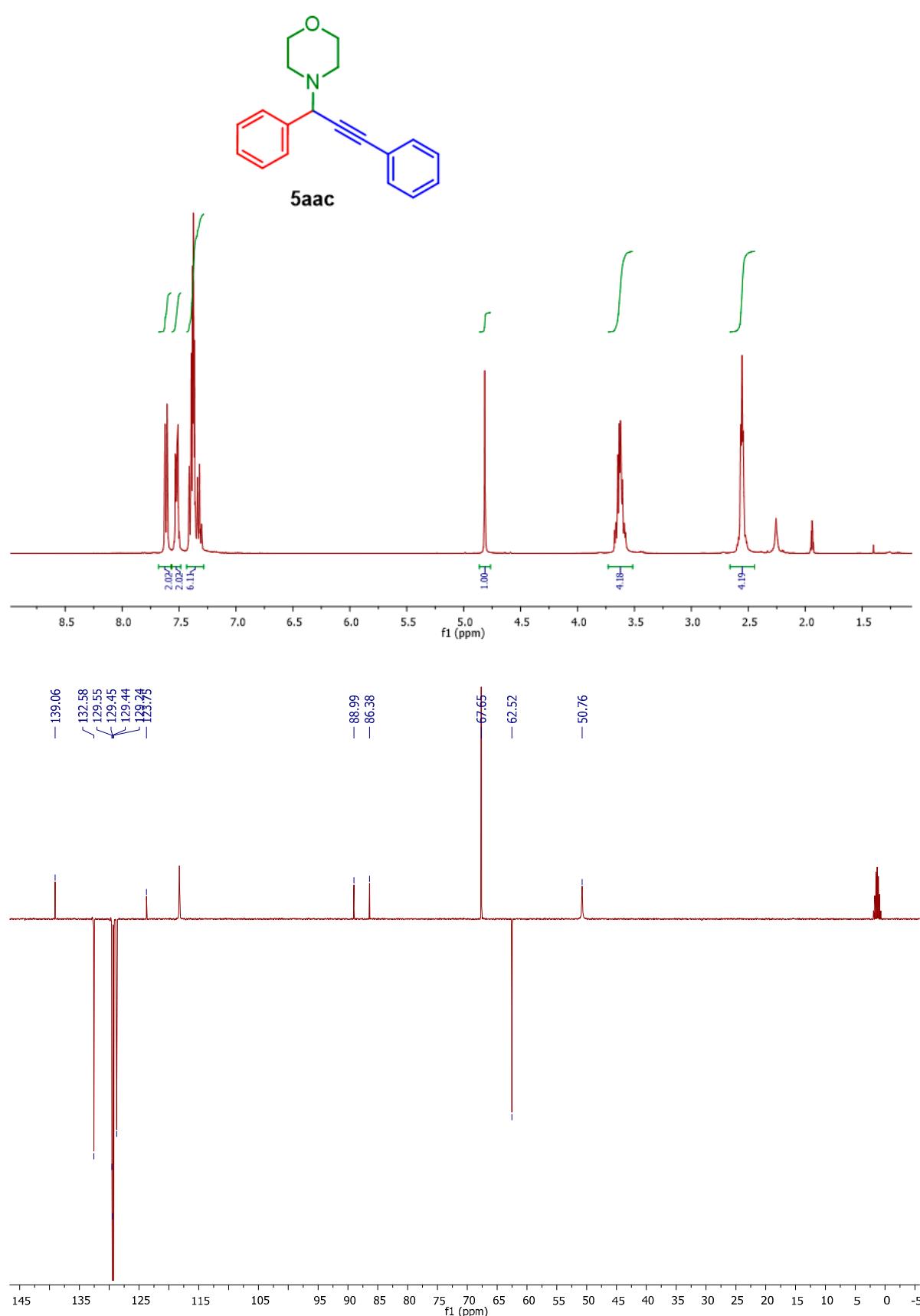
**Figure S7.** <sup>1</sup>H and <sup>13</sup>C-APT (CD<sub>3</sub>CN) NMR spectra of 1-(1-(3-chlorophenyl)-3-phenylprop-2-ynyl)piperidine (**5gaa**).



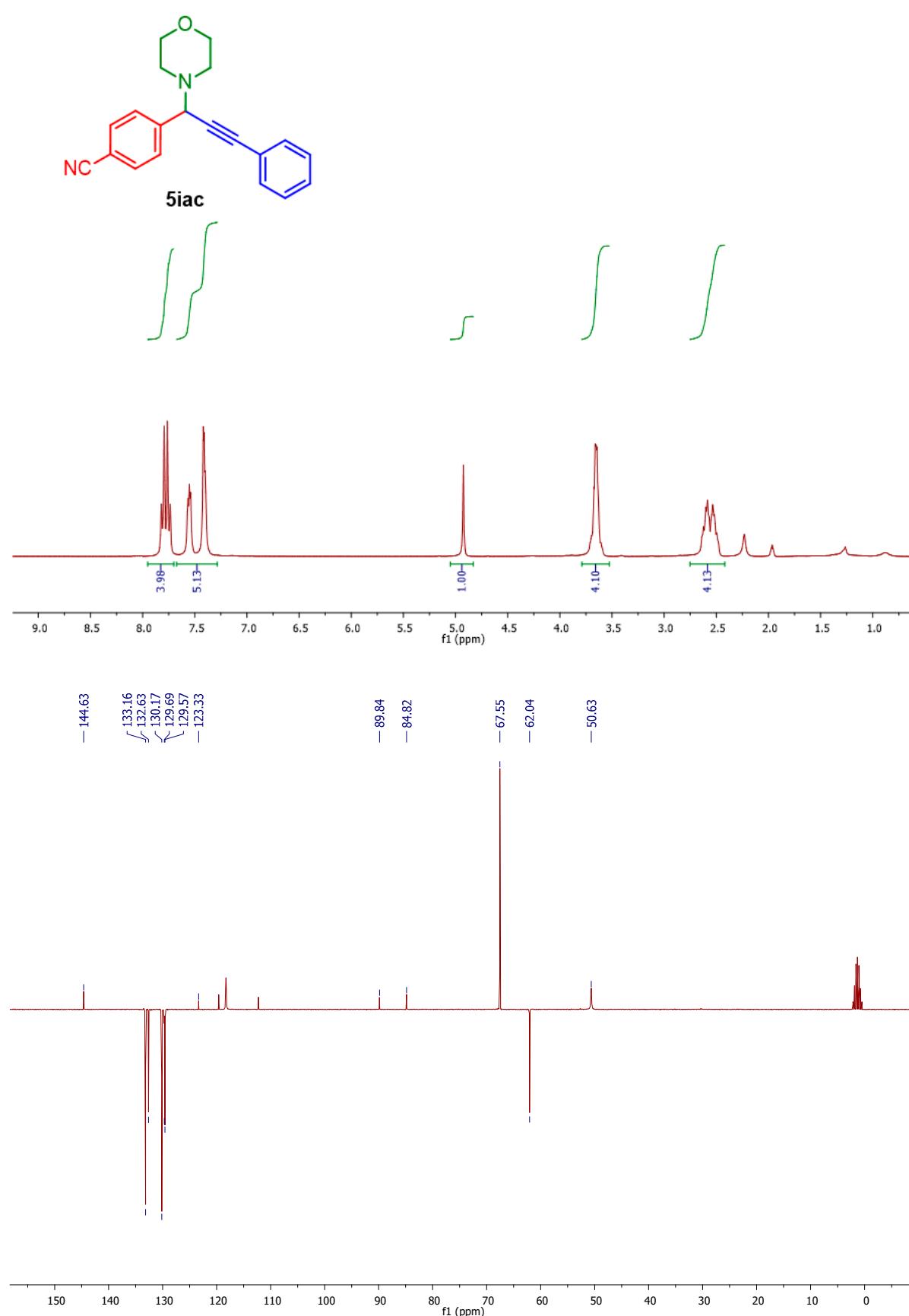
**Figure S8.** <sup>1</sup>H and <sup>13</sup>C-APT ( $\text{CD}_3\text{CN}$ ) NMR spectra of 1-(1-(4-fluorophenyl)-3-phenylprop-2-ynyl)piperidine (**5haa**).



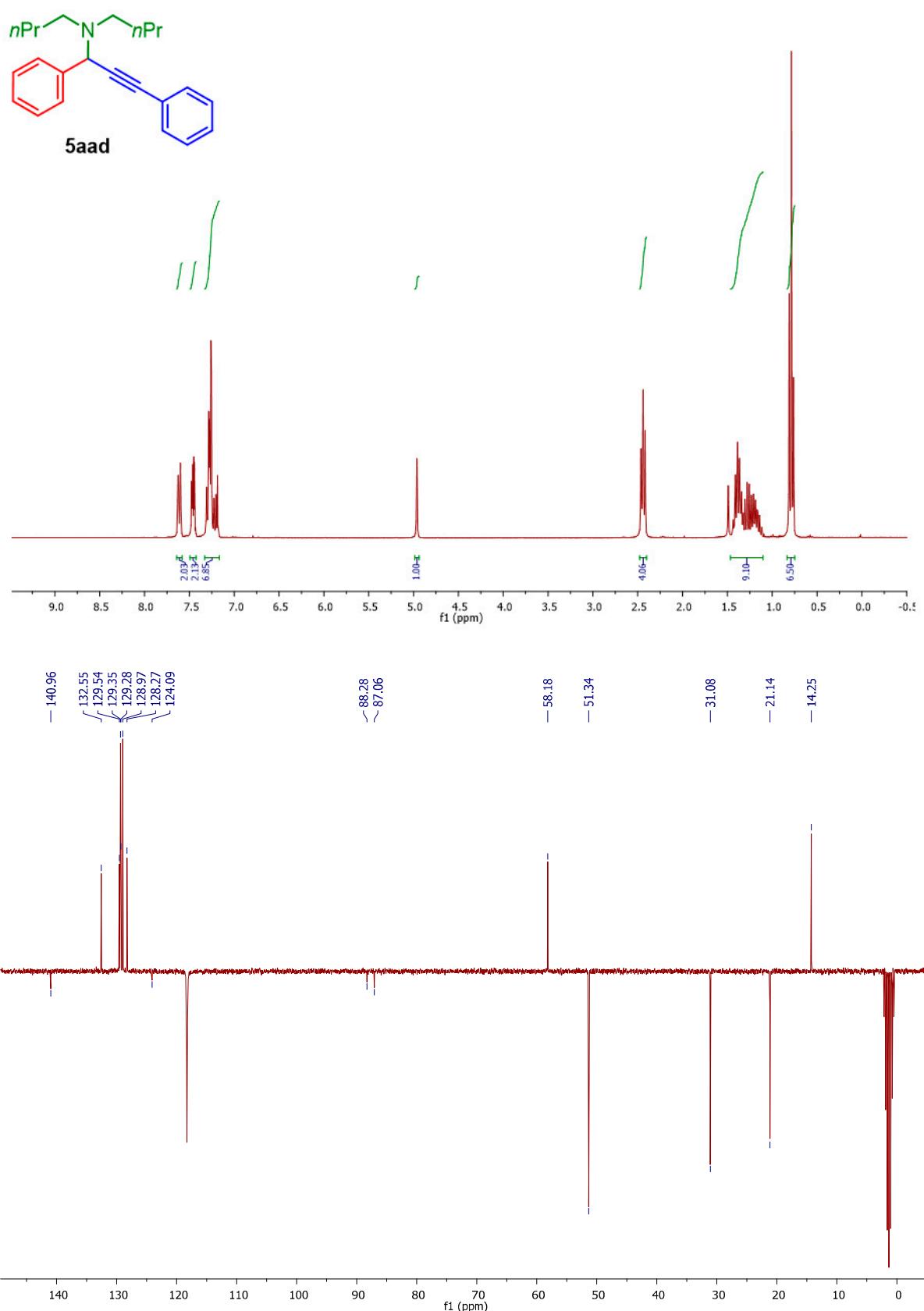
**Figure S9.**  $^1\text{H}$  ( $\text{CDCl}_3$ ) and  $^{13}\text{C}$ -APT ( $\text{CD}_3\text{CN}$ ) NMR spectra of 1-(1,3-diphenylprop-2-ynyl)pyrrolidine (**5aab**).



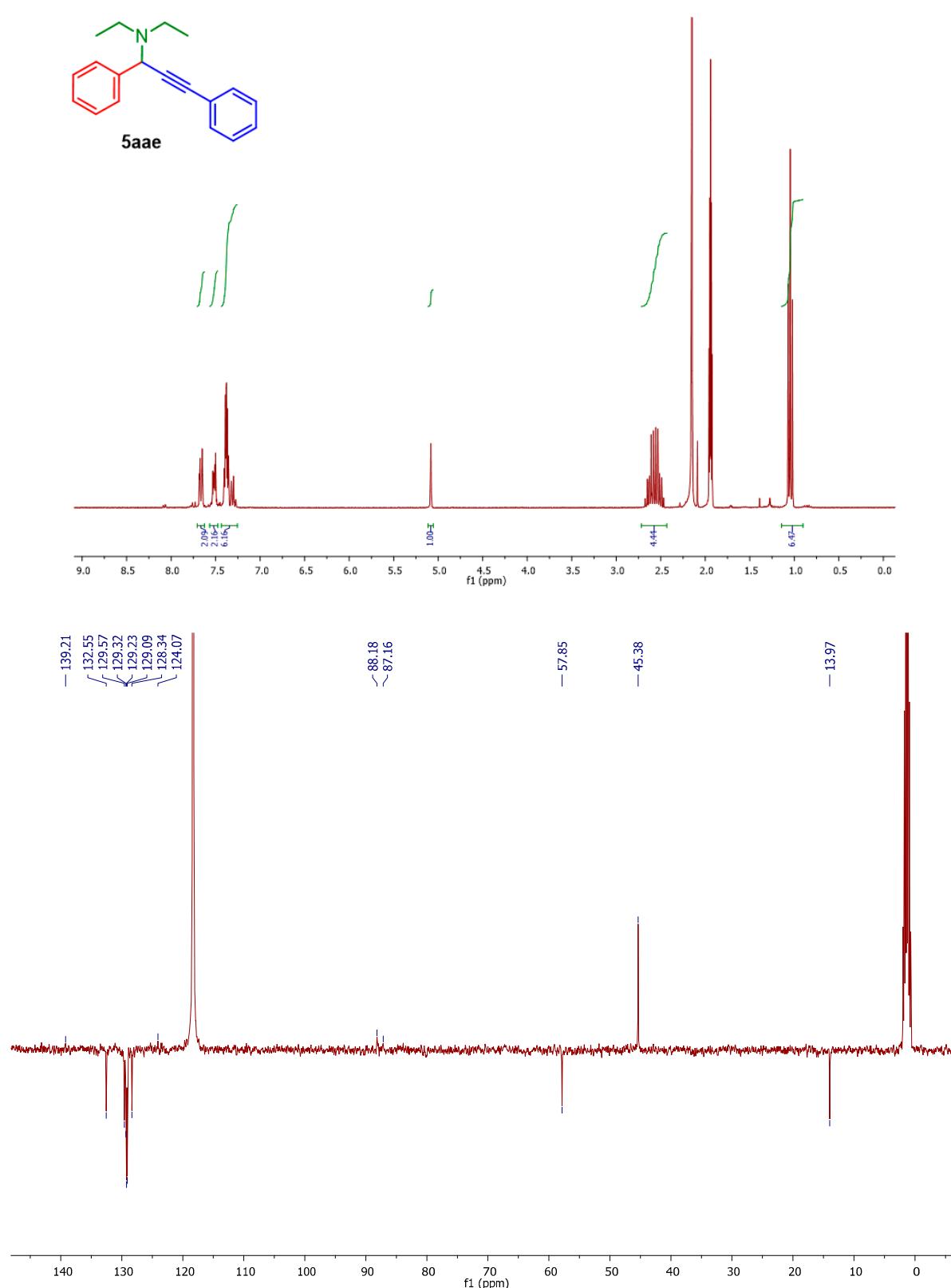
**Figure S10.**  $^1\text{H}$  and  $^{13}\text{C}$ -APT ( $\text{CD}_3\text{CN}$ ) NMR spectra of 4-(1,3-diphenylprop-2-ynyl)morpholine (**5aac**).



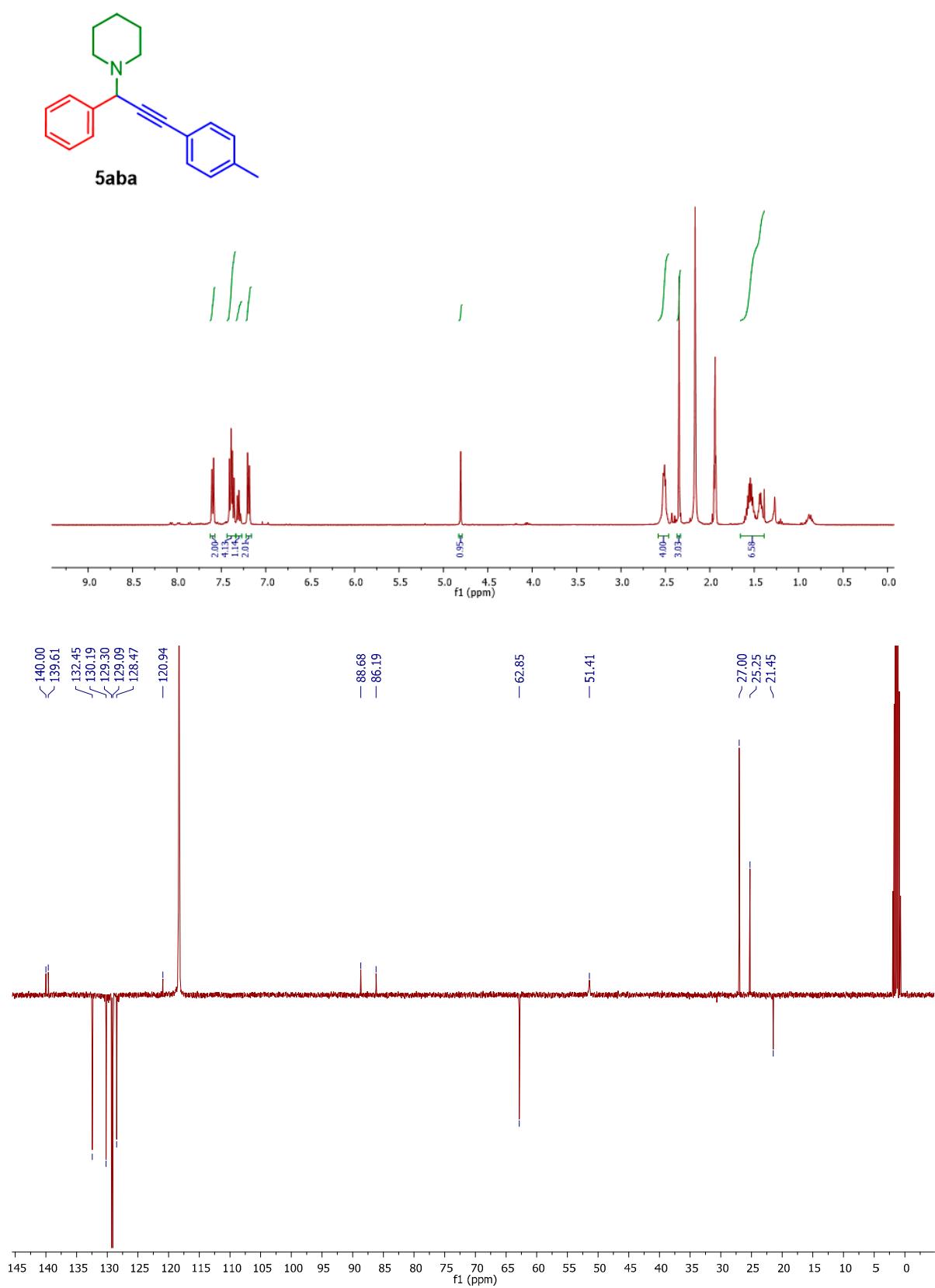
**Figure S11.** <sup>1</sup>H and <sup>13</sup>C-APT ( $\text{CD}_3\text{CN}$ ) NMR spectra of 4-(1-morpholino-3-phenylprop-2-yn-1-yl)benzonitrile (**5iac**).



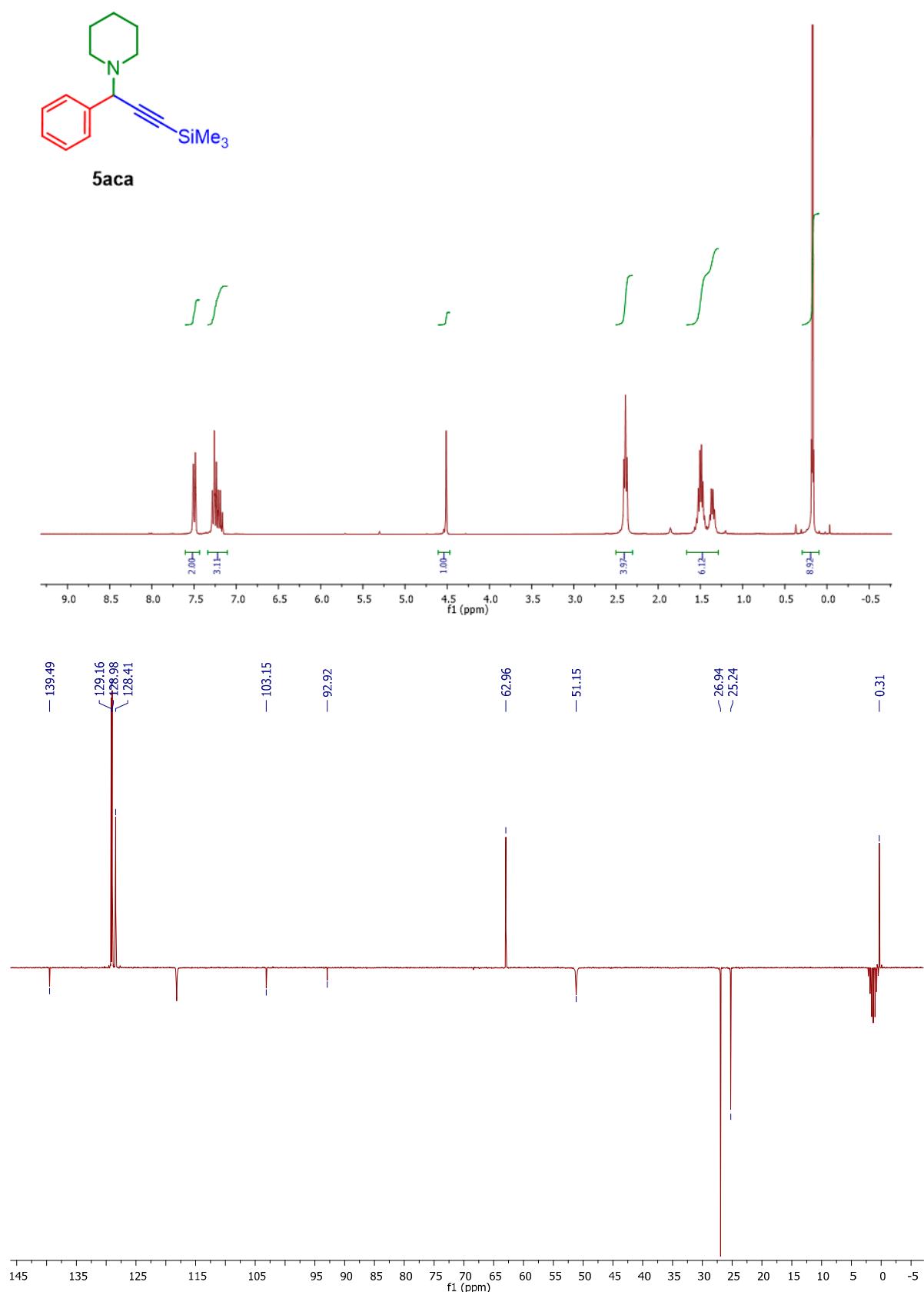
**Figure S12.**  $^1\text{H}$  ( $\text{CDCl}_3$ ) and  $^{13}\text{C}$ -APT ( $\text{CD}_3\text{CN}$ ) NMR spectra of N-butyl-N-(1,3-diphenylprop-2-ynyl)butan-1-amine (**5aad**).



**Figure S13.**  $^1\text{H}$  and  $^{13}\text{C}$ -APT ( $\text{CD}_3\text{CN}$ ) NMR spectra of *N,N*-diethyl-1,3-diphenylprop-2-yn-1-amine (**5aae**).



**Figure S14.**  $^1\text{H}$  and  $^{13}\text{C}$ -APT ( $\text{CD}_3\text{CN}$ ) NMR spectra of 1-(1-phenyl-3-p-tolylprop-2-ynyl)piperidine (**5aba**).



**Figure S15.** <sup>1</sup>H (CDCl<sub>3</sub>) and <sup>13</sup>C-APT (CD<sub>3</sub>CN) NMR spectra of 1-(1-phenyl-3-(trimethylsilyl)prop-2-ynyl)piperidine (**5aca**).