

(Diisopinocampheyl)borane-Mediated Reductive Aldol Reactions of Acrylate Esters: Enantioselective Synthesis of *Anti*-Aldols

Christophe Allais[‡], Philippe Nuhant[‡] and William R. Roush.*

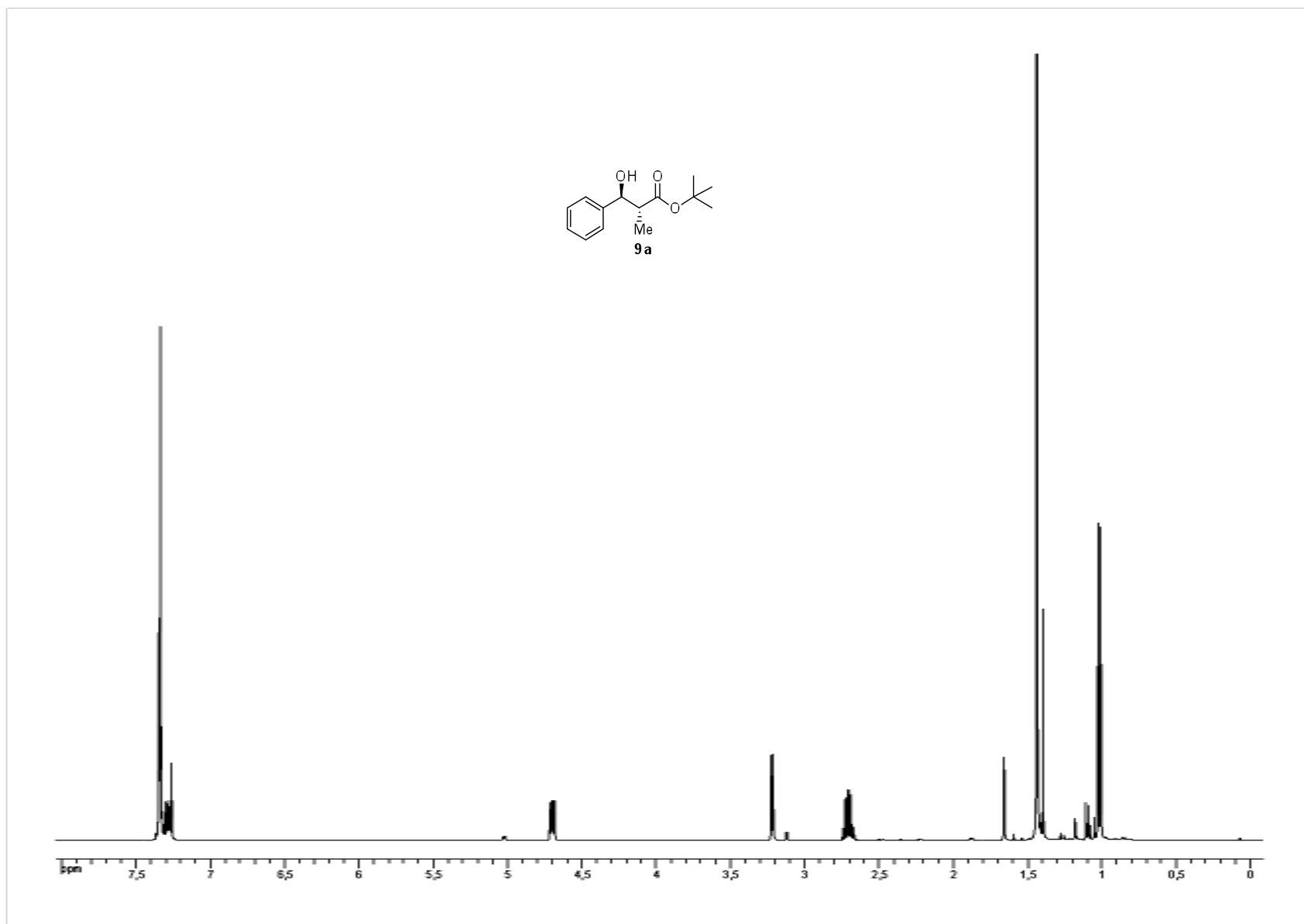
Department of Chemistry, Scripps Florida, Jupiter, Florida 33458

*E-mail: roush@scripps.edu

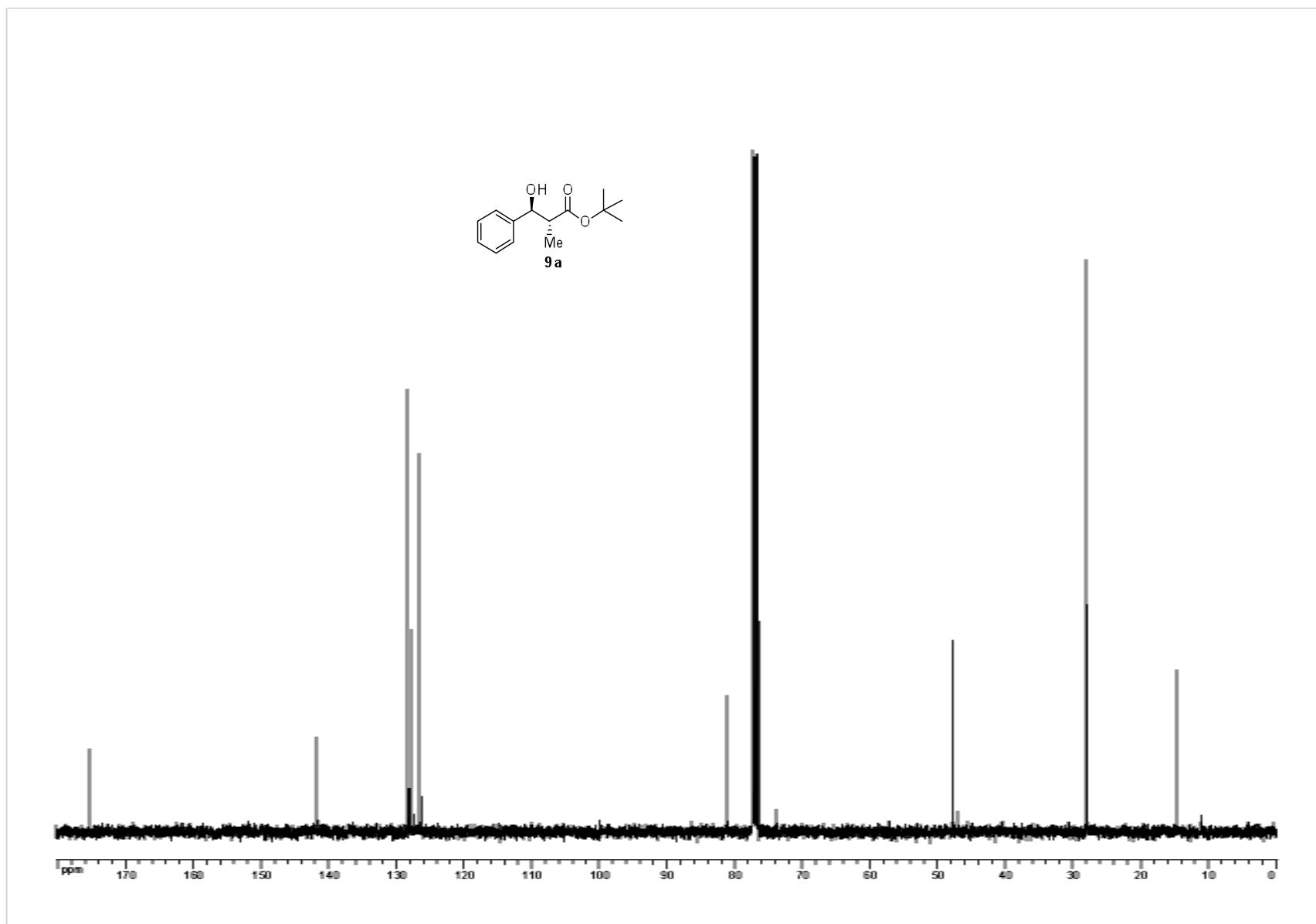
[‡]These authors equally contributed.

SUPPORTING INFORMATION – ¹H and ¹³C Spectra for compounds **9a-n, **10a-e,k,l** and **11a,b**.**

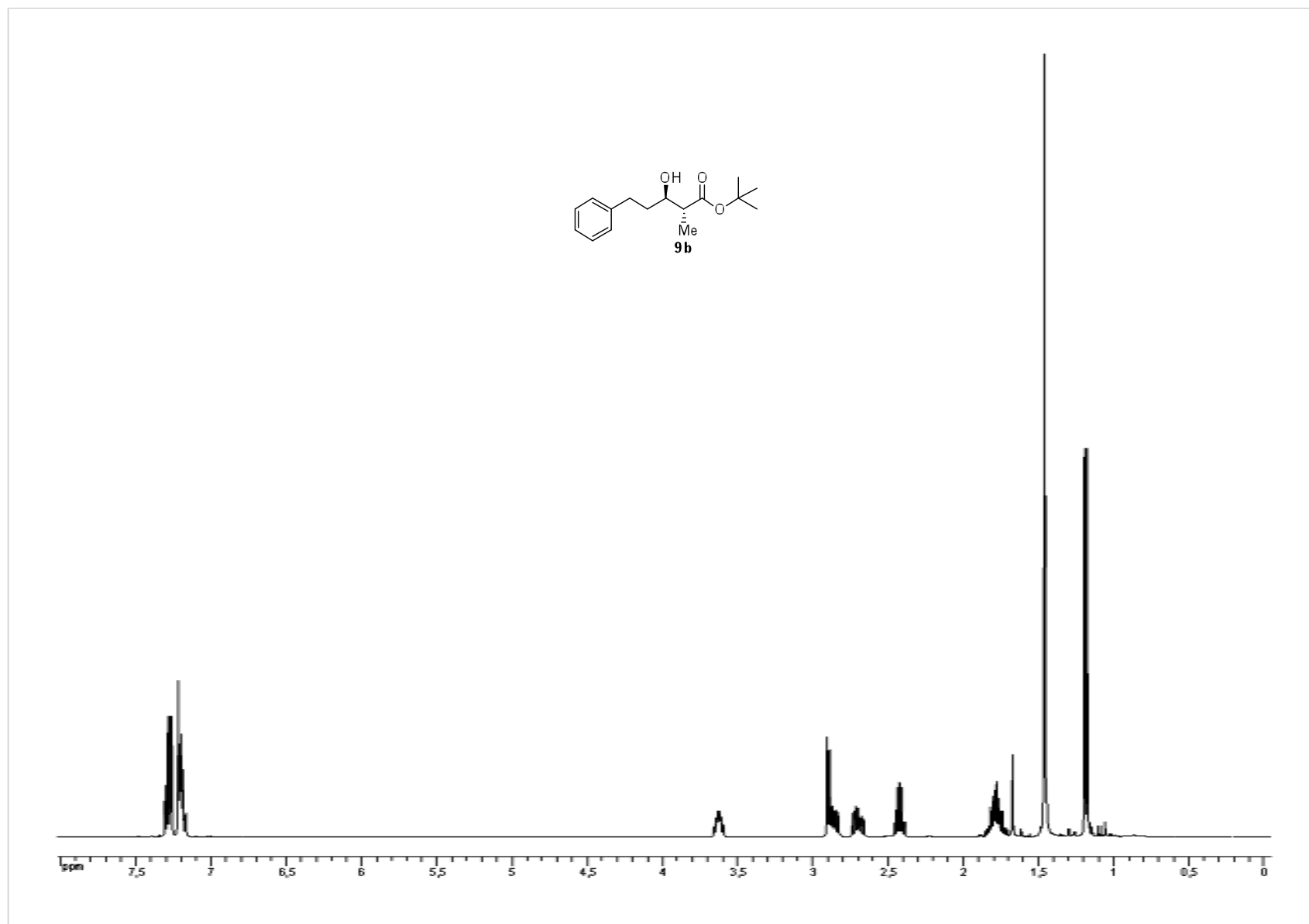
^1H NMR (400 MHz, CDCl_3) of compound **9a** (from reaction with THF, Entry 2, Table 1, dr 11:1 *anti:syn*)



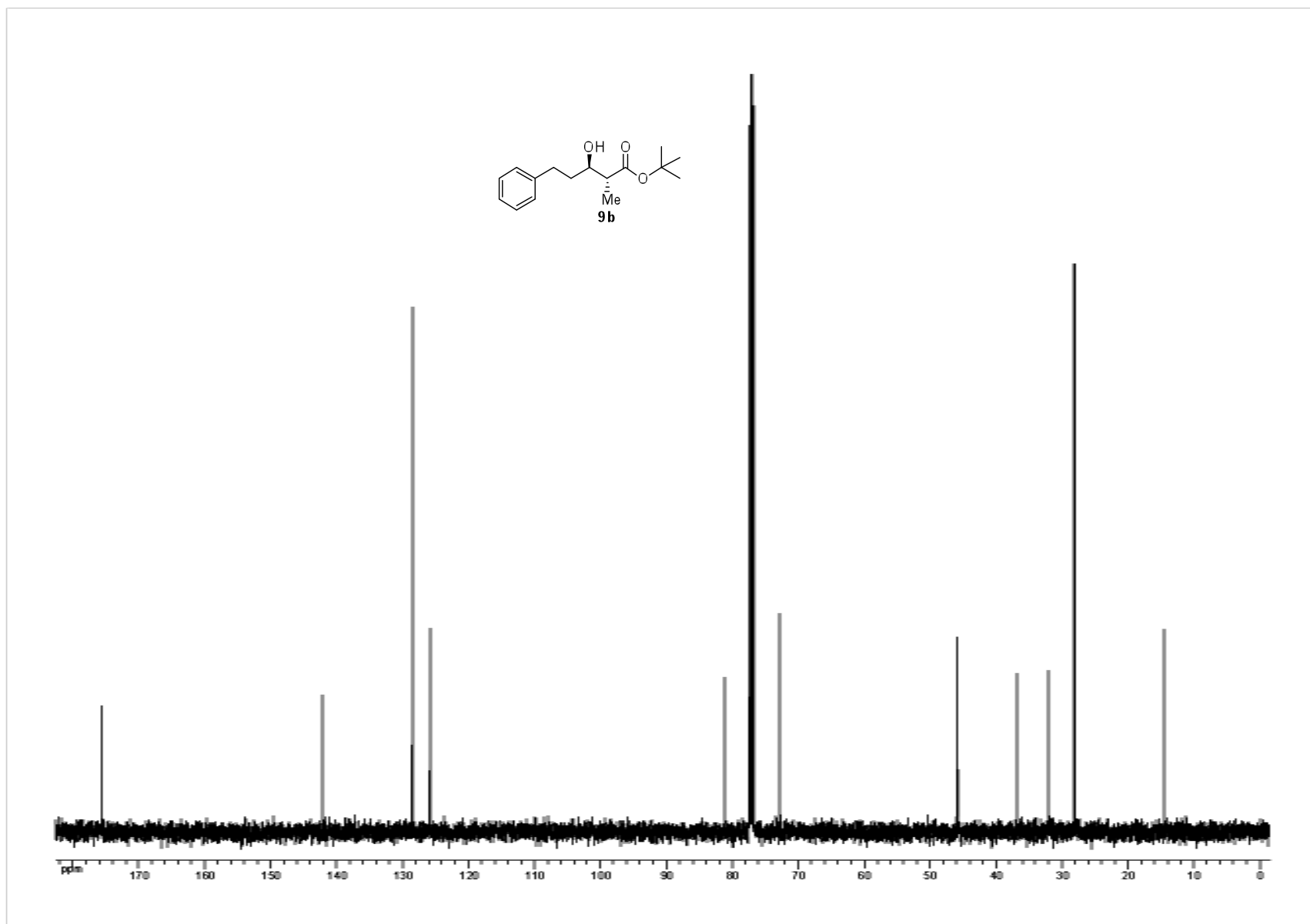
^{13}C NMR (100 MHz, CDCl_3) of compound **9a** (from reaction with THF, Entry 2, Table 1, dr 11:1 *anti:syn*)



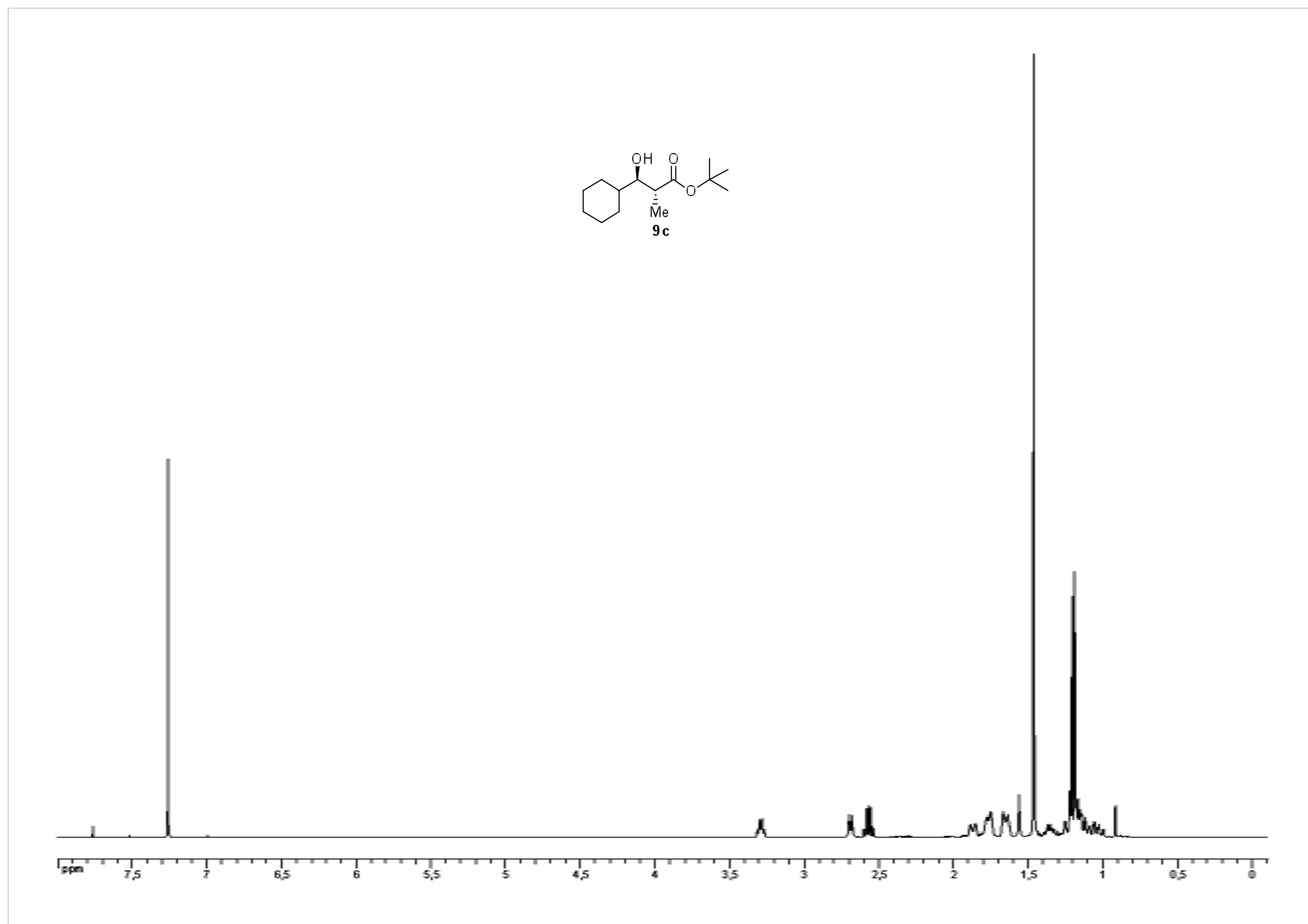
^1H NMR (400 MHz, CDCl_3) of compound **9b** (dr >20:1 *anti:syn*)



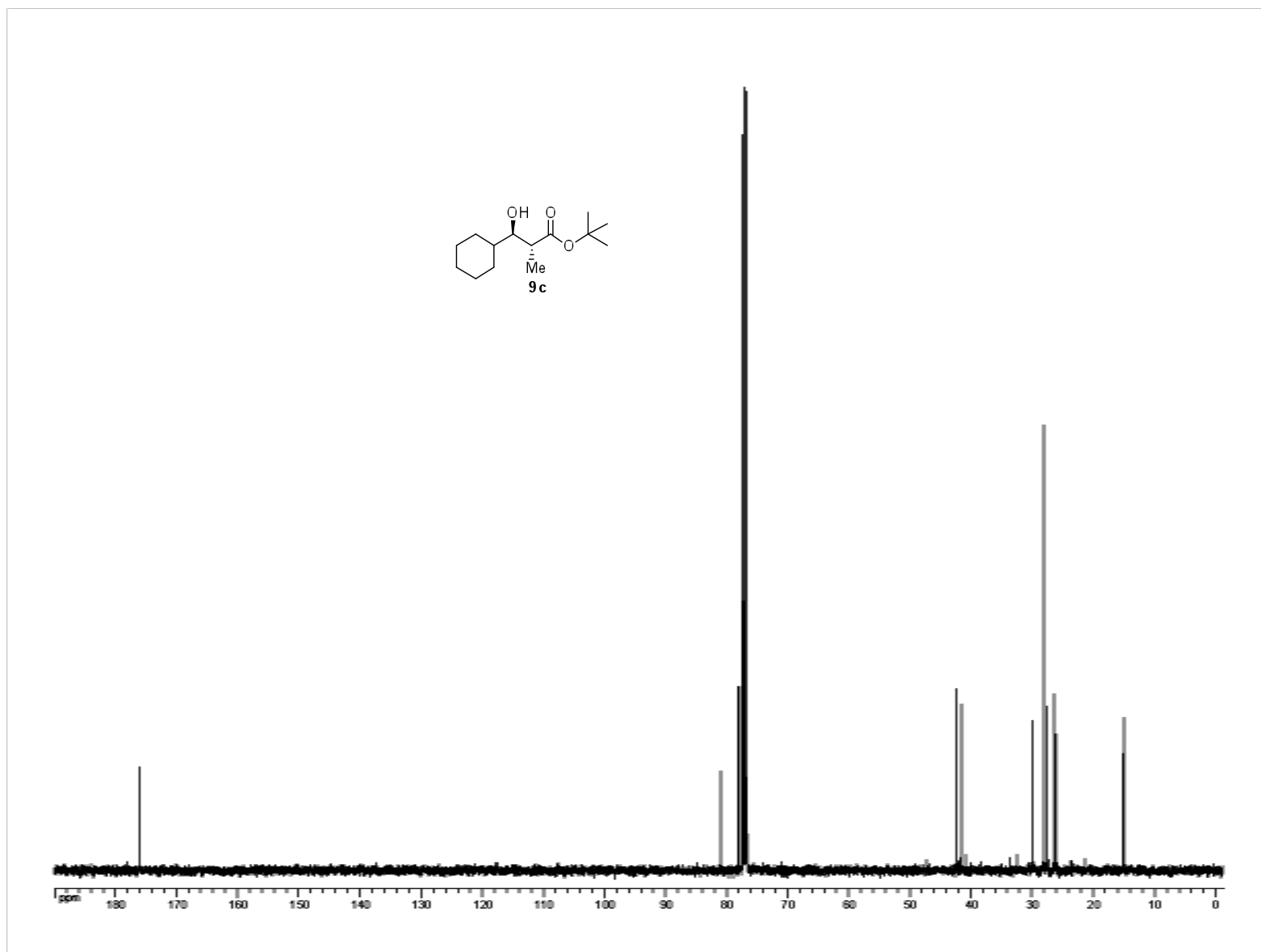
^{13}C NMR (100 MHz, CDCl_3) of compound **9b** (dr >20:1 *anti:syn*)



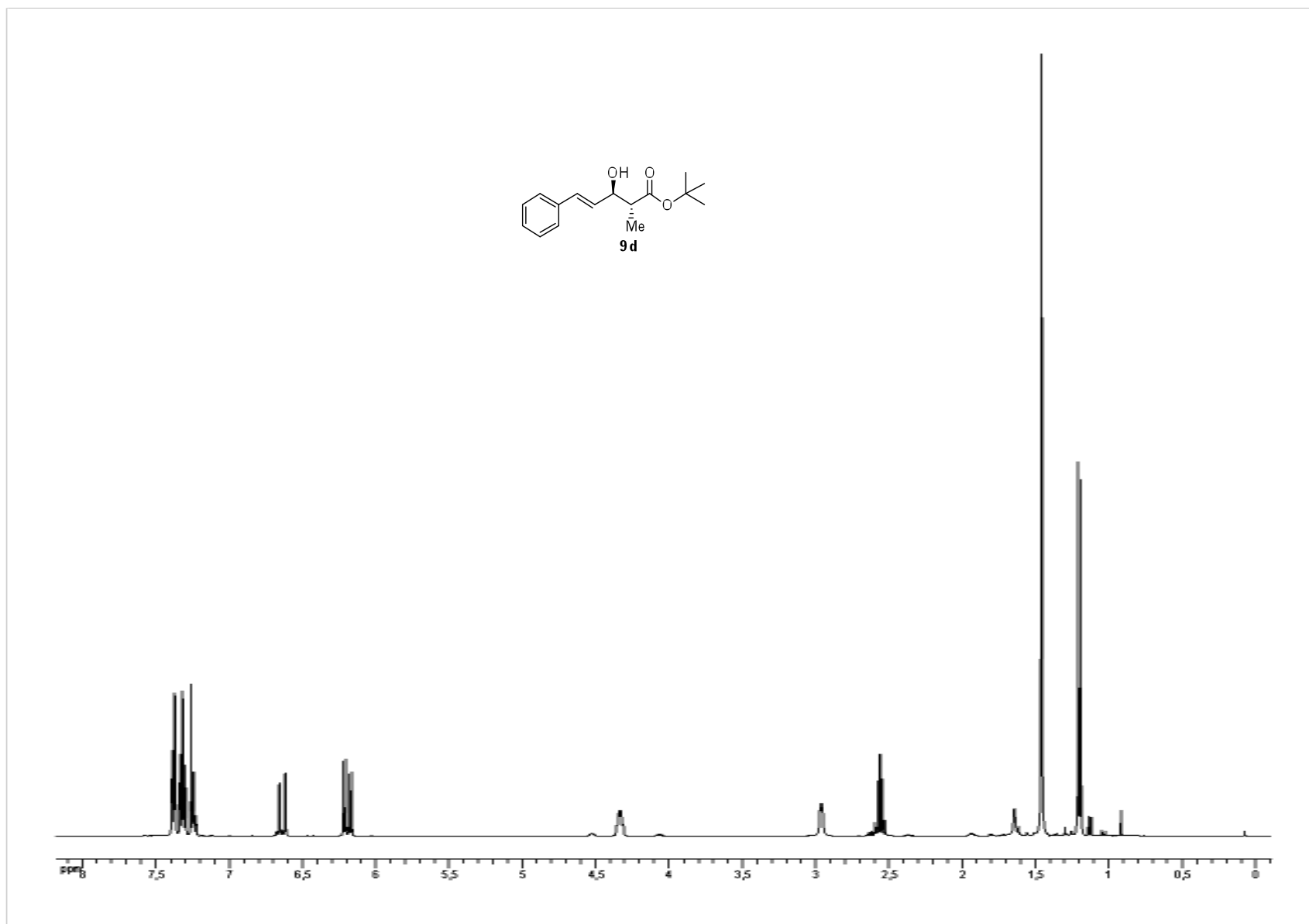
^1H NMR (400 MHz, CDCl_3) of compound **9c** (dr >20:1 *anti:syn*)



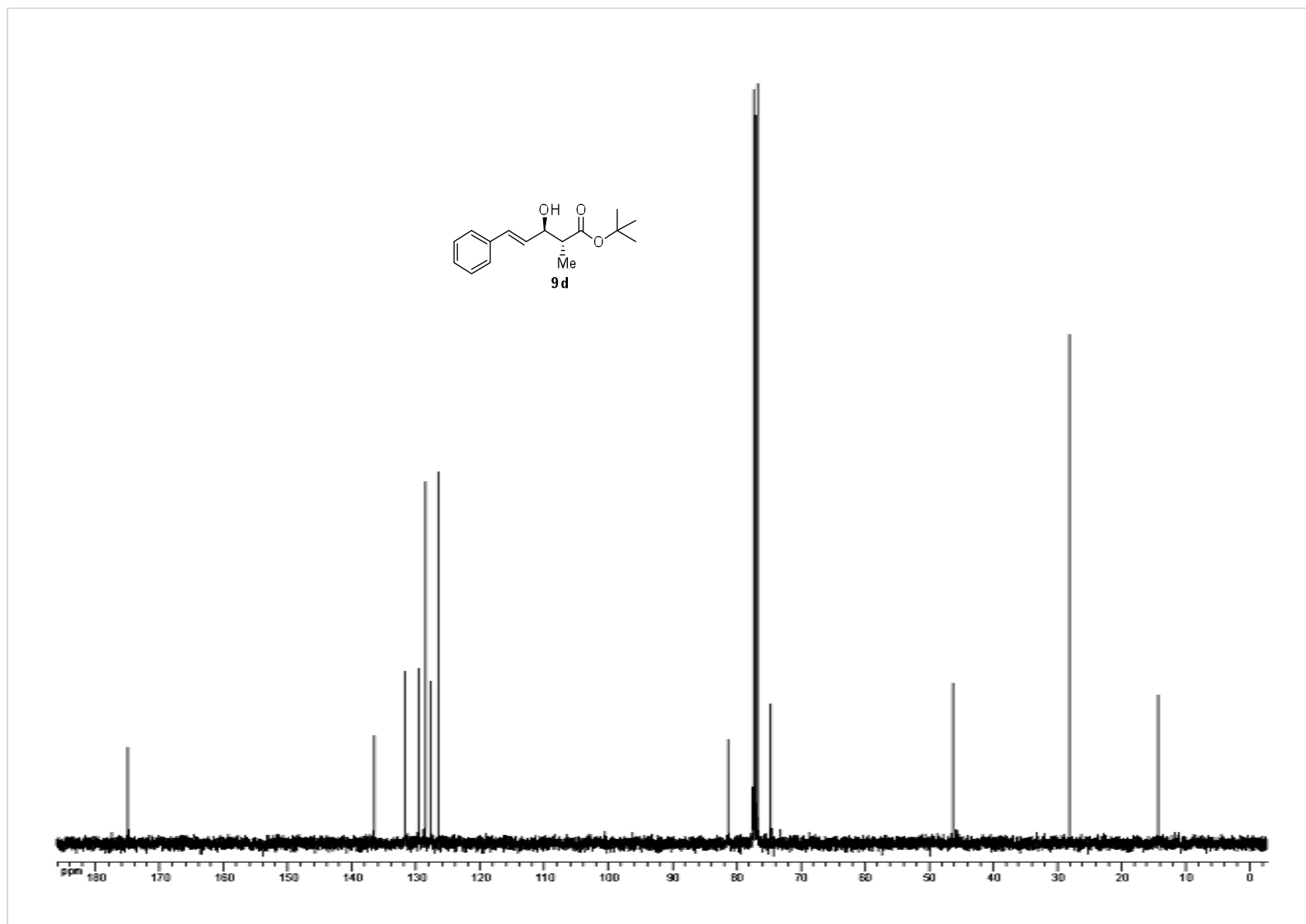
^{13}C NMR (100 MHz, CDCl_3) of compound **9c** (dr >20:1 *anti:syn*)



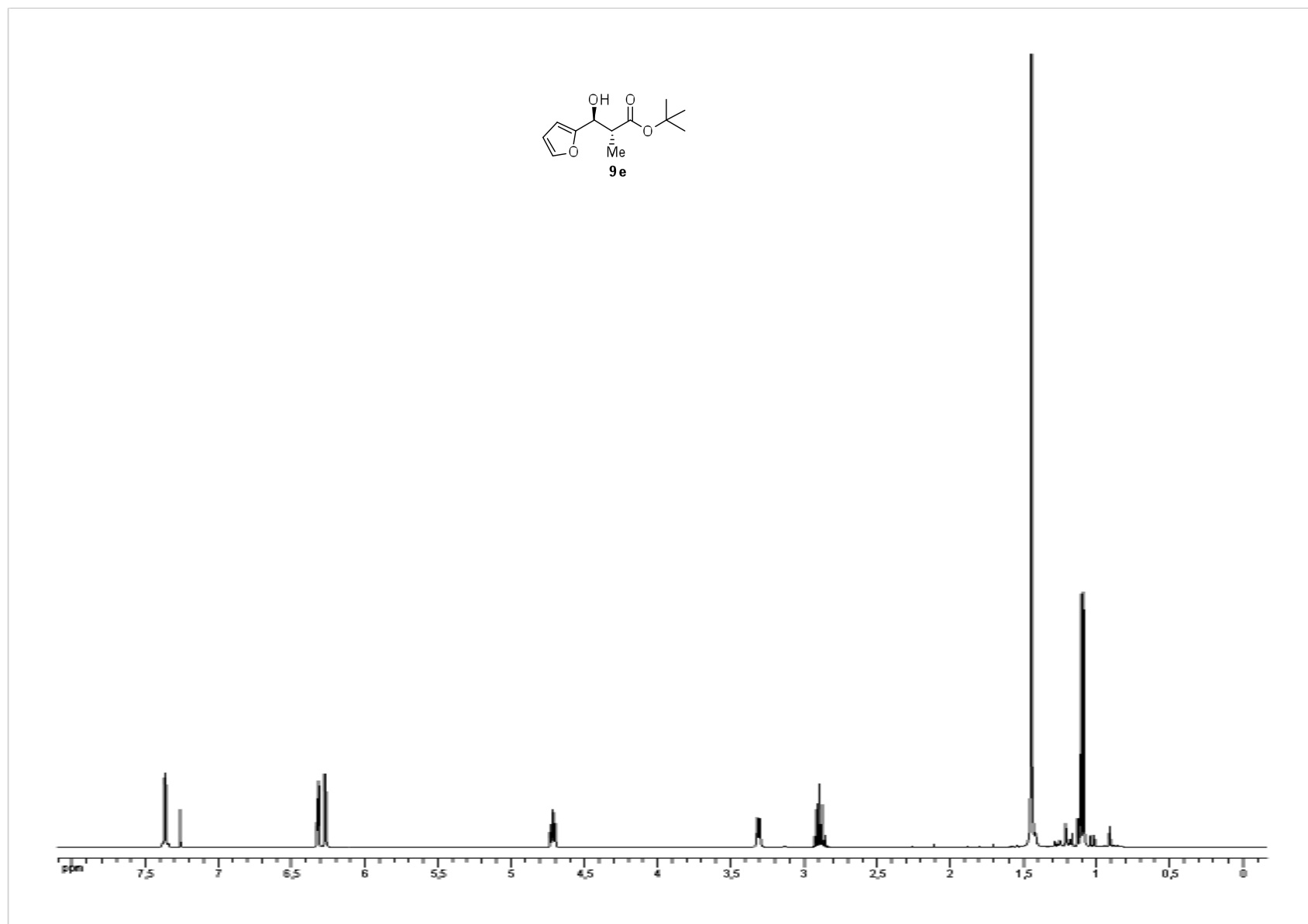
^1H NMR (400 MHz, CDCl_3) of compound **9d** (dr 13:1 *anti:syn*)



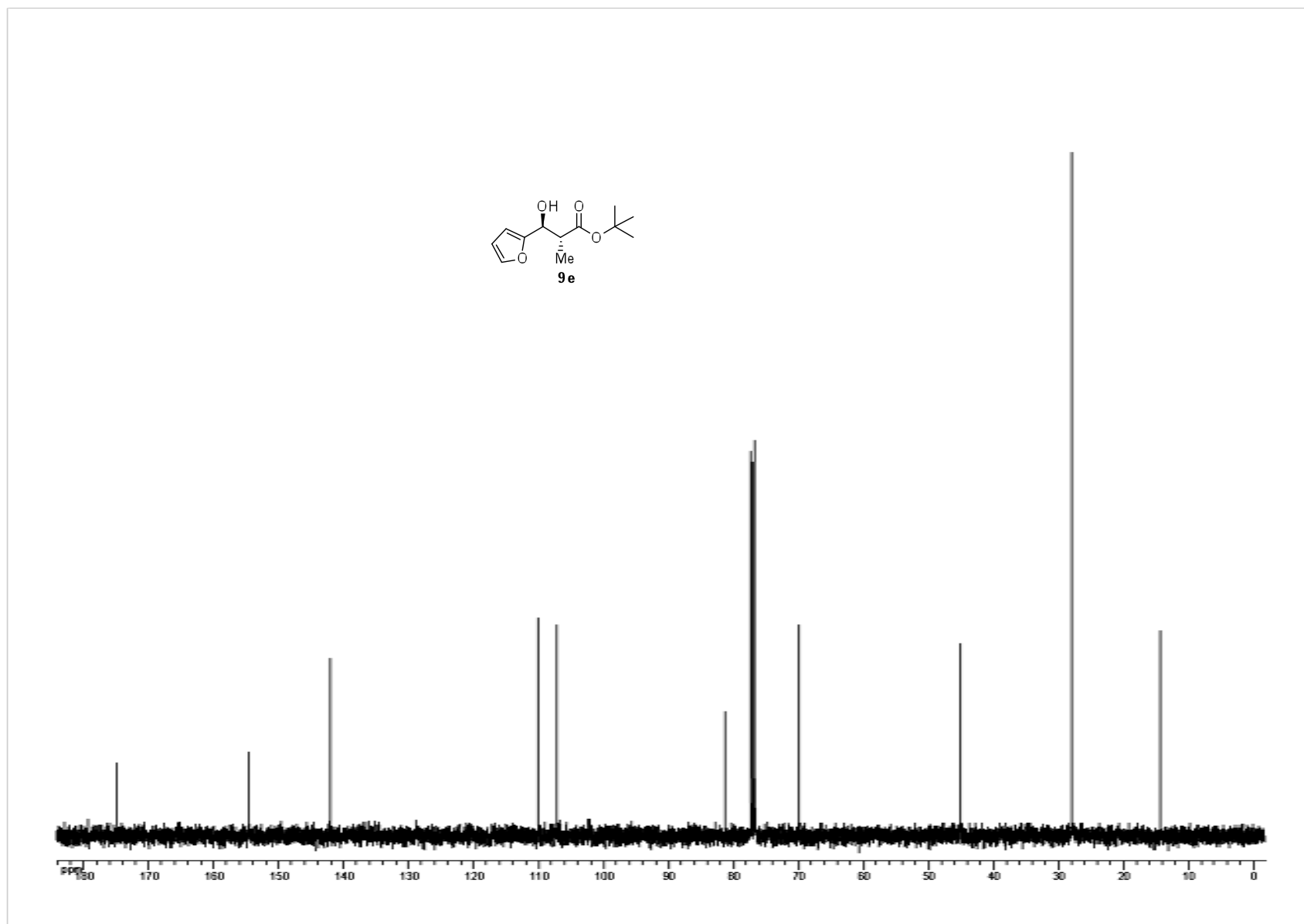
^{13}C NMR (100 MHz, CDCl_3) of compound **9d** (dr 13:1 *anti:syn*)



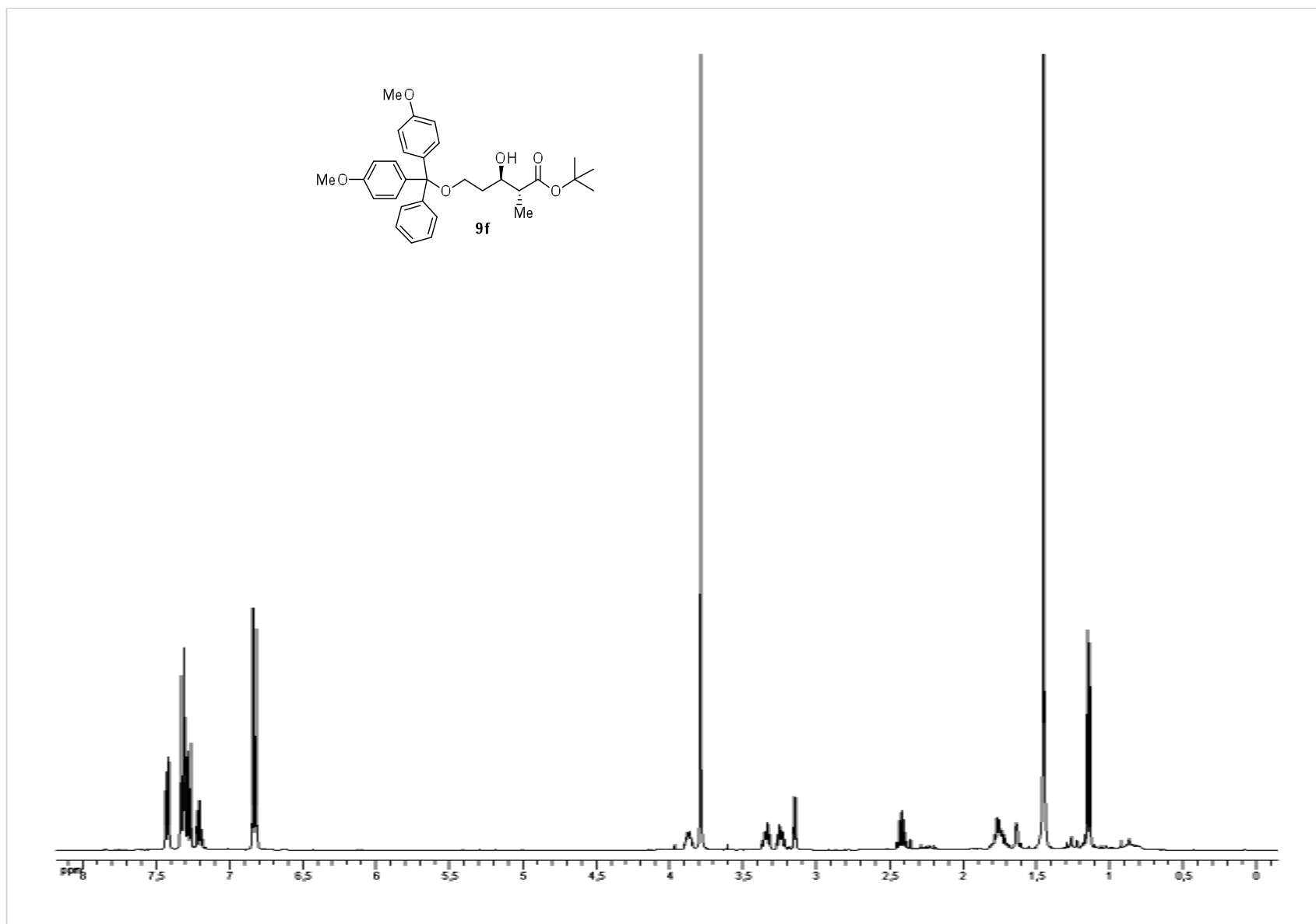
^1H NMR (400 MHz, CDCl_3) of compound **9e** (dr 15:1 *anti:syn*)



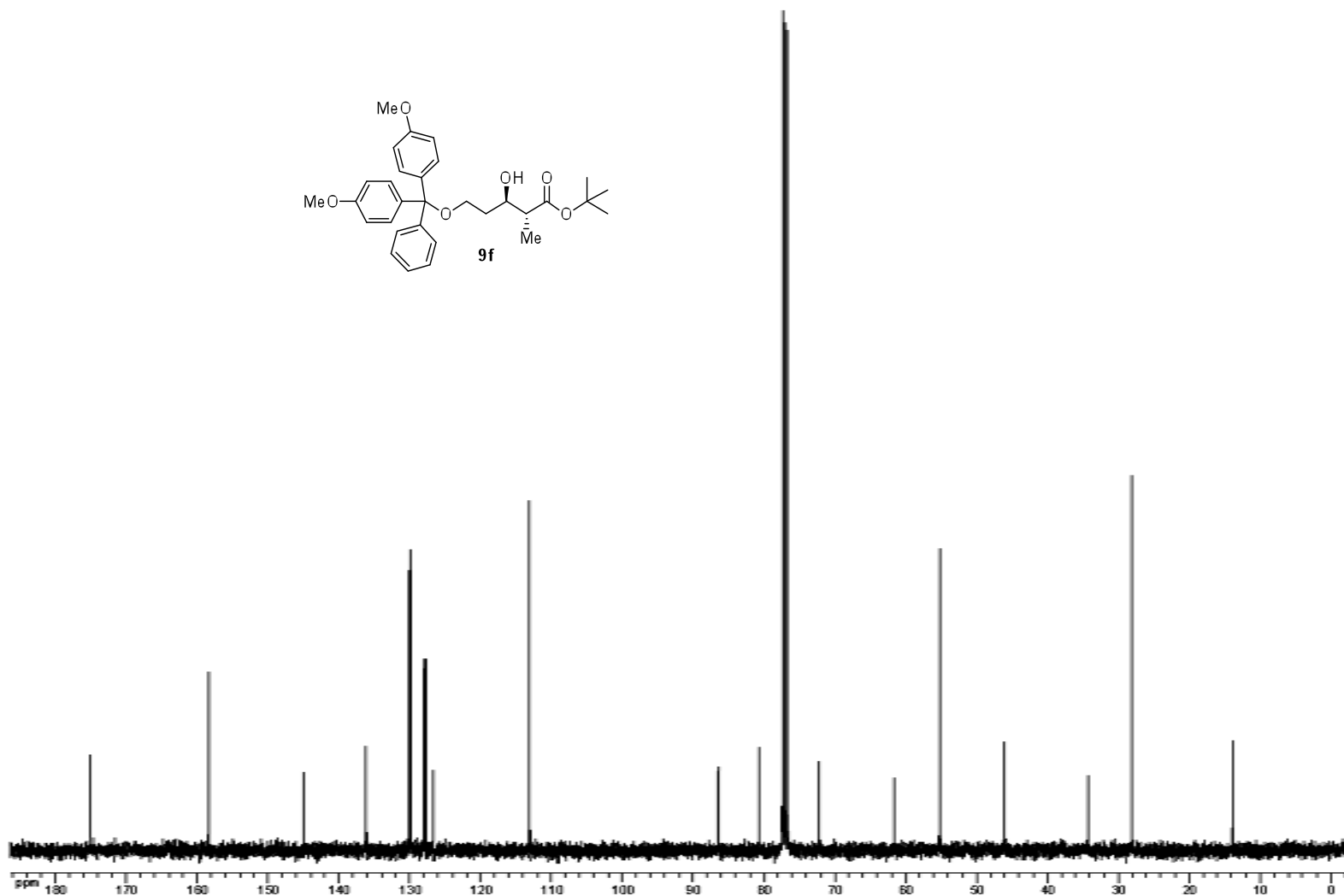
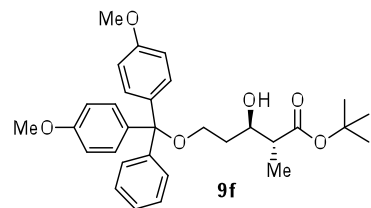
^{13}C NMR (100 MHz, CDCl_3) of compound **9e** (dr 15:1 *anti:syn*)



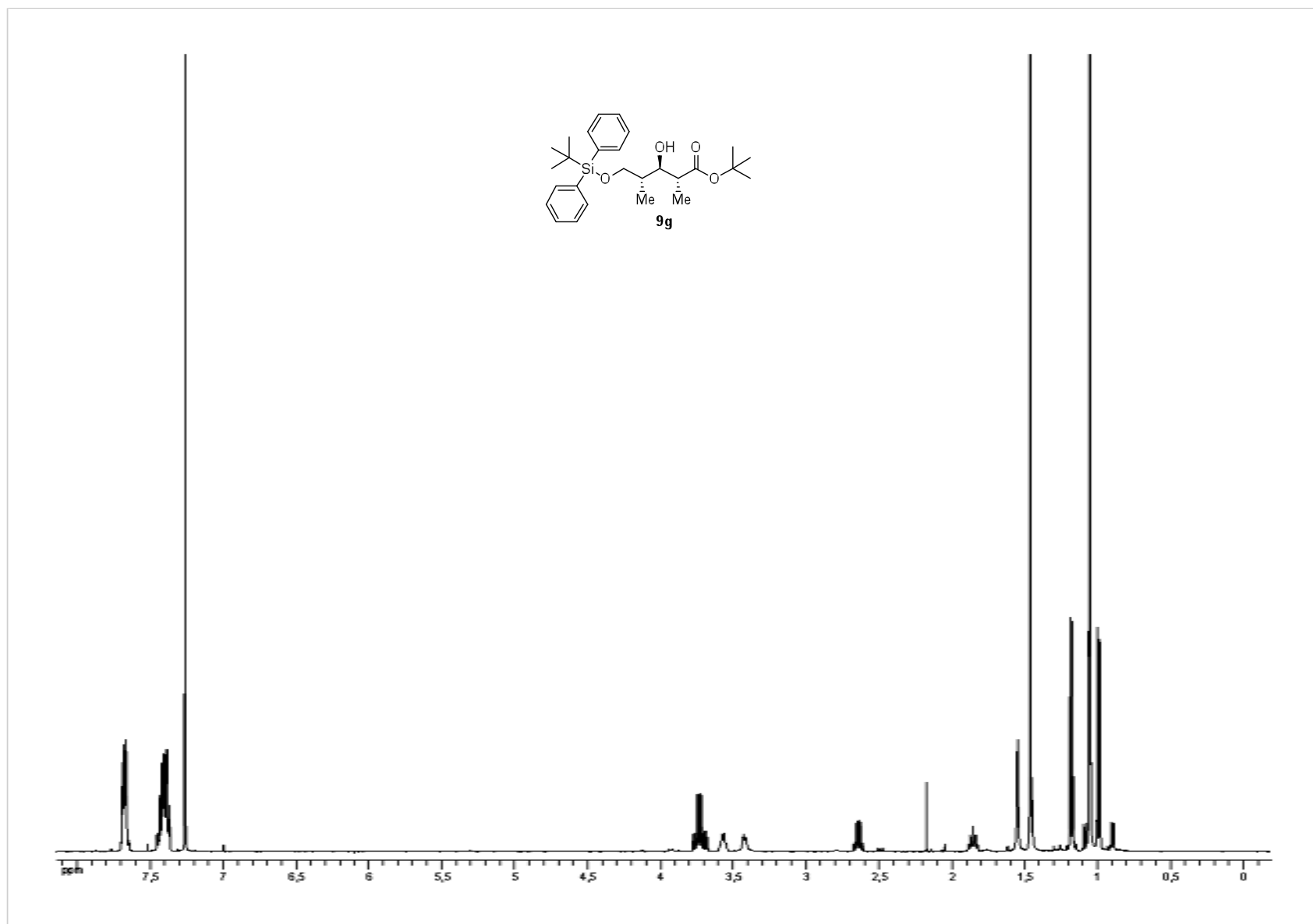
^1H NMR (400 MHz, CDCl_3) of compound **9f** (dr 20:1 *anti:syn*)



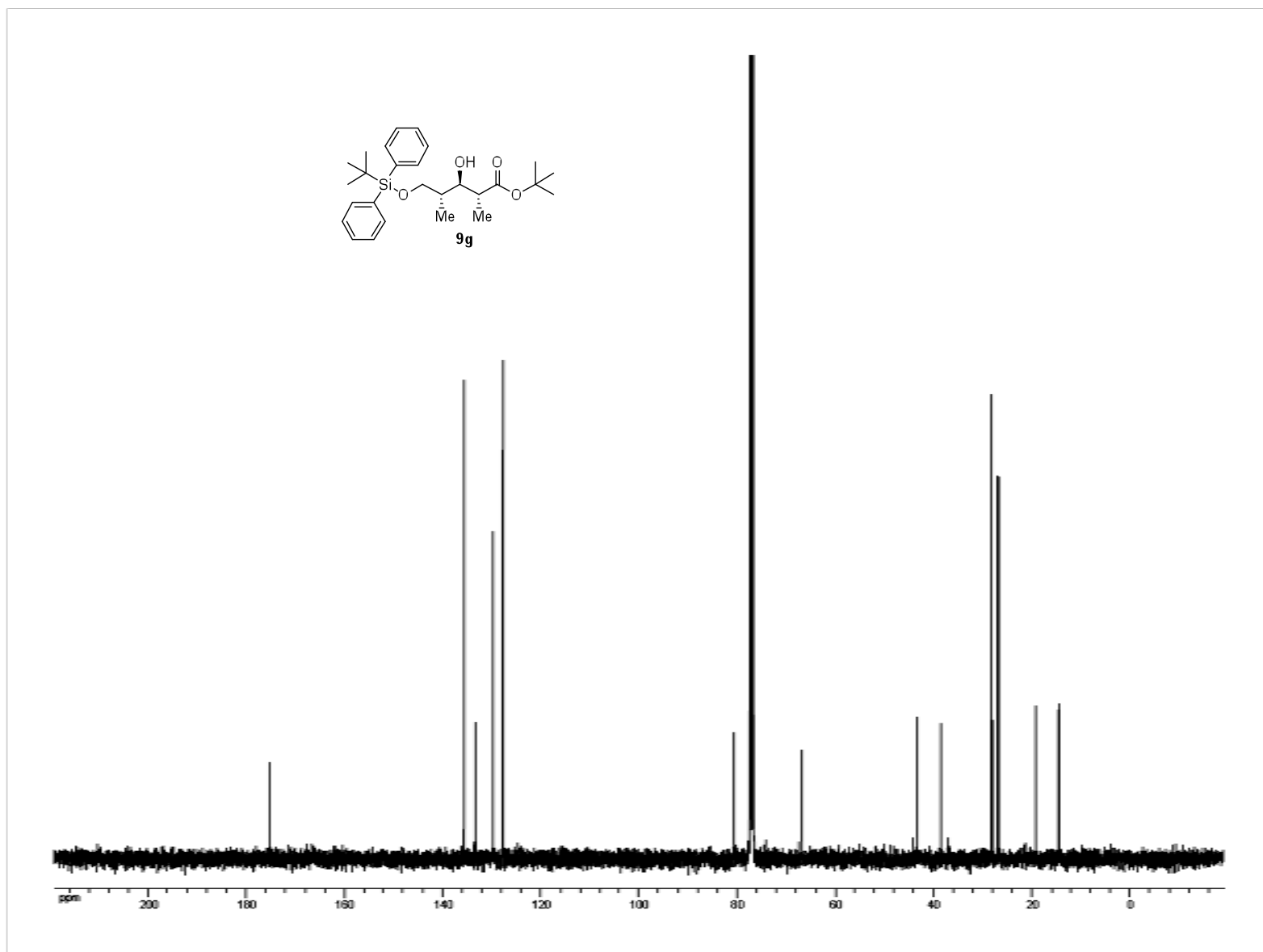
^{13}C NMR (100 MHz, CDCl_3) of compound **9f** (dr 20:1 *anti:syn*)



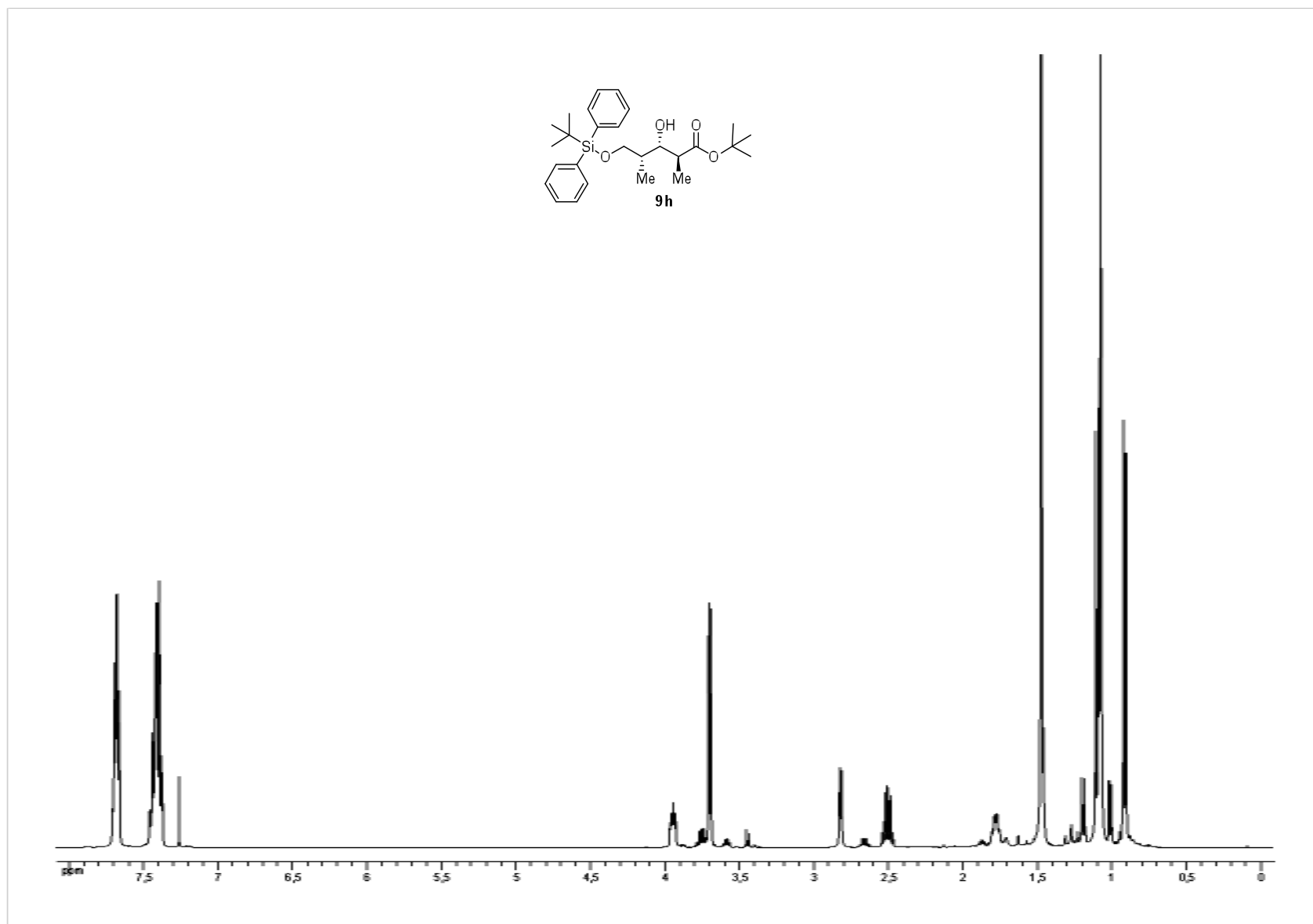
^1H NMR (400 MHz, CDCl_3) of compound **9g** (dr 9:1 **9g**:**9h**)



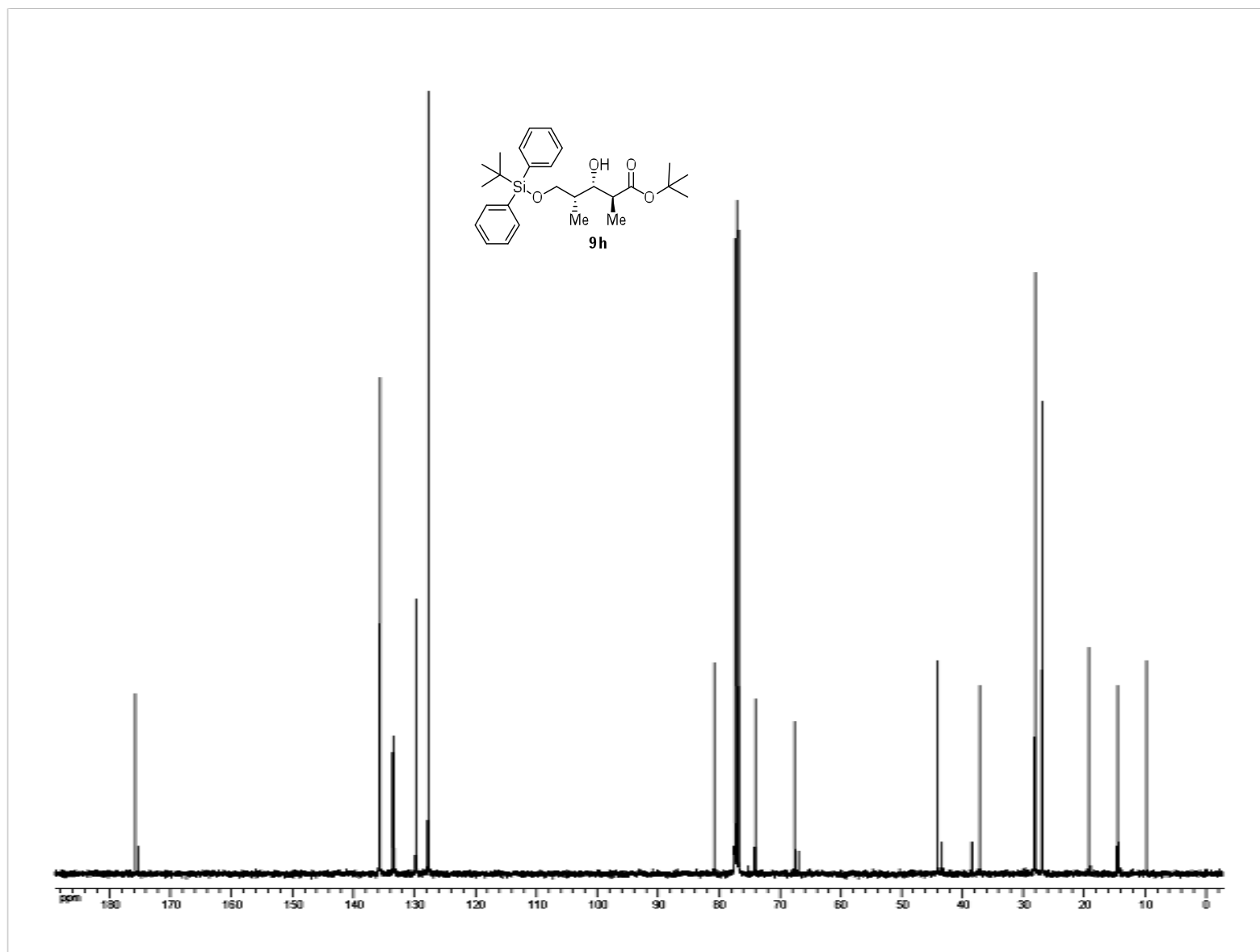
^{13}C NMR (100 MHz, CDCl_3) of compound **9g** (dr 9:1 **9g**:**9h**)



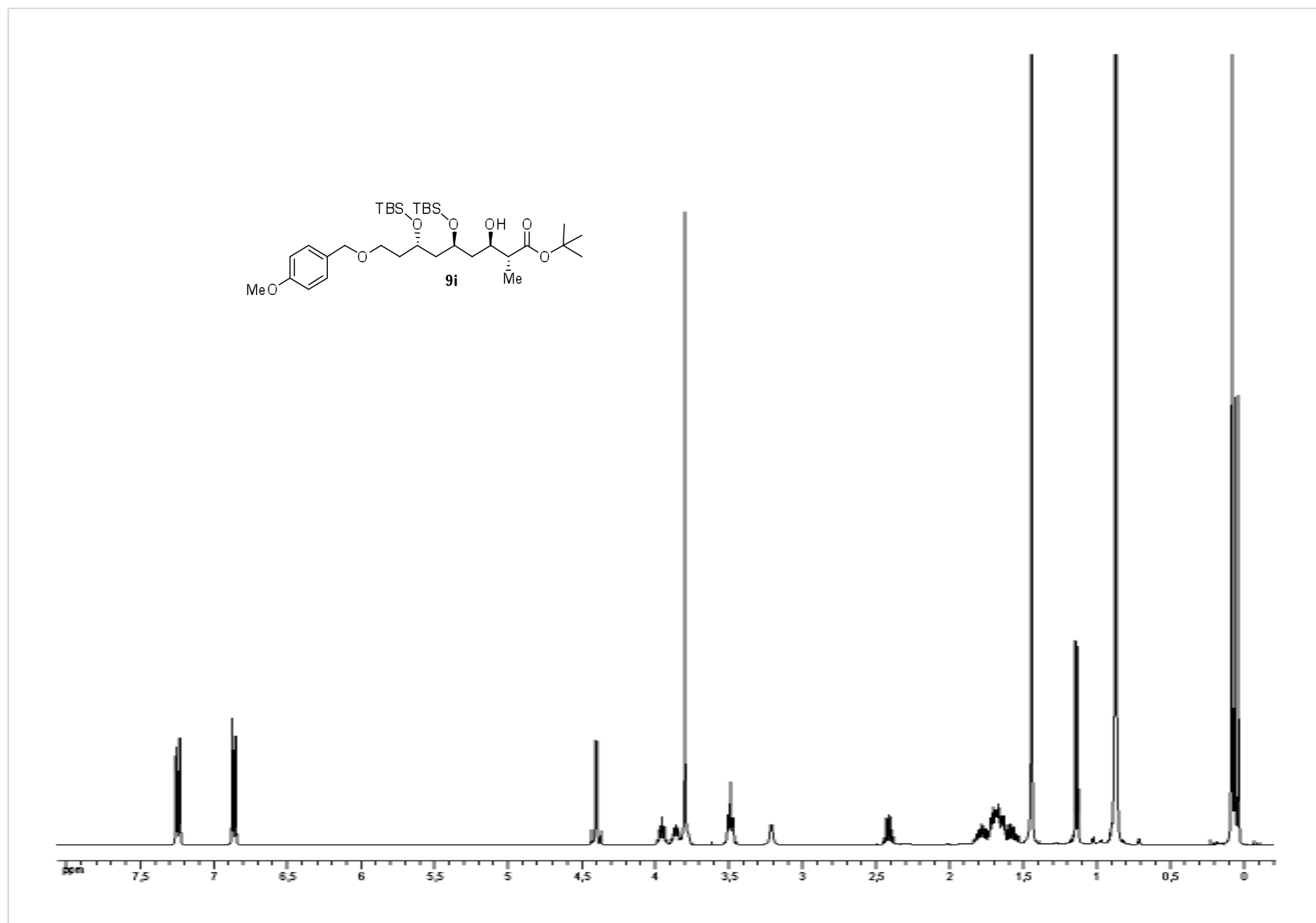
^1H NMR (400 MHz, CDCl_3) of compound **9h** (dr 6:1 **9h**:**9g**)



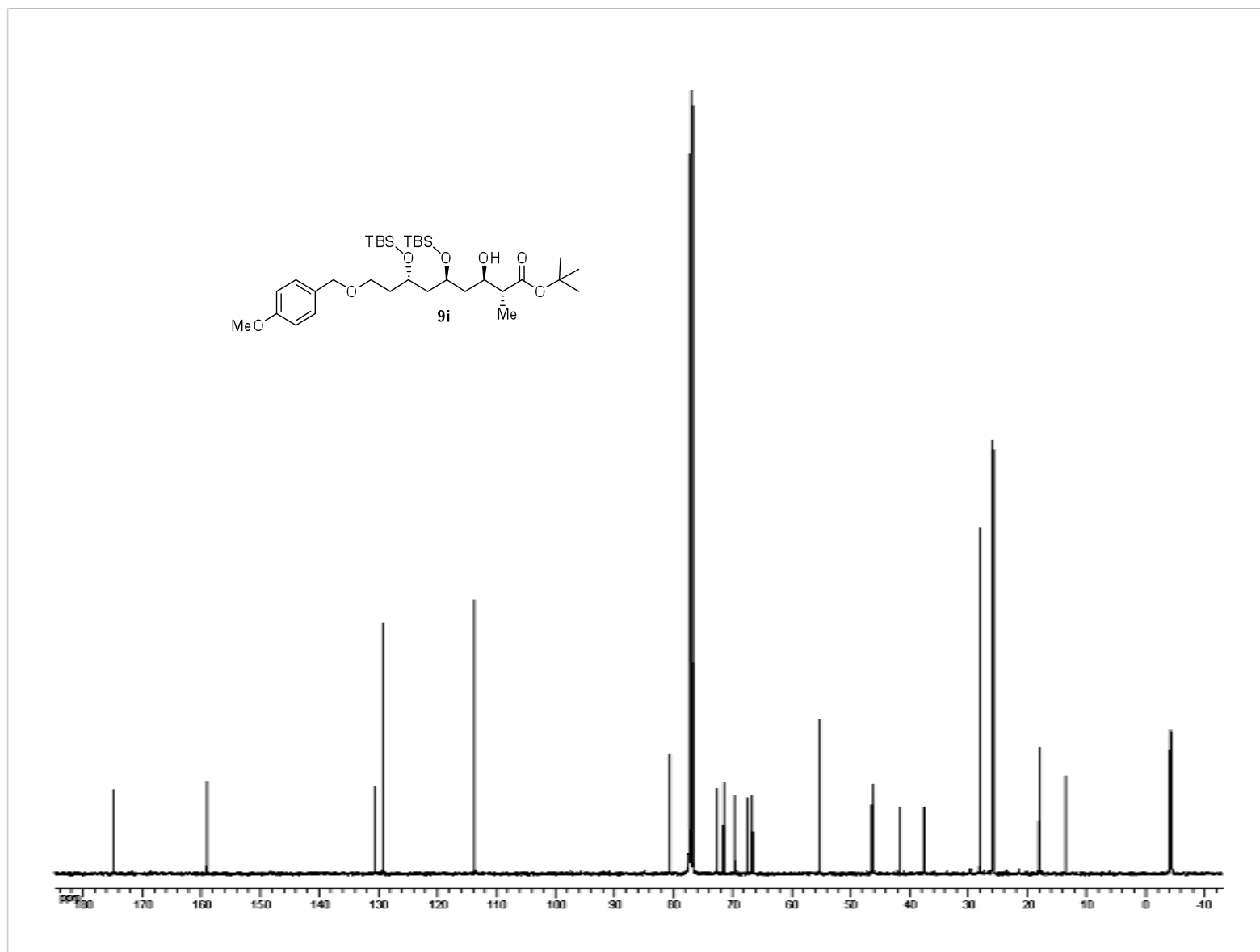
^{13}C NMR (100 MHz, CDCl_3) of compound **9h** (dr 6:1 **9h**:**9g**)



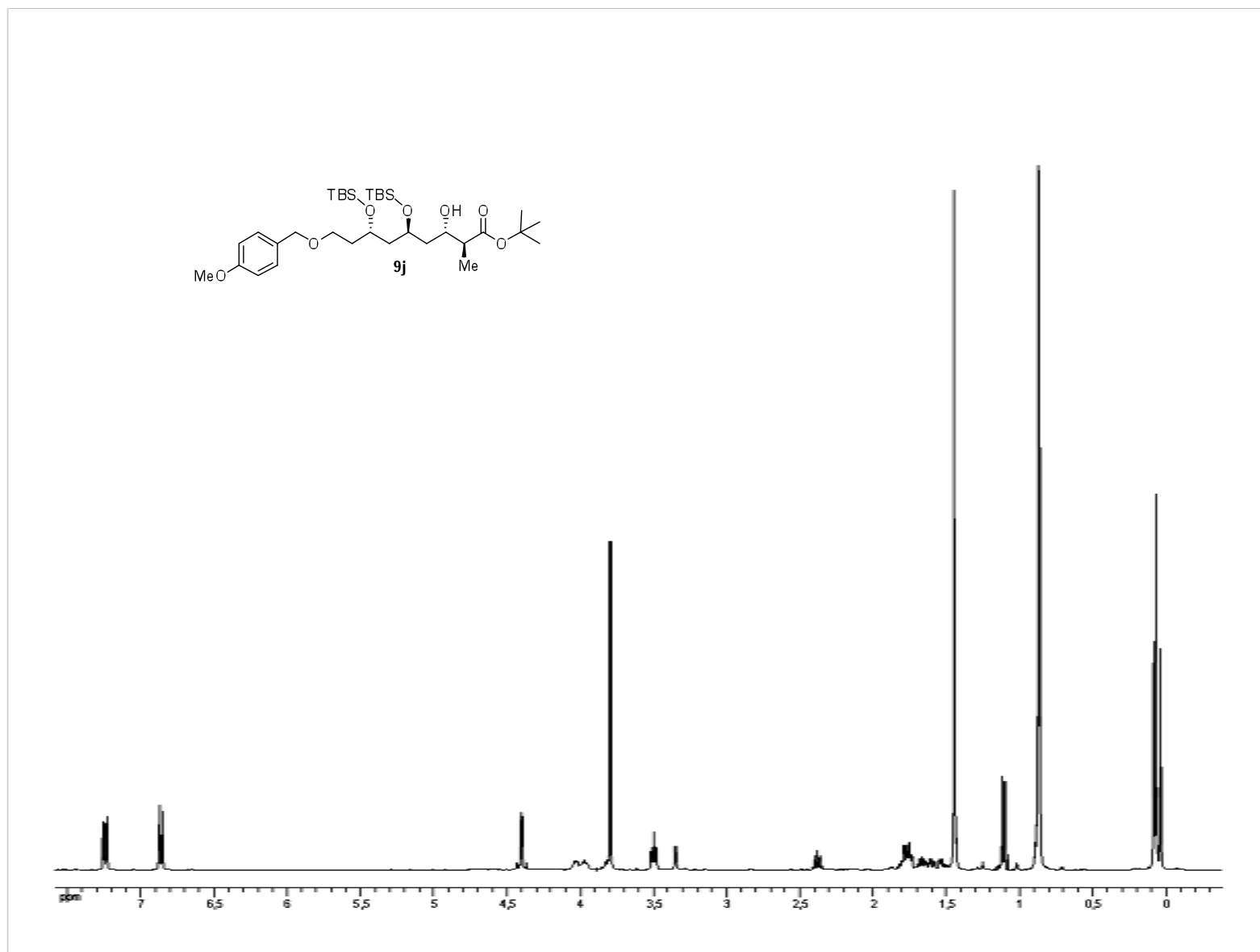
^1H NMR (400 MHz, CDCl_3) of compound **9i** (dr >20:1)



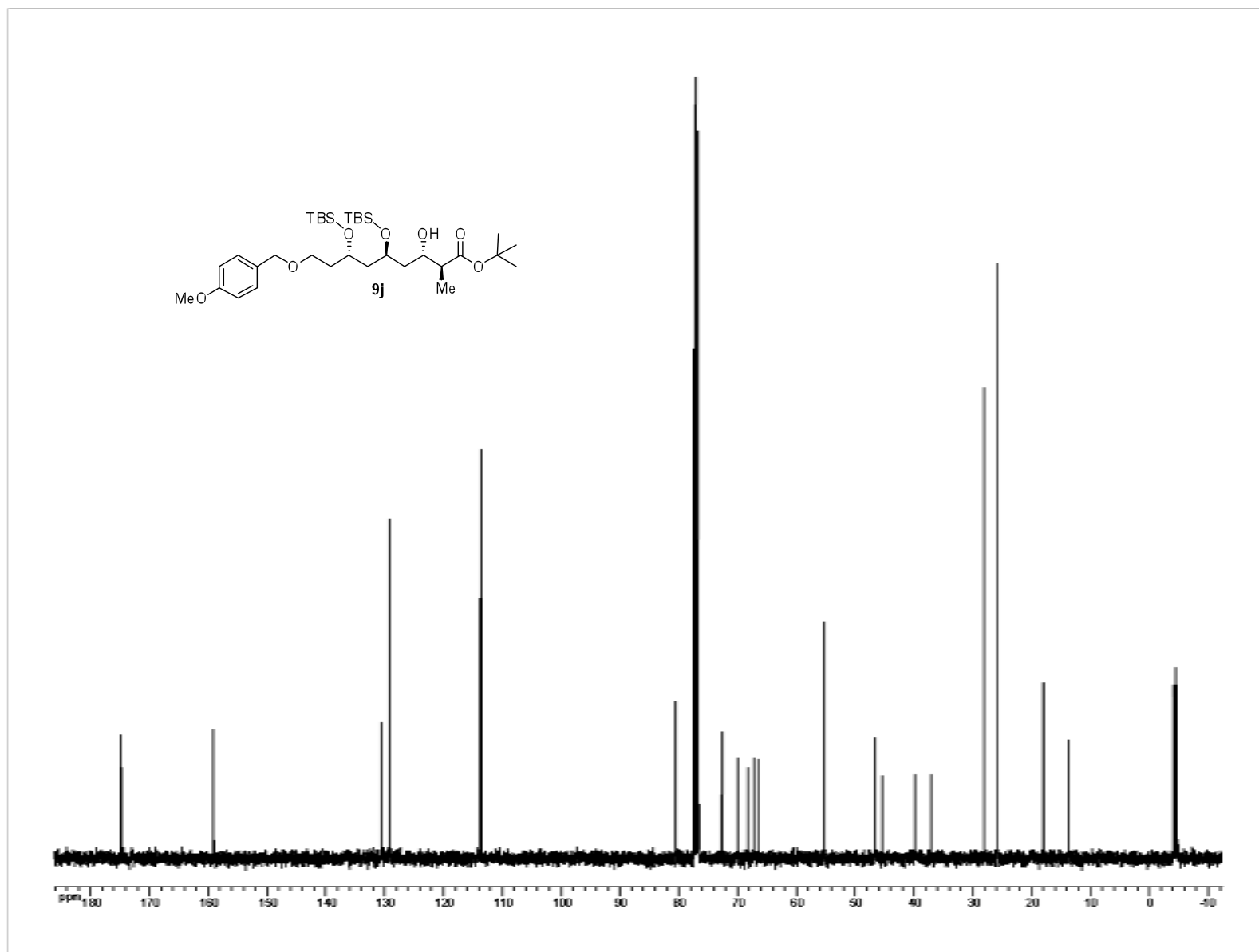
^{13}C NMR (100 MHz, CDCl_3) of compound **9i** (dr >20:1)



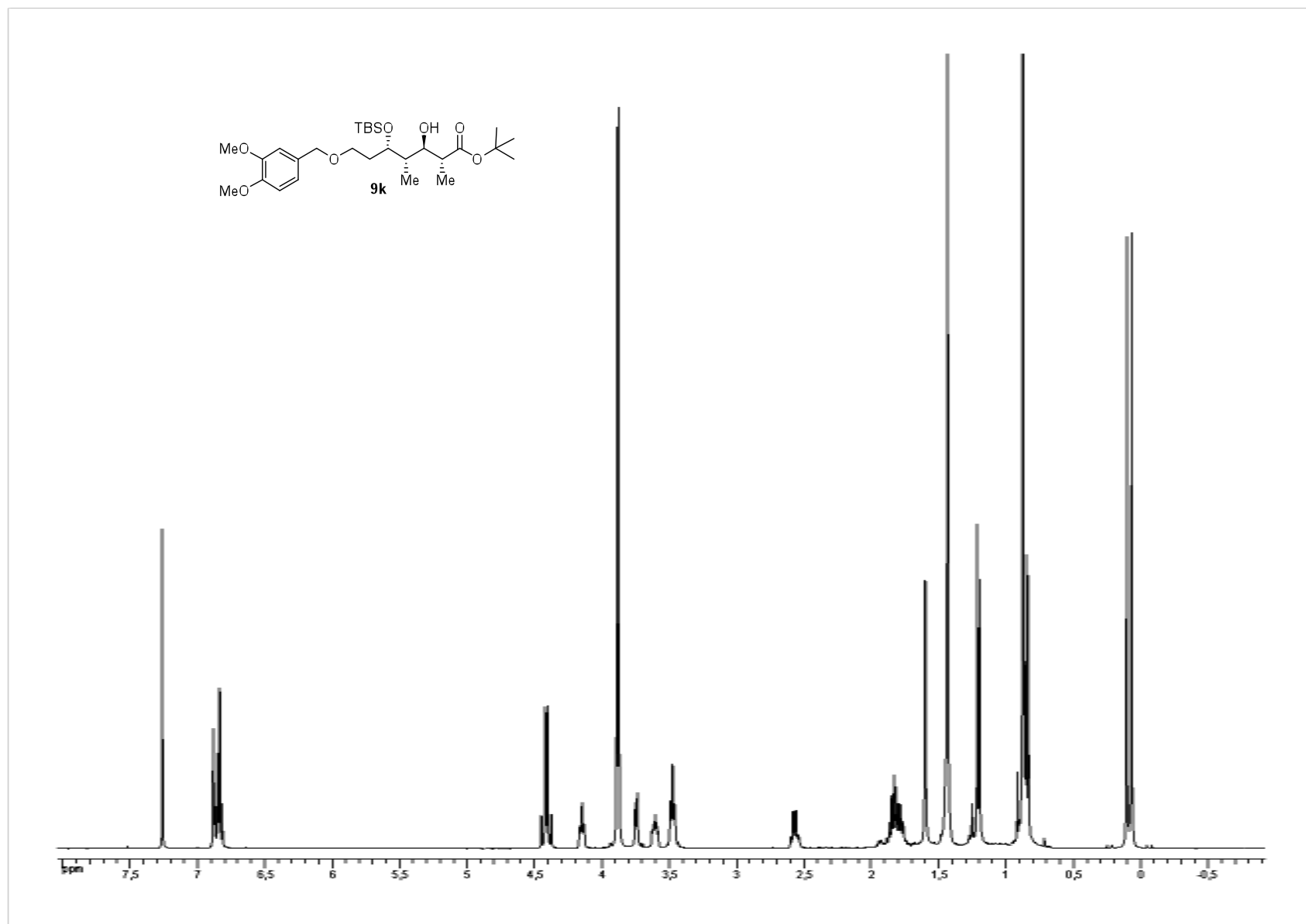
^1H NMR (400 MHz, CDCl_3) of compound **9j** (dr >20:1)



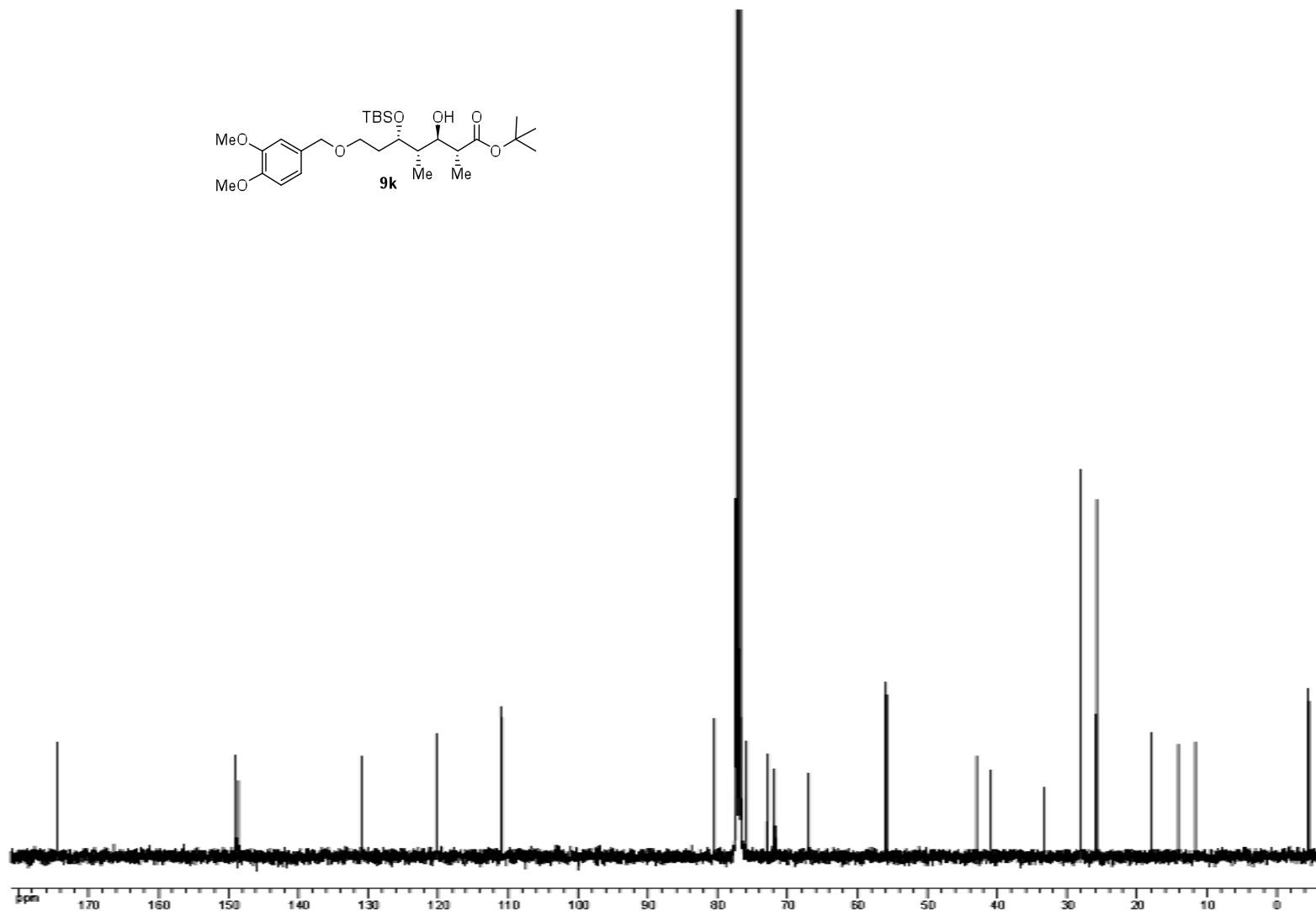
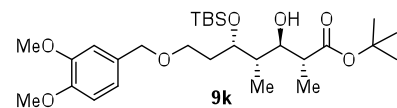
^{13}C NMR (100 MHz, CDCl_3) of compound **9j** (dr >20:1)



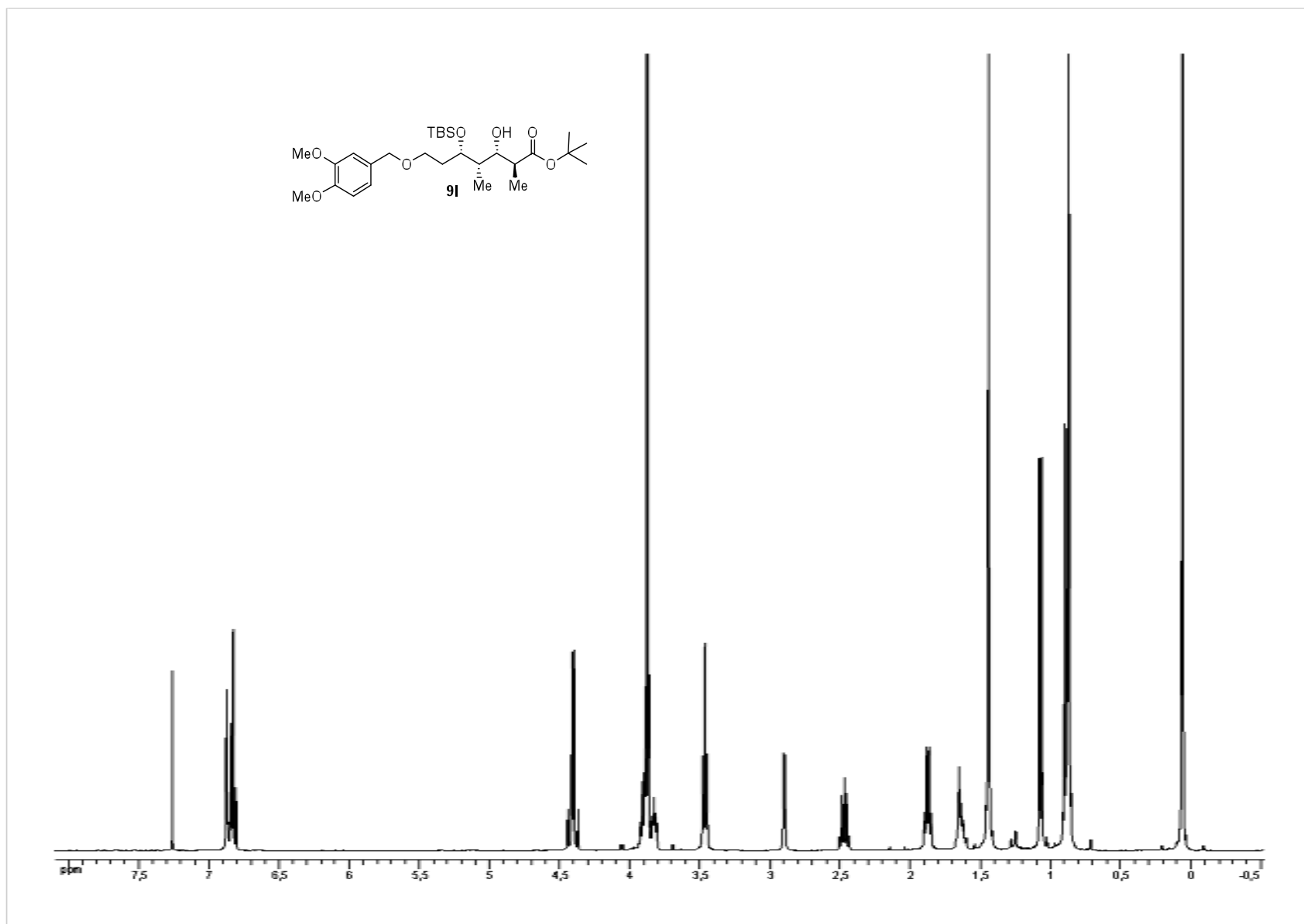
^1H NMR (400 MHz, CDCl_3) of compound **9k** (dr >20:1)



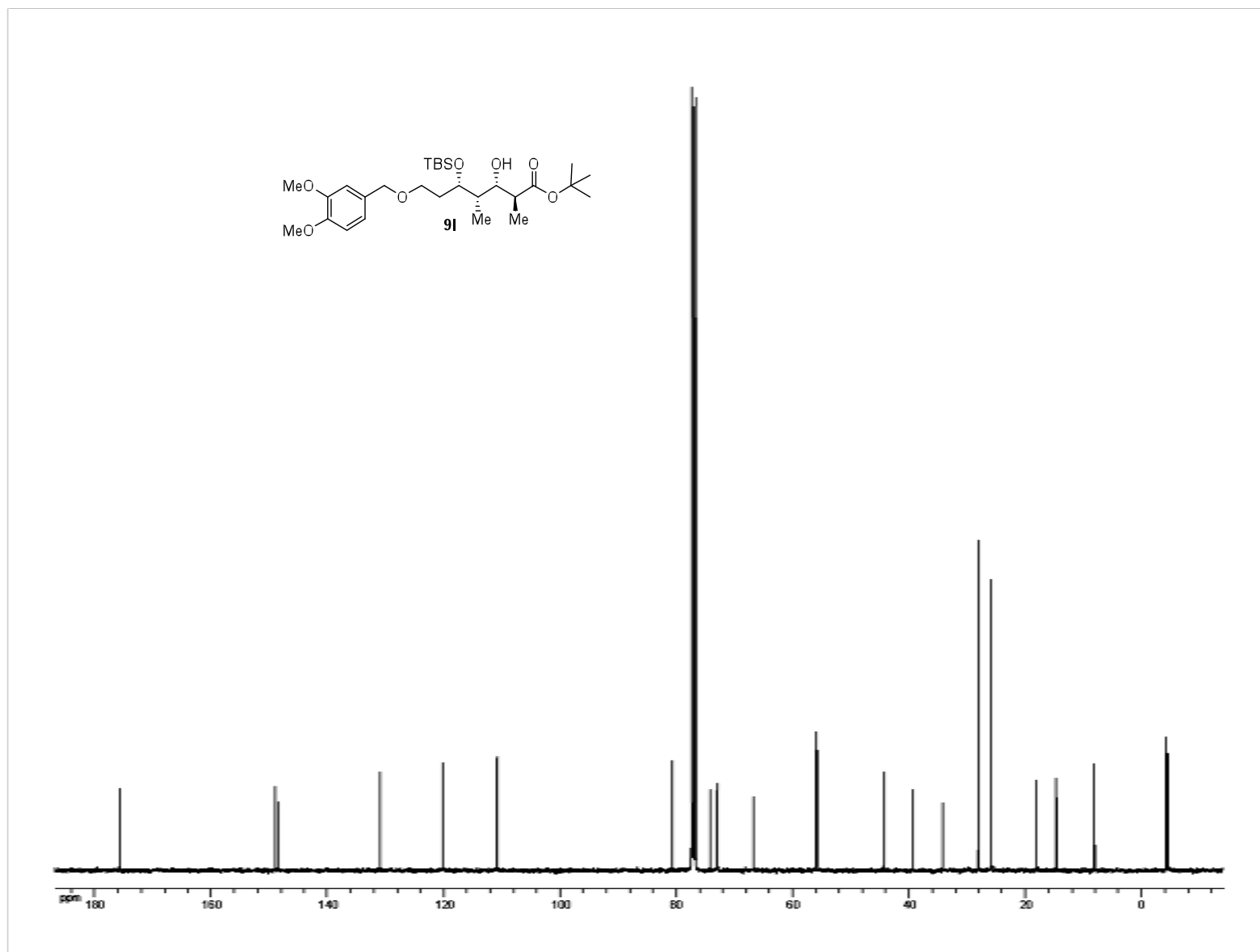
^{13}C NMR (100 MHz, CDCl_3) of compound **9k** (dr >20:1)



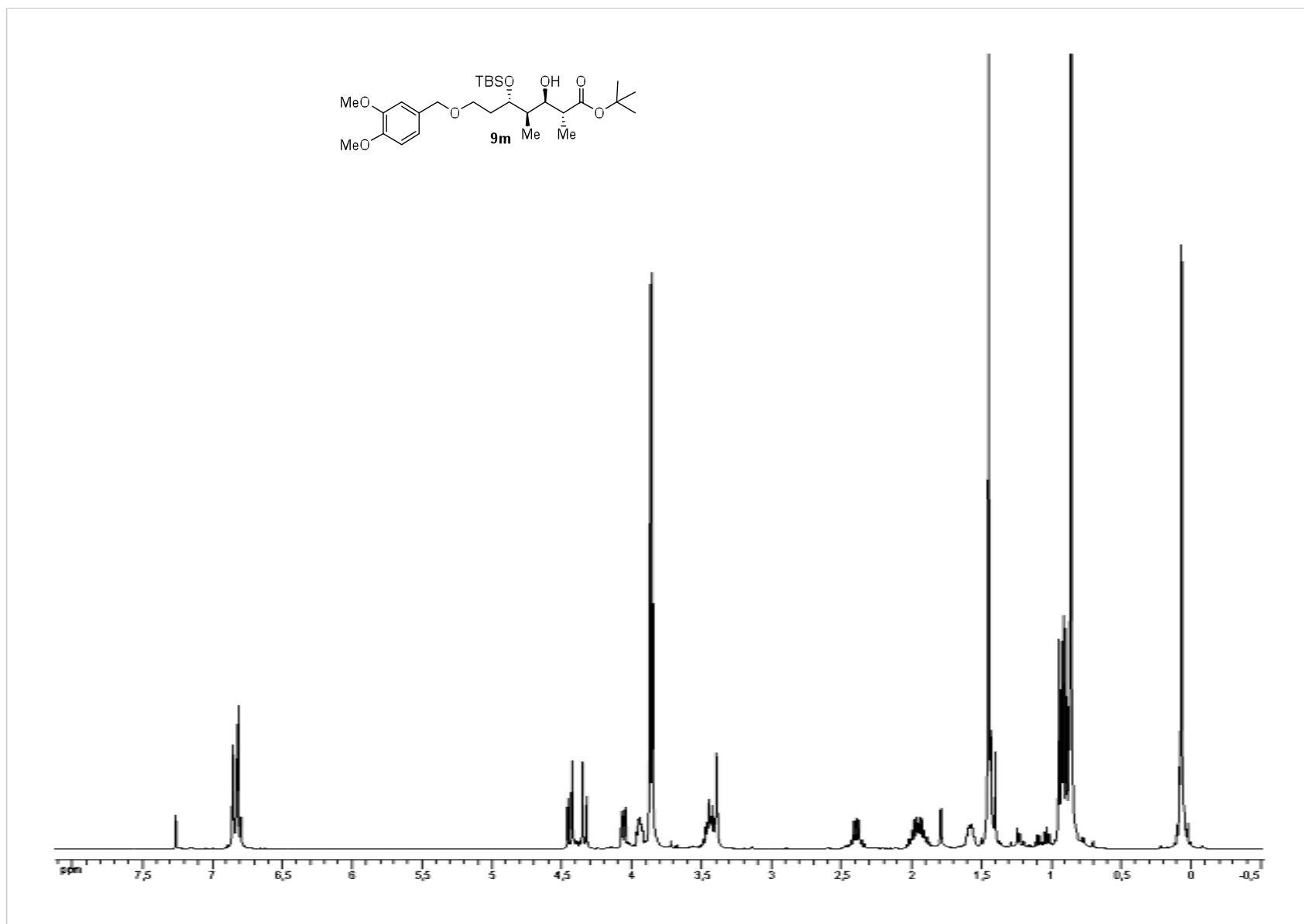
^1H NMR (400 MHz, CDCl_3) of compound **9l** (dr >20:1)



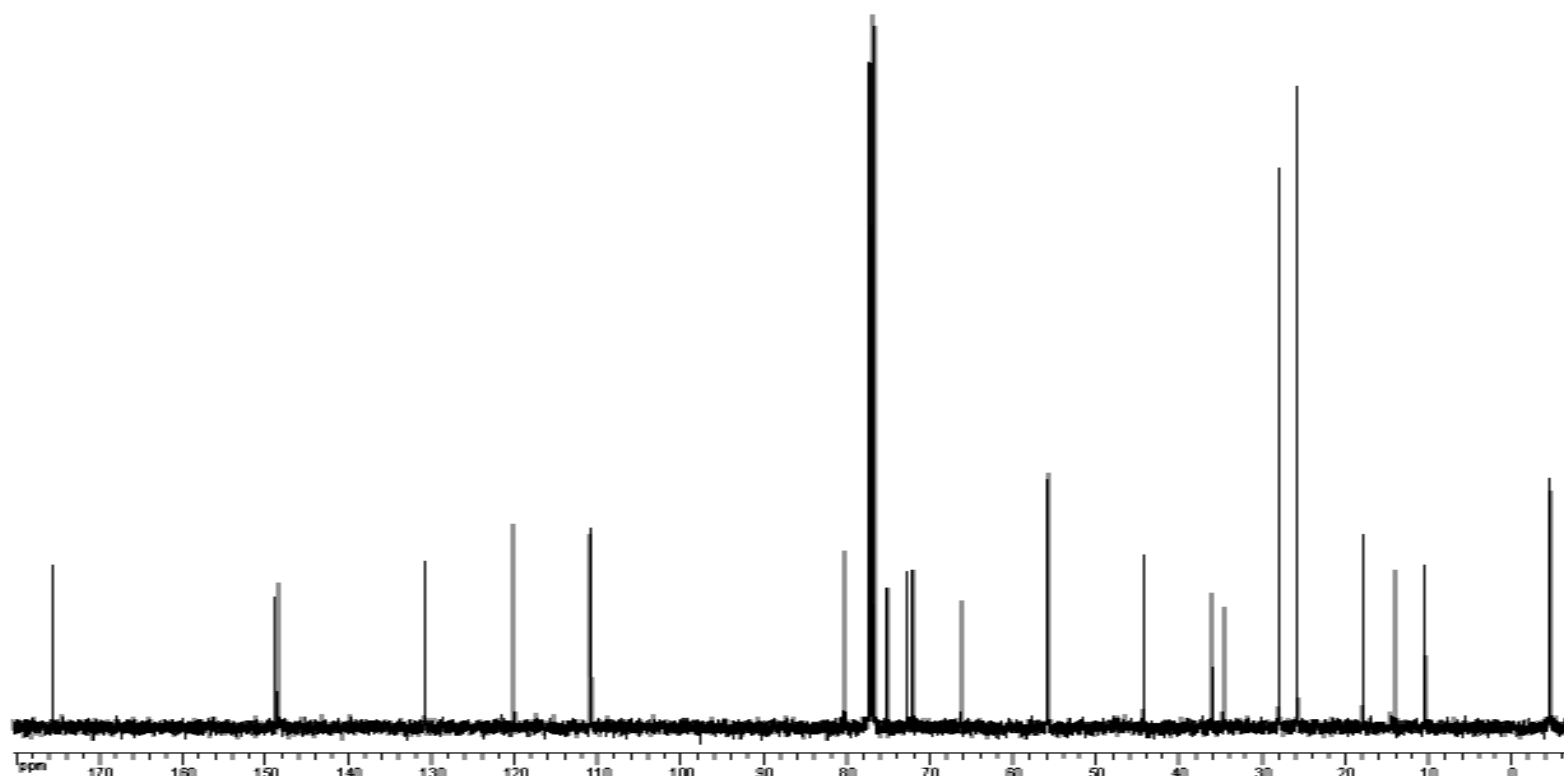
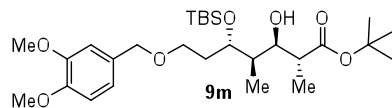
^{13}C NMR (100 MHz, CDCl_3) of compound **91** (dr >20:1)



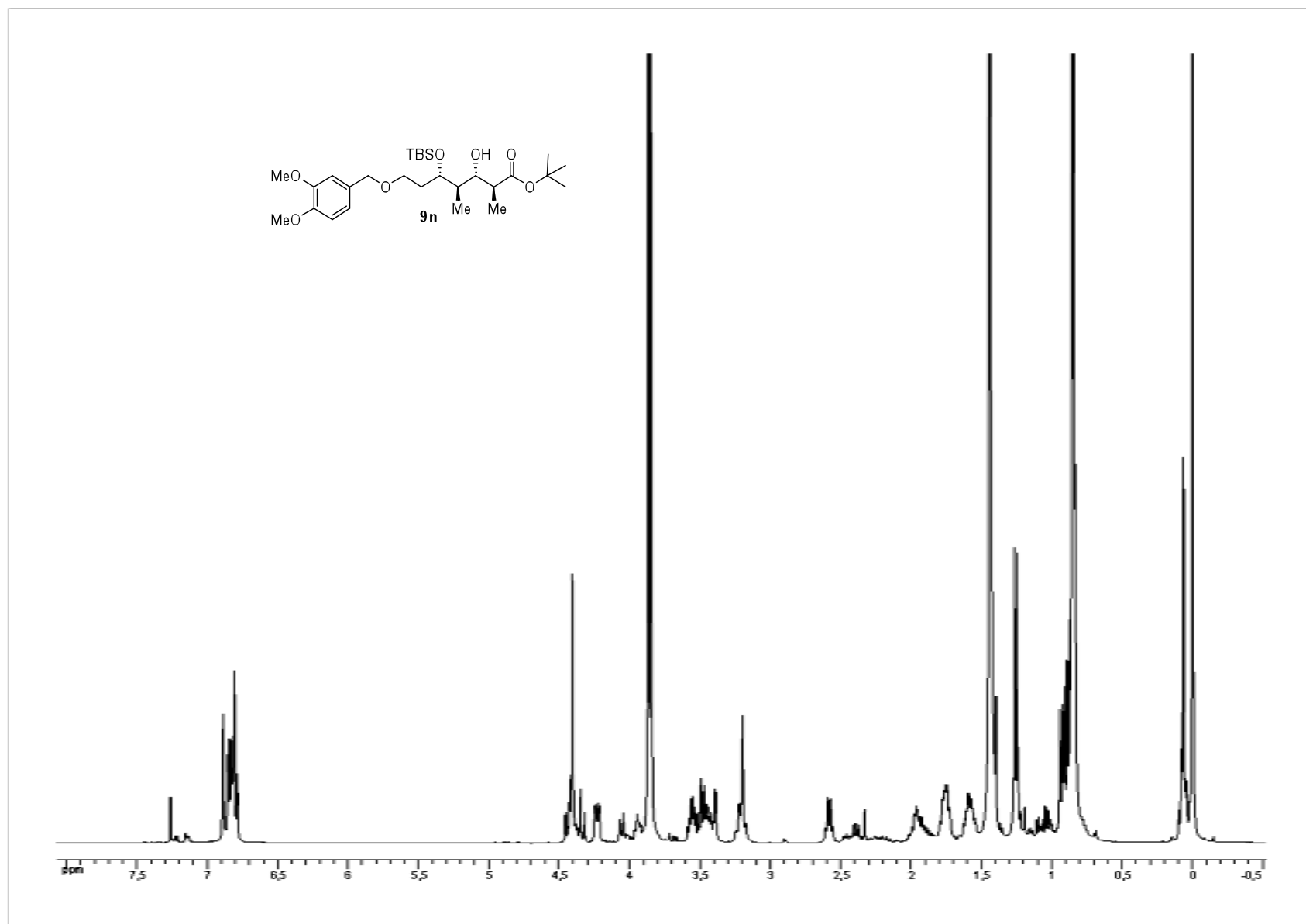
^1H NMR (400 MHz, CDCl_3) of compound **9m** (dr >20:1)



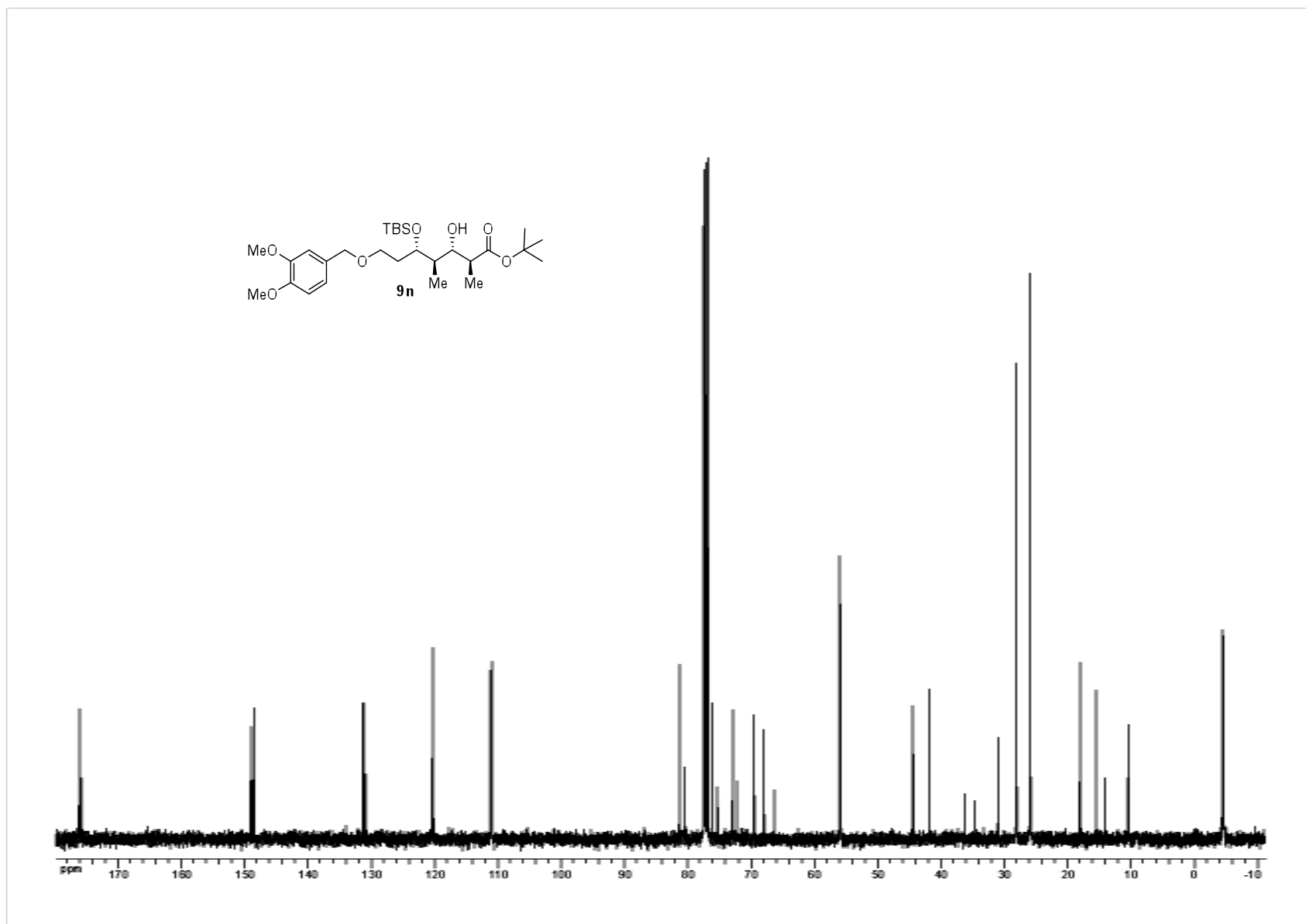
^{13}C NMR (100 MHz, CDCl_3) of compound **9m** (dr >20:1)



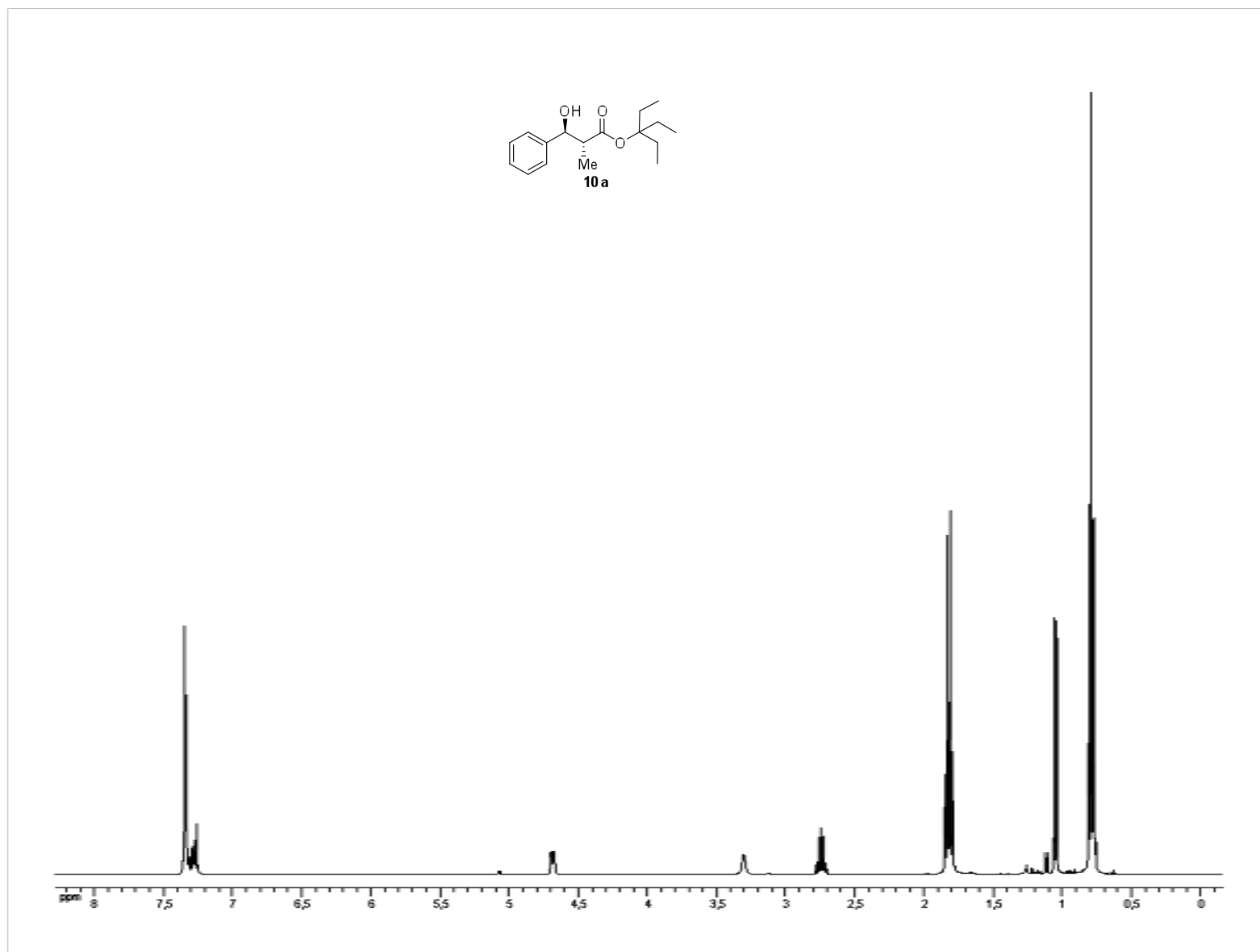
^1H NMR (400 MHz, CDCl_3) of compound **9n** (dr 2:1 **9n**:**9m**)



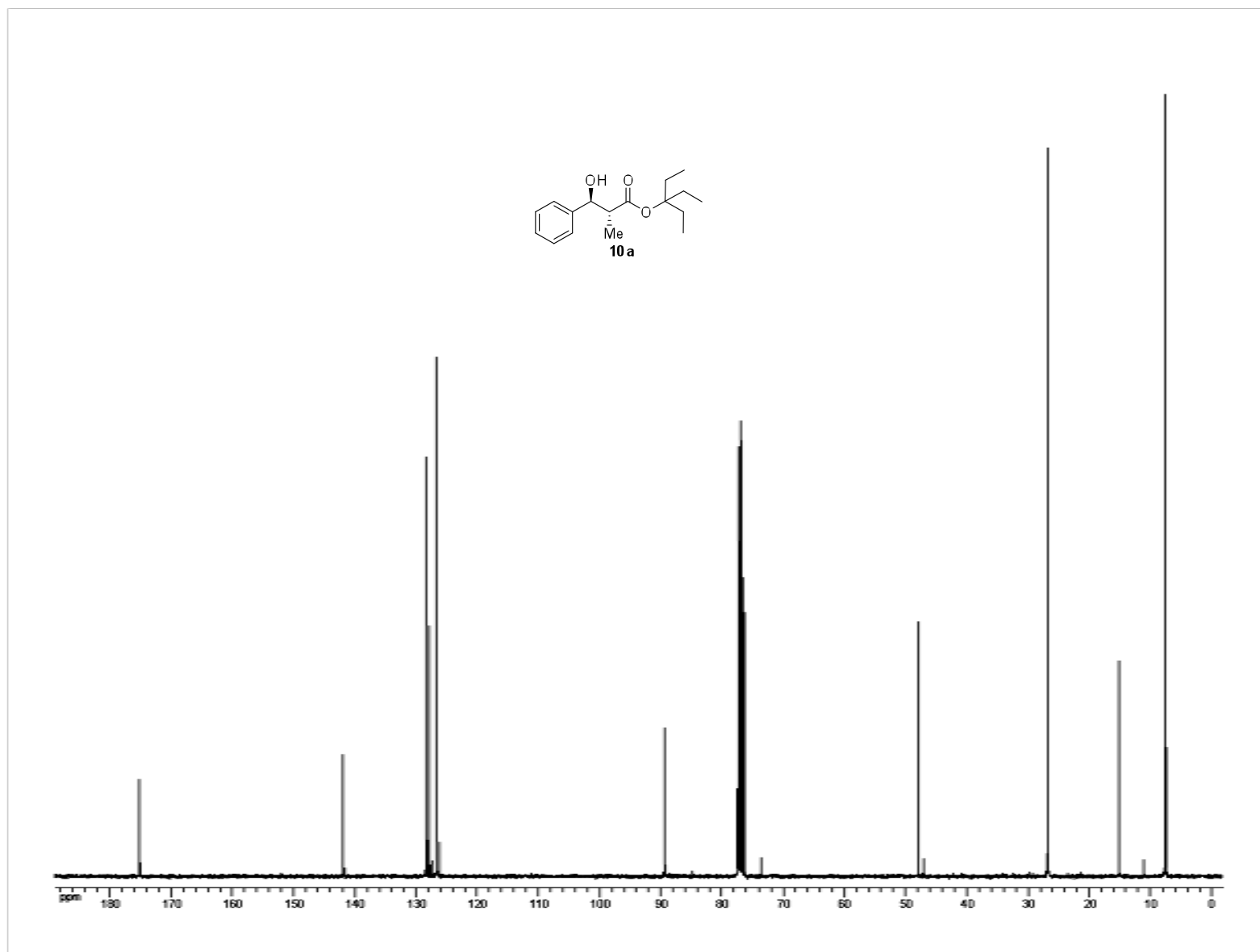
^{13}C NMR (100 MHz, CDCl_3) of compound **9n** (dr 2:1 **9n**:**9m**)



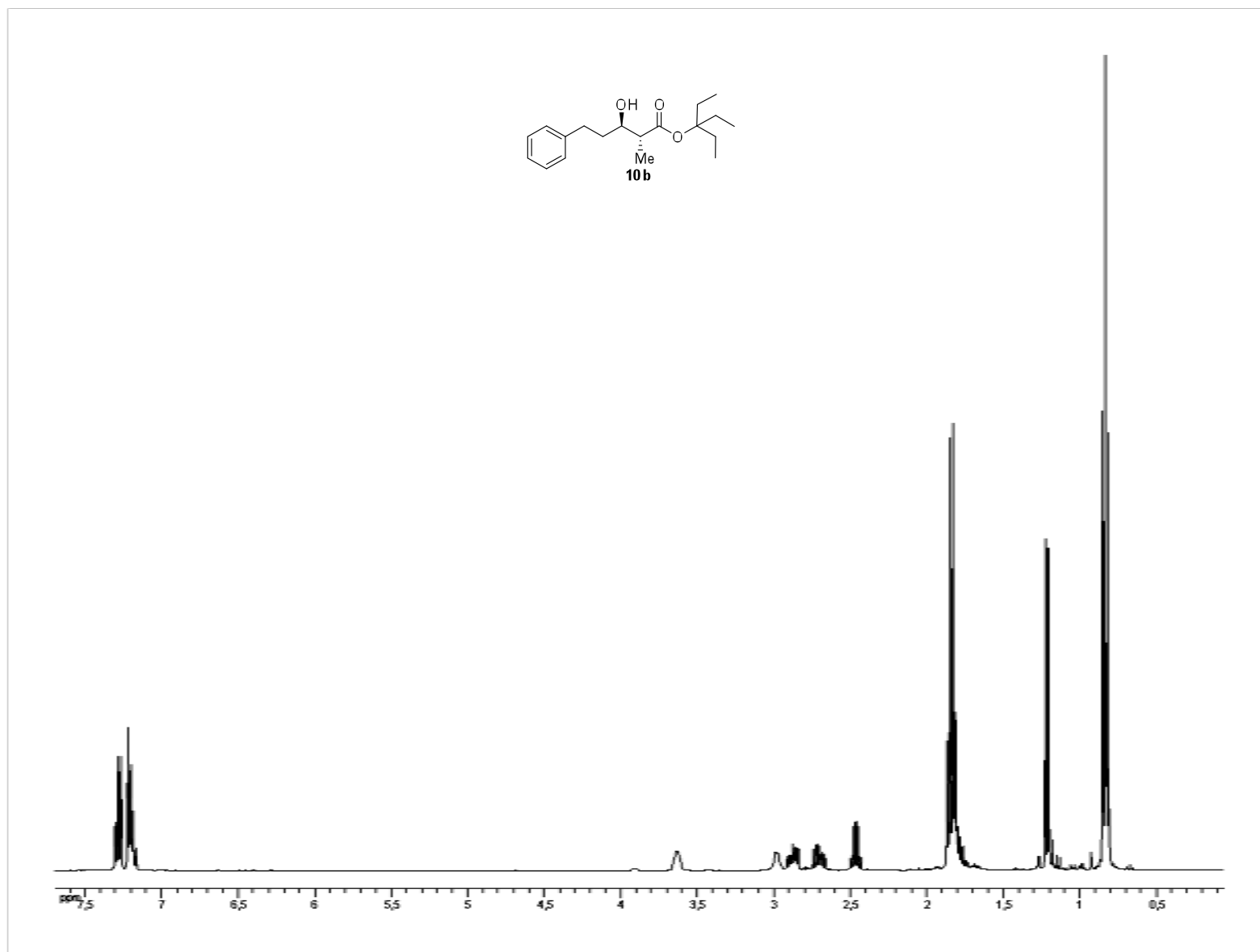
^1H NMR (400 MHz, CDCl_3) of compound **10a** (dr 14:1 *anti:syn*)



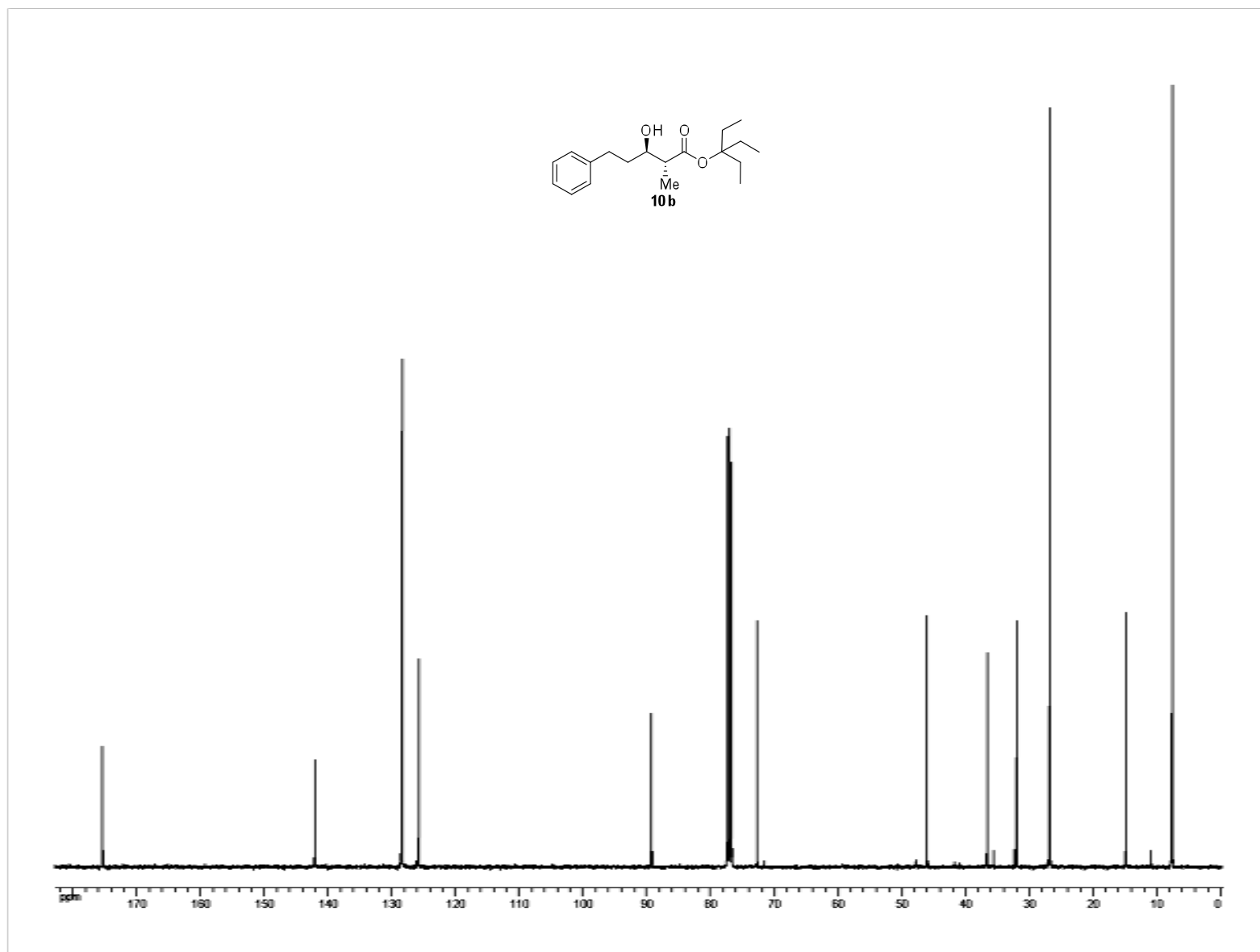
^{13}C NMR (100 MHz, CDCl_3) of compound **10a** (dr 14:1 *anti:syn*)



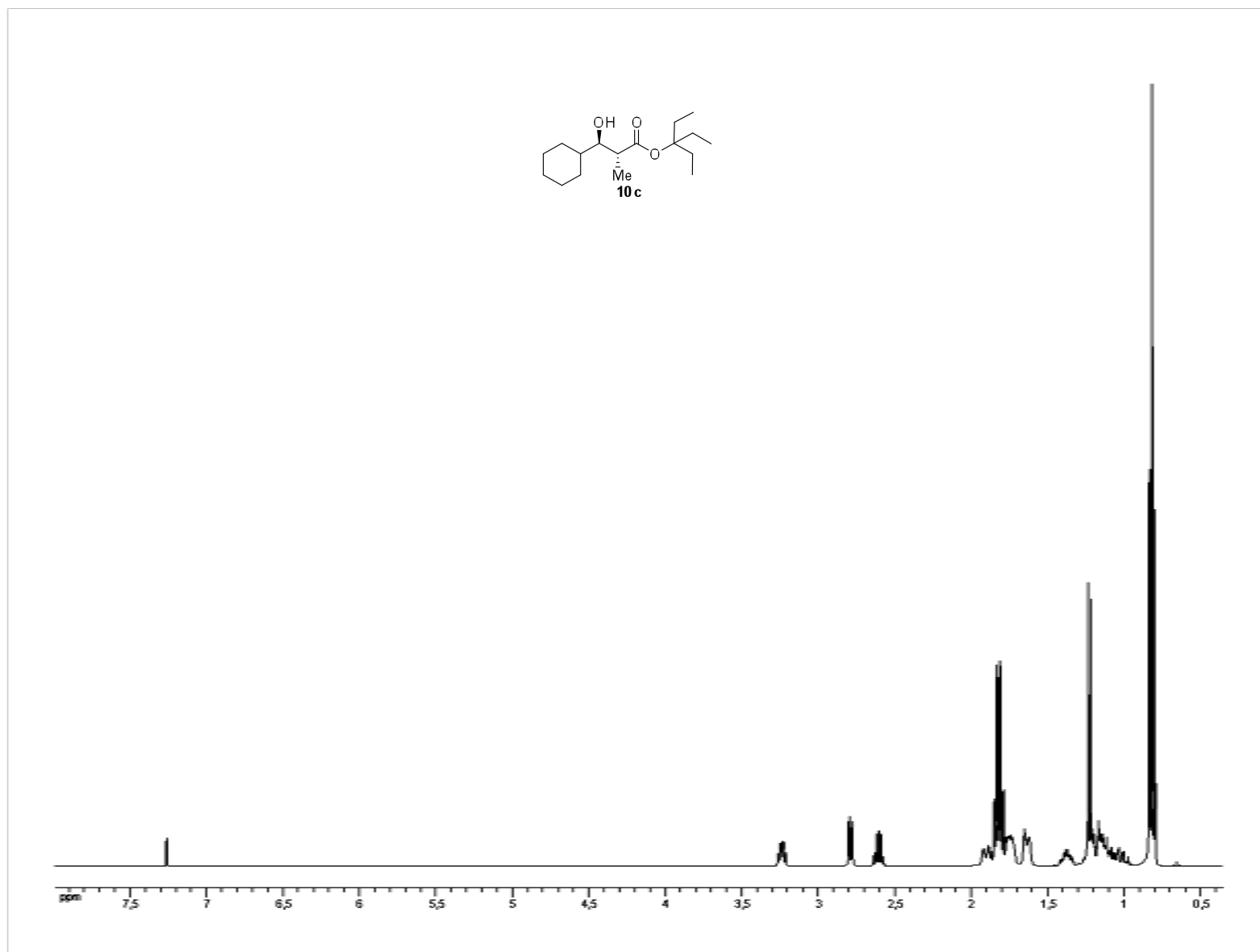
^1H NMR (400 MHz, CDCl_3) of compound **10b** (dr 13:1 *anti:syn*)



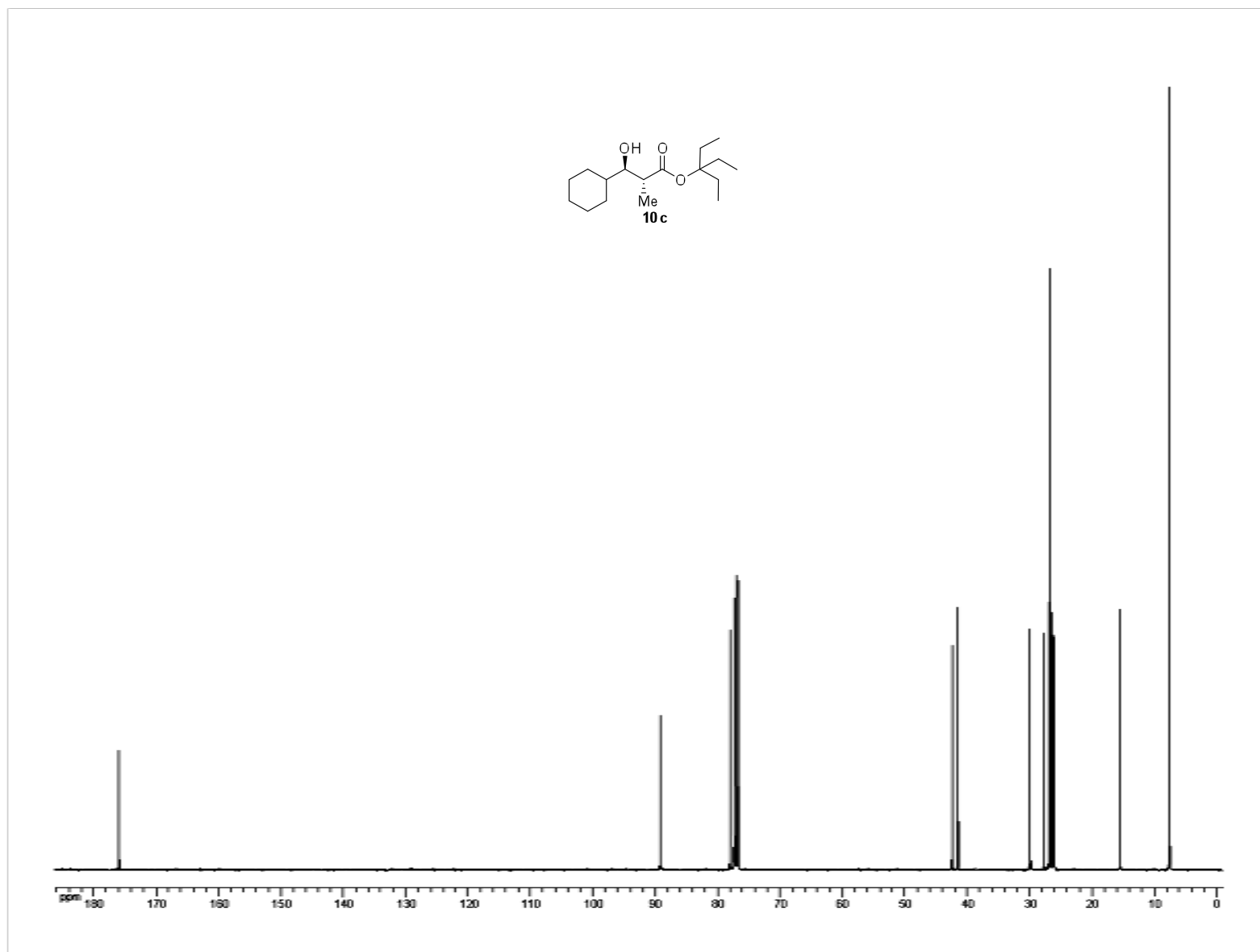
^{13}C NMR (100 MHz, CDCl_3) of compound **10b** (dr 13:1 *anti:syn*)



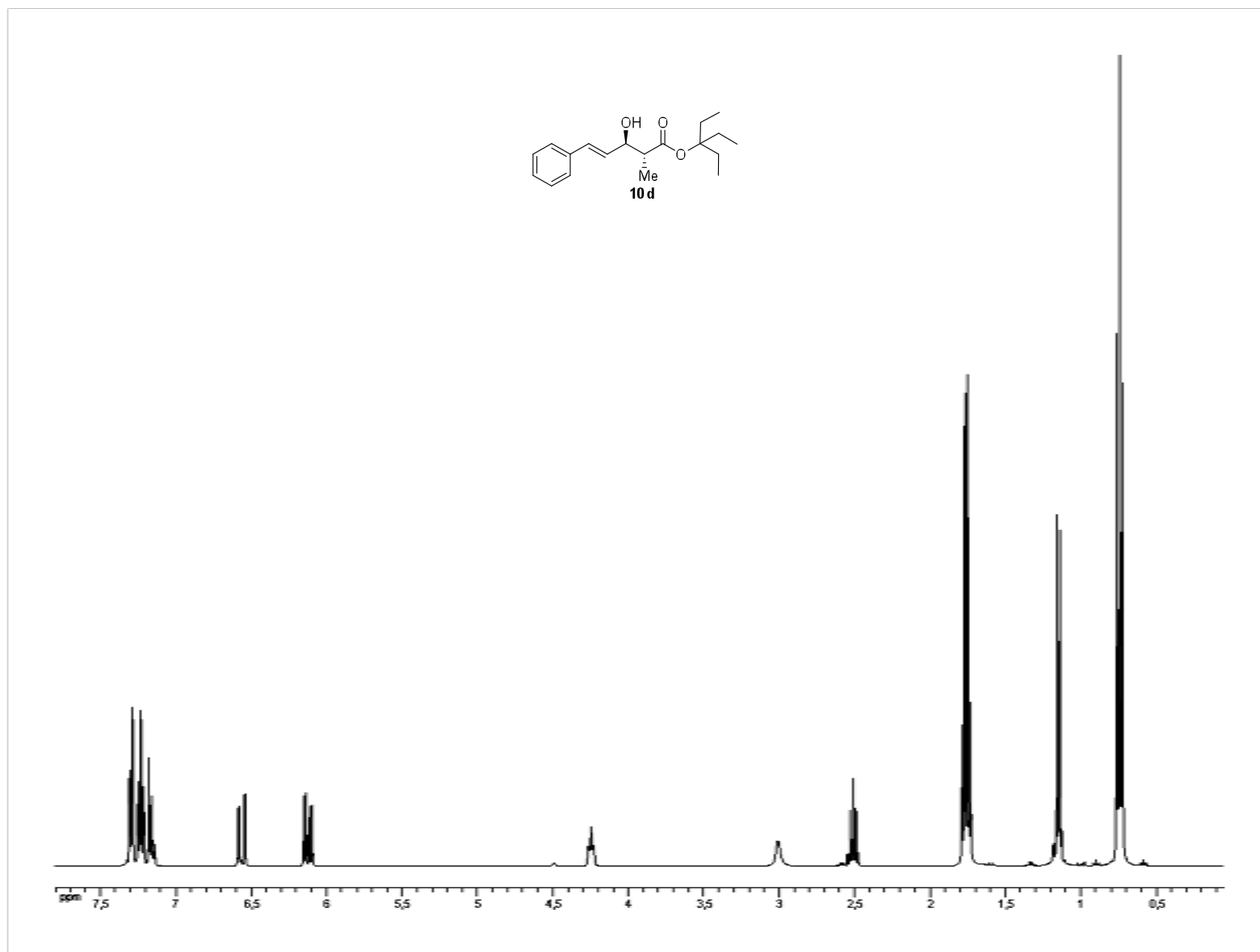
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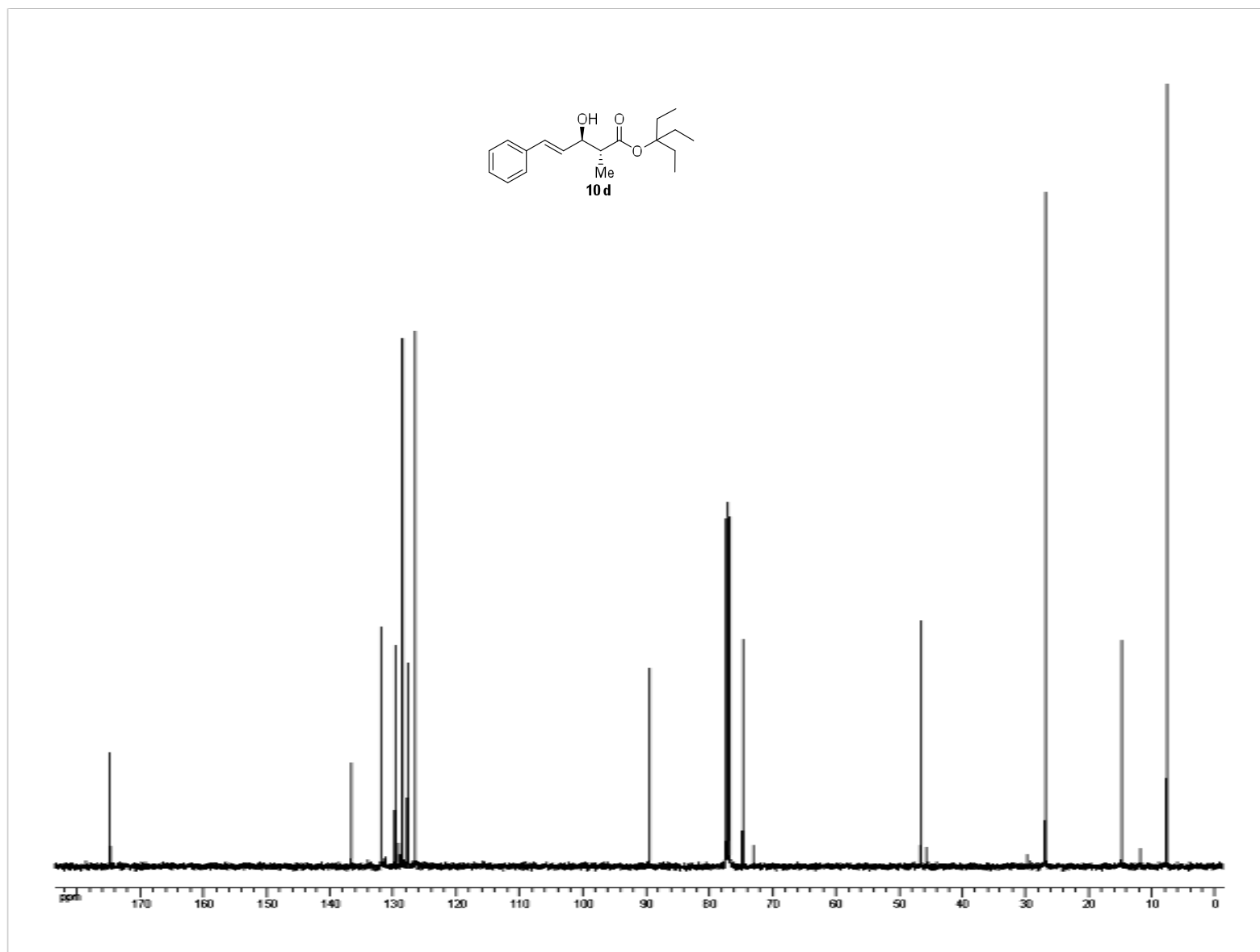
^{13}C NMR (100 MHz, CDCl_3) of compound **10c** (dr >20:1 *anti:syn*)



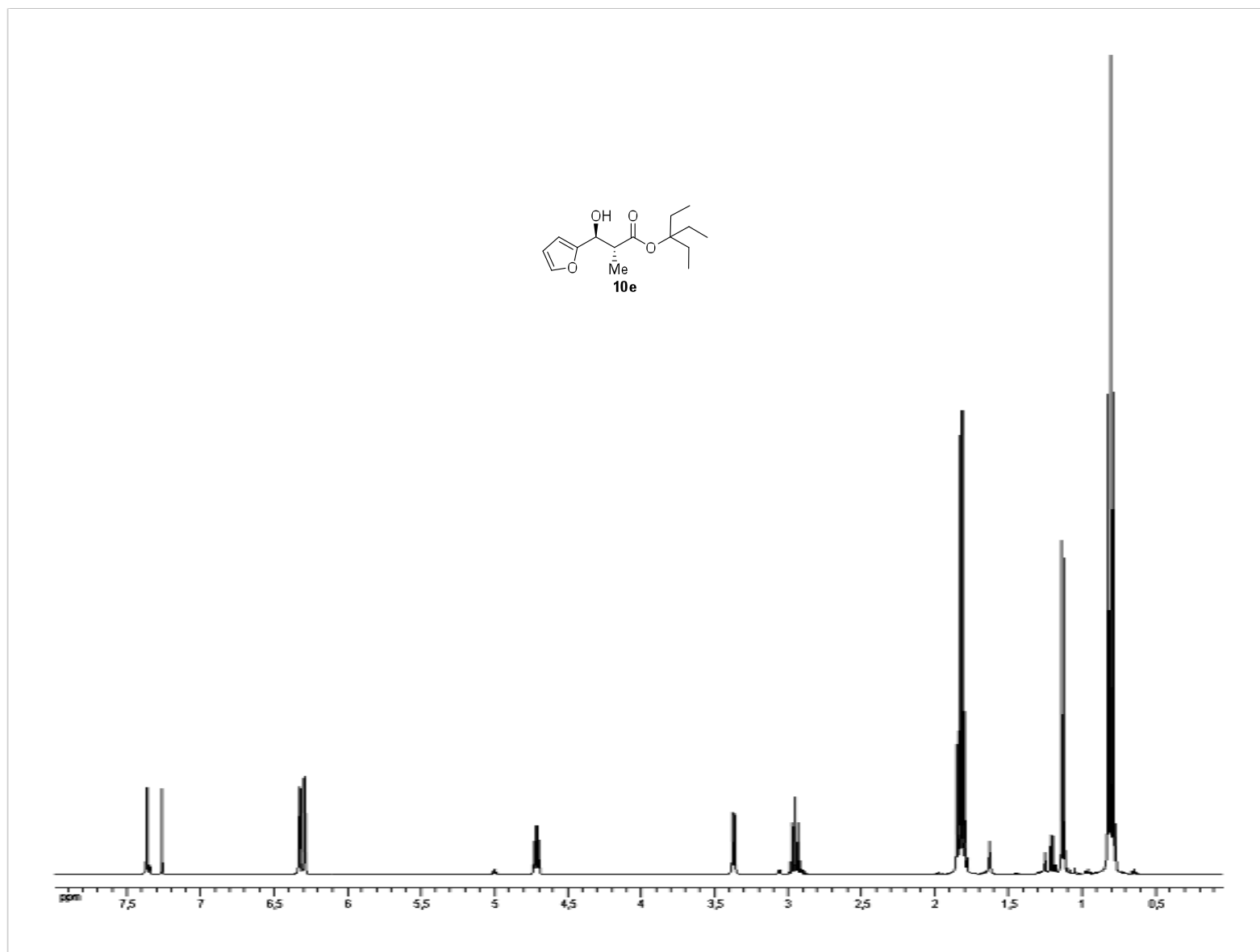
^1H NMR (400 MHz, CDCl_3) of compound **10d** (dr 13:1 *anti:syn*)



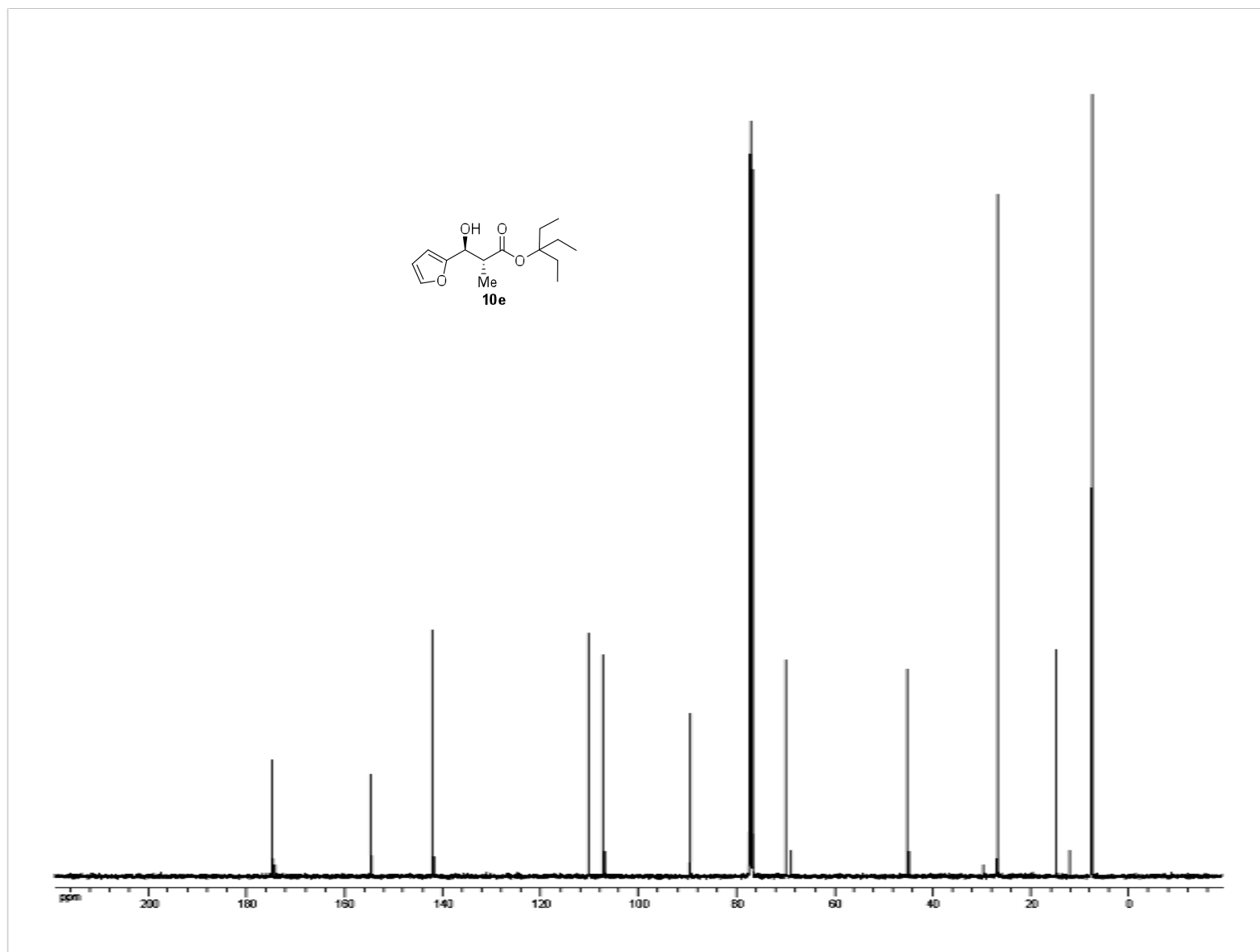
^{13}C NMR (100 MHz, CDCl_3) of compound **10d** (dr 13:1 *anti:syn*)



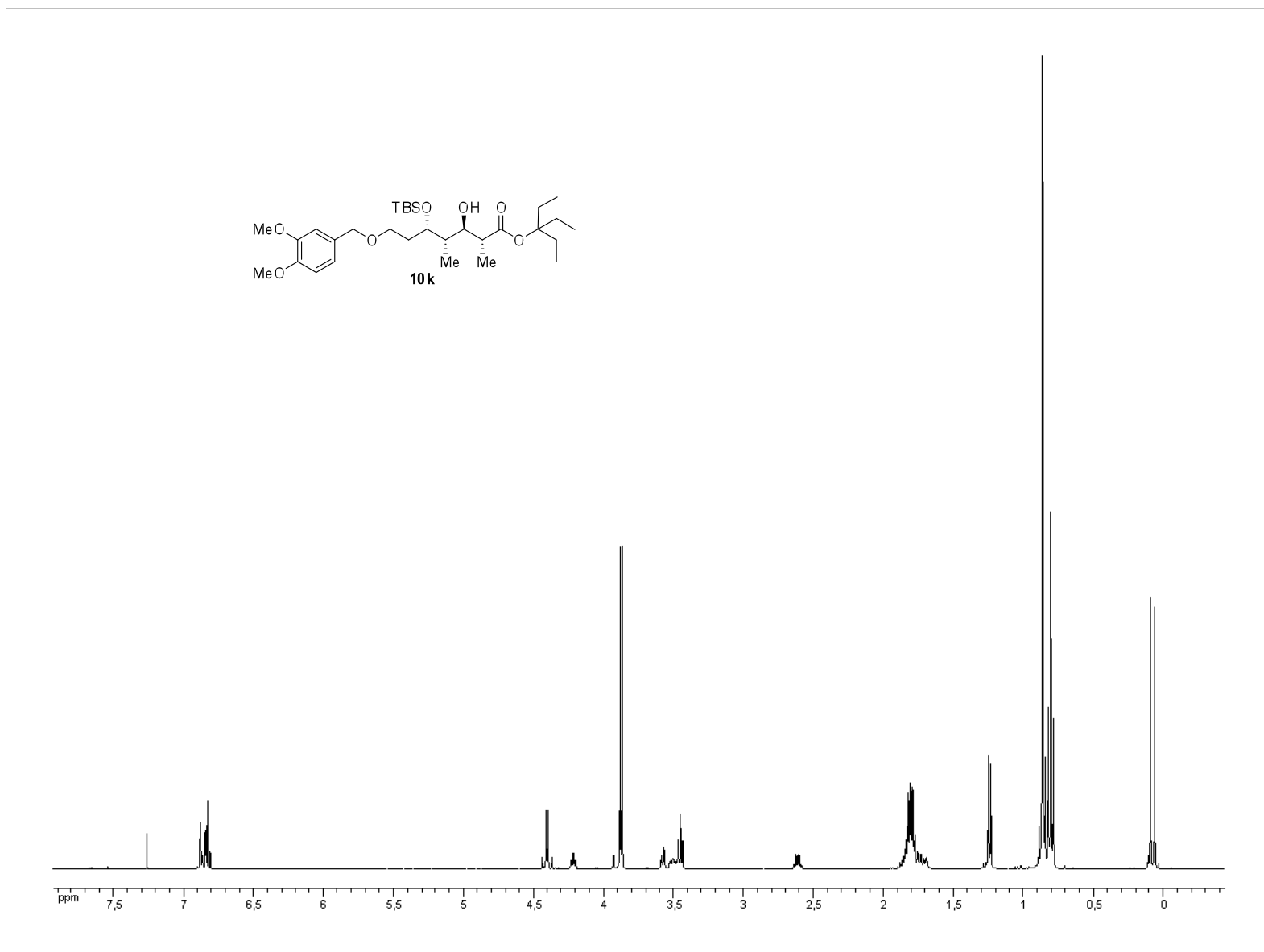
^1H NMR (400 MHz, CDCl_3) of compound **10e** (dr 10:1 *anti:syn*)



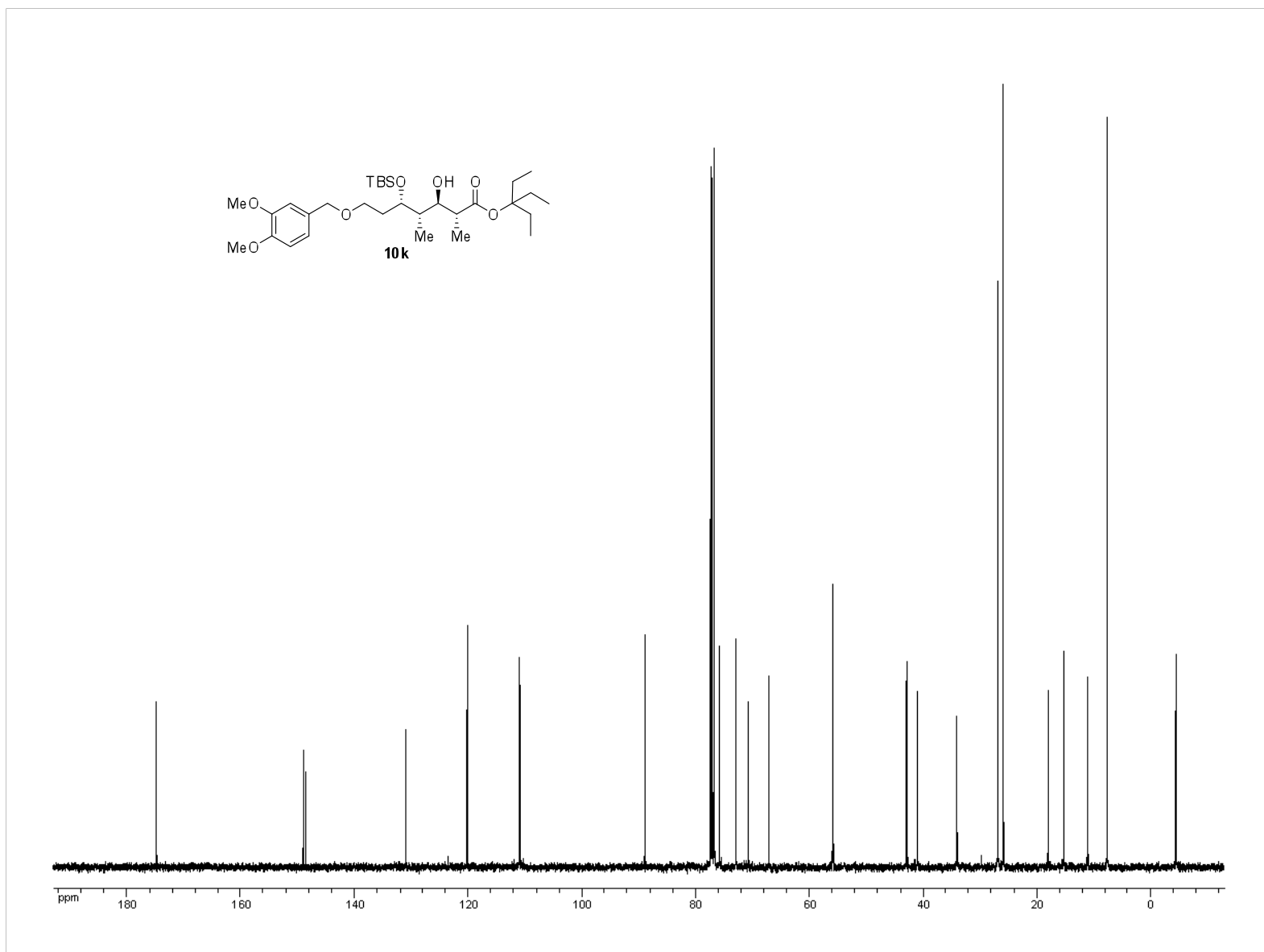
^{13}C NMR (100 MHz, CDCl_3) of compound **10e** (dr 10:1 *anti:syn*)



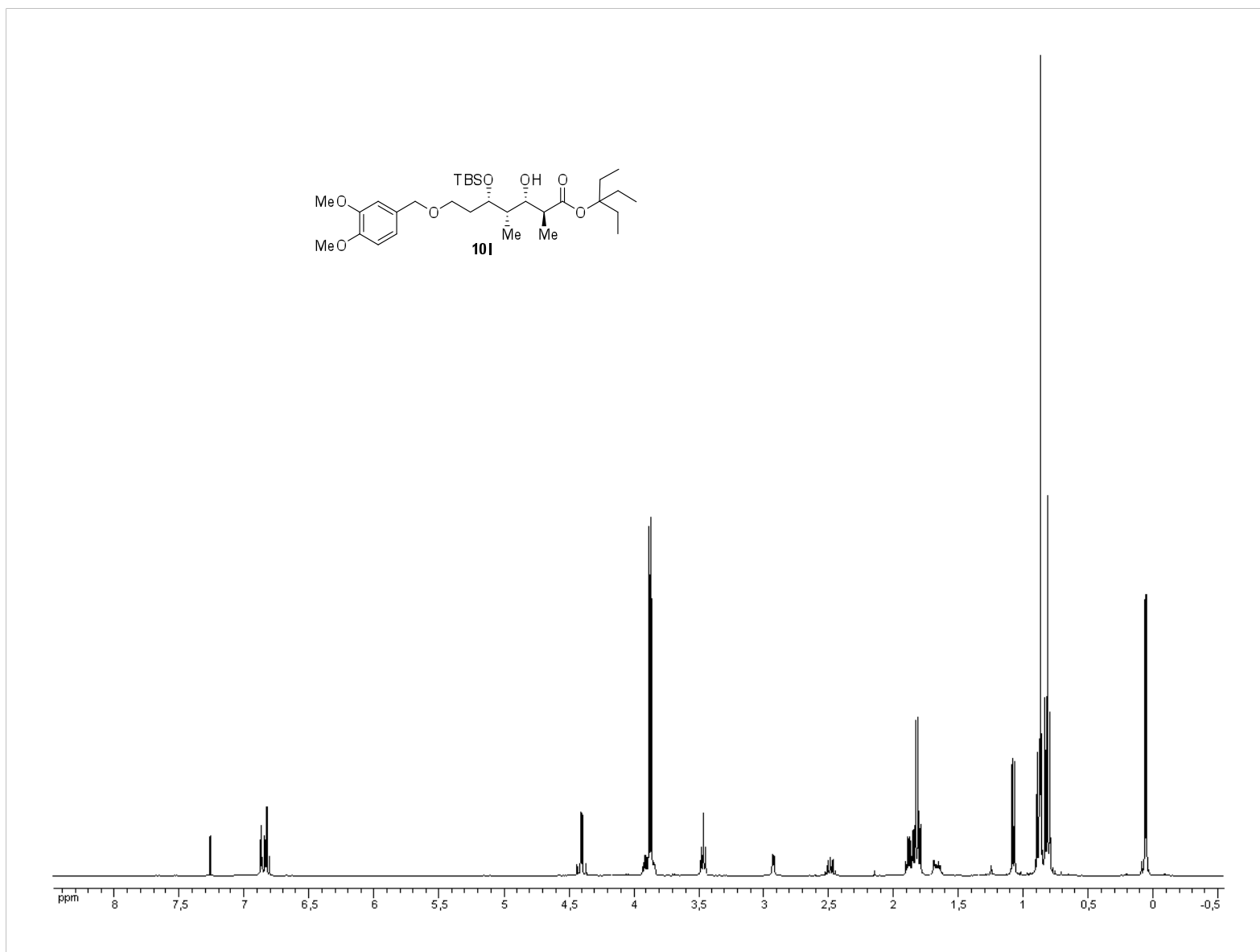
^1H NMR (400 MHz, CDCl_3) of compound **10k** (dr >20:1)



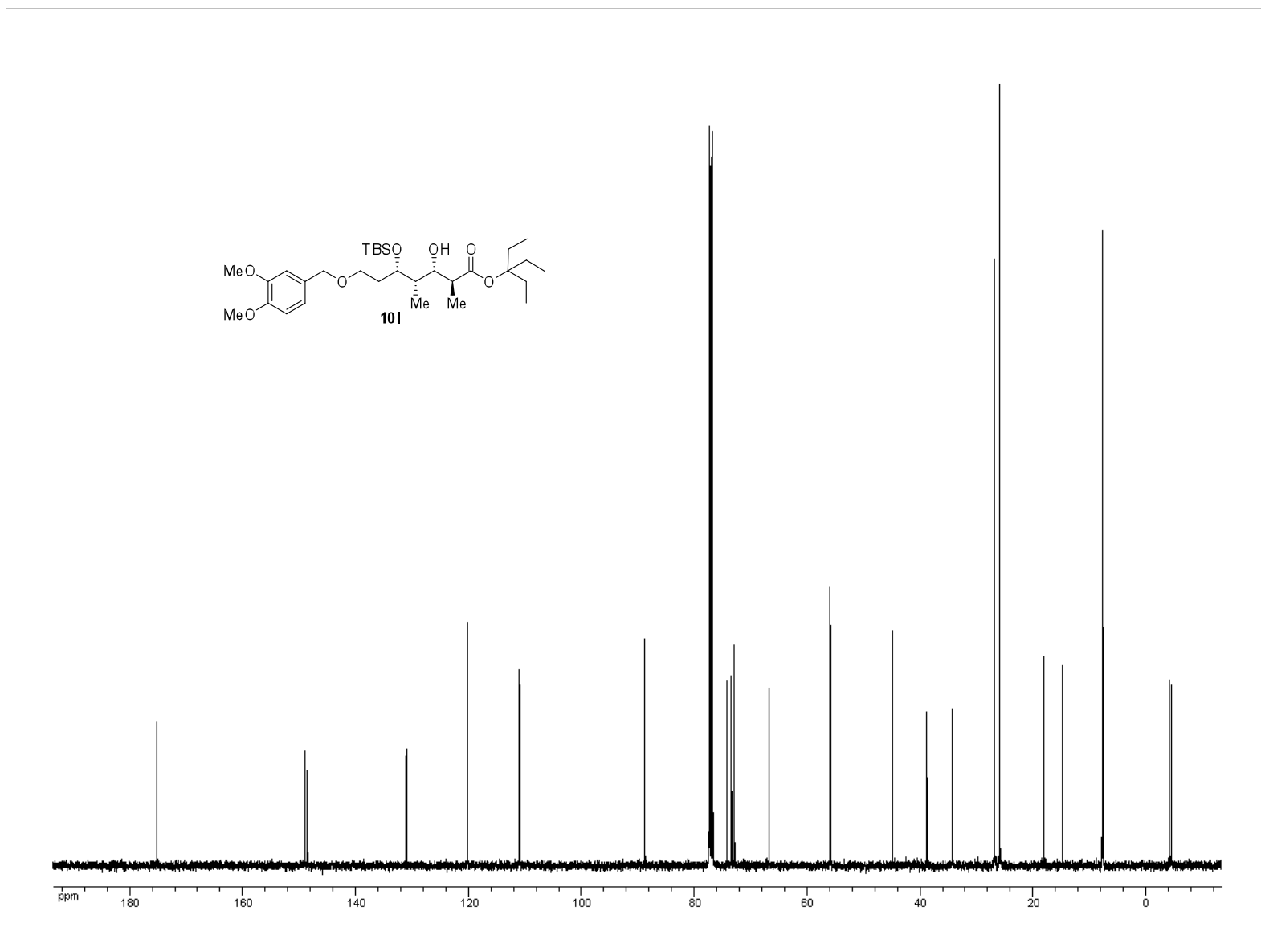
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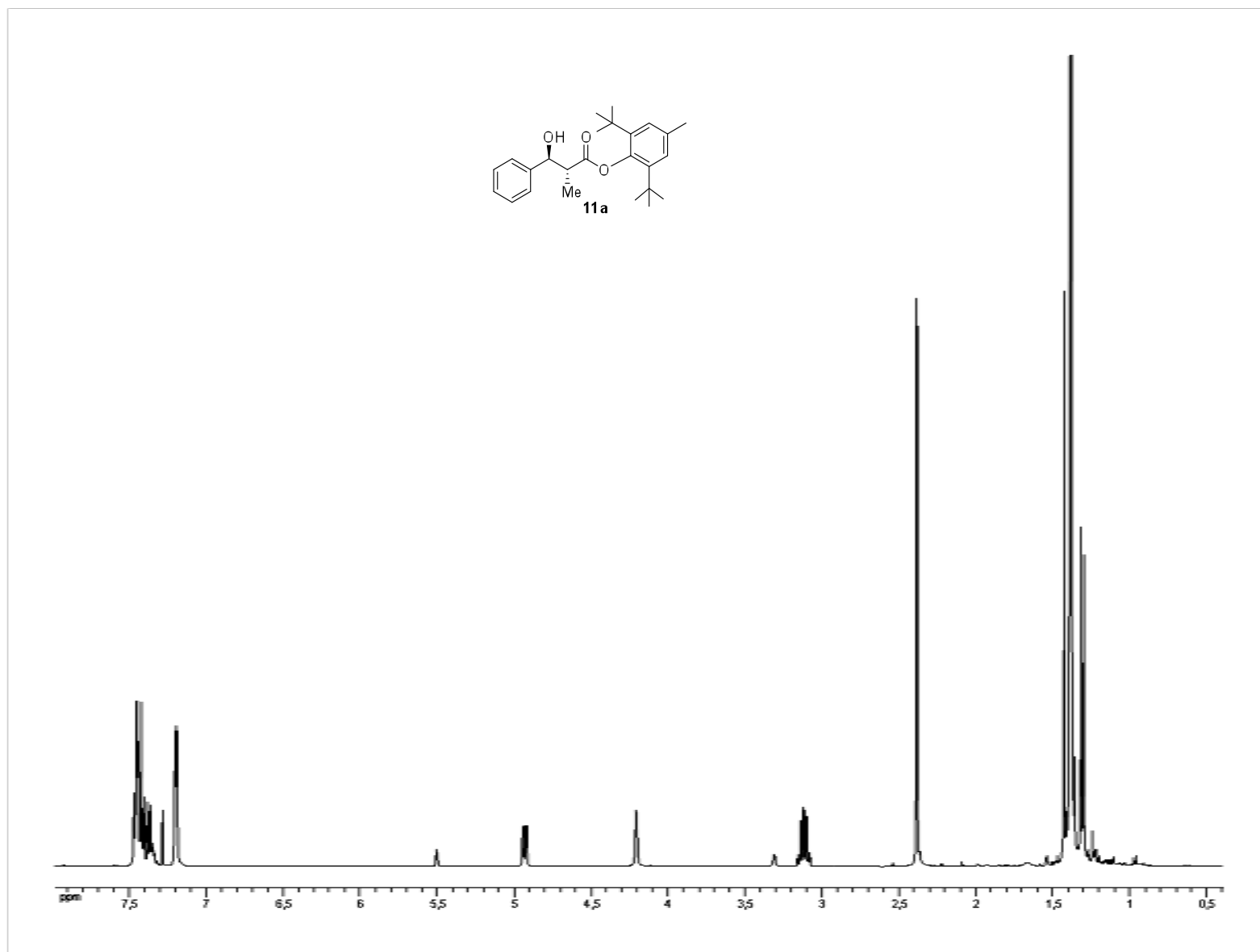
^1H NMR (400 MHz, CDCl_3) of compound **101** (dr >20:1)



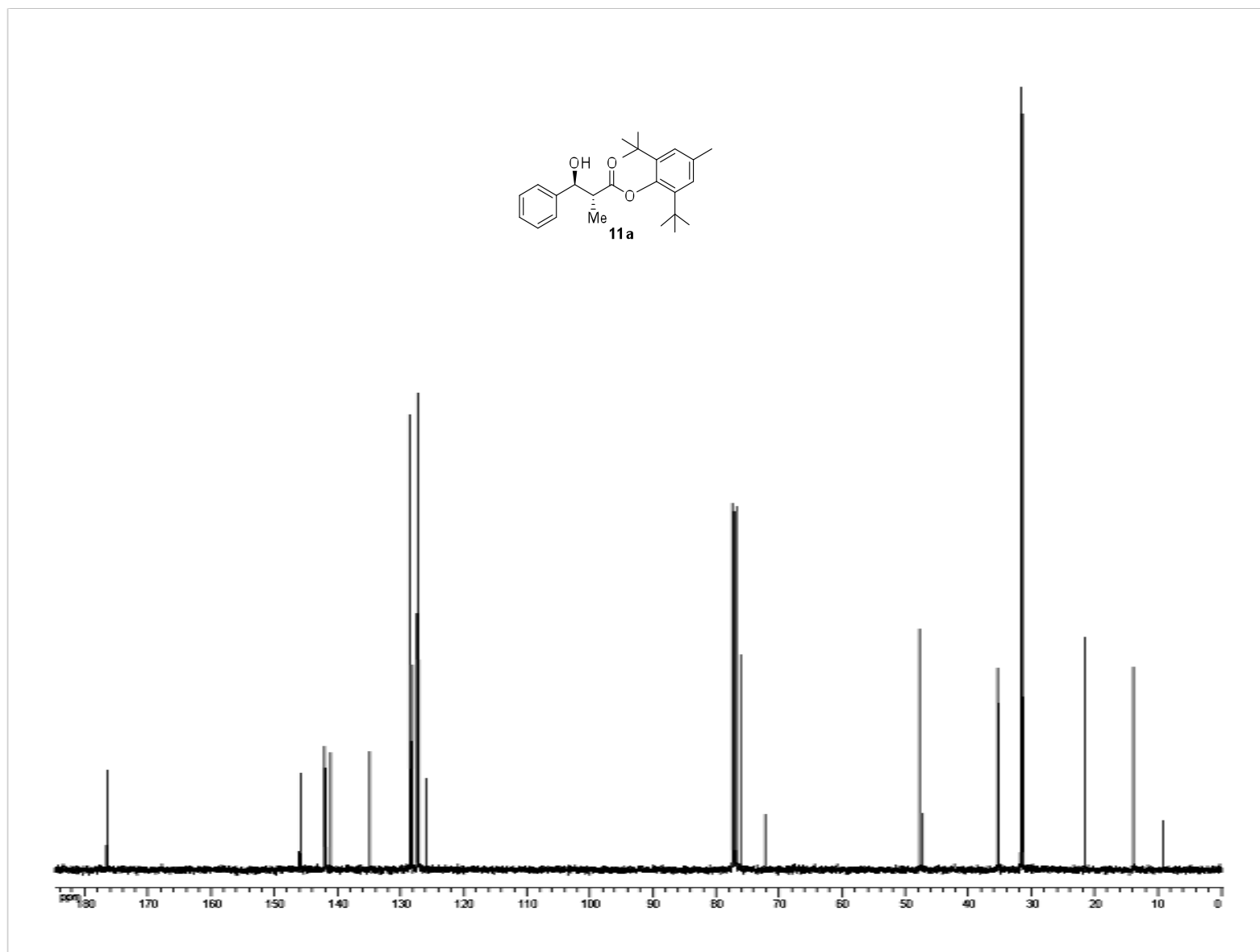
^{13}C NMR (100 MHz, CDCl_3) of compound **101** (dr >20:1)



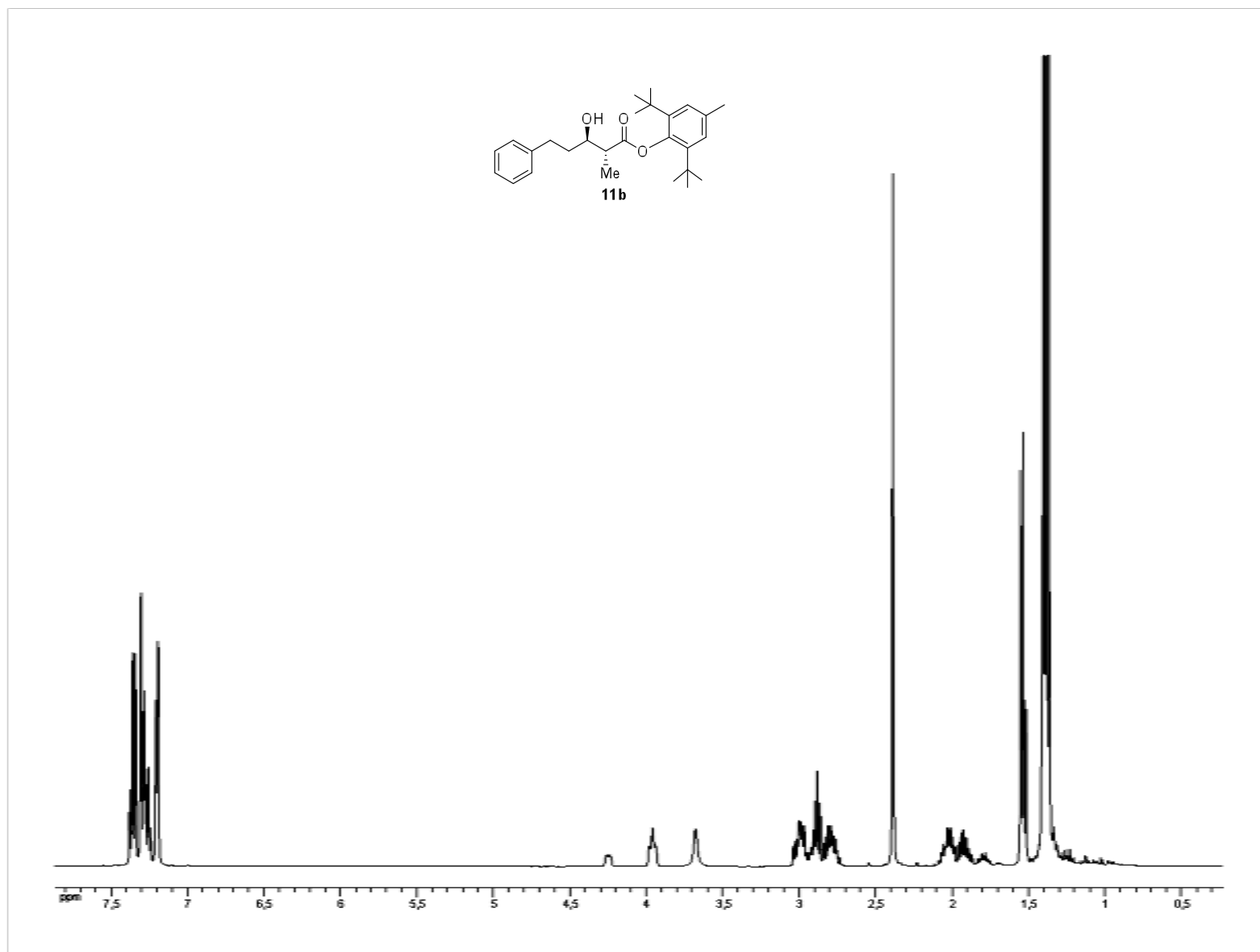
^1H NMR (400 MHz, CDCl_3) of compound **11a** (dr 6:1 *anti:syn*)



^{13}C NMR (100 MHz, CDCl_3) of compound **11a** (dr 6:1 *anti:syn*)



^1H NMR (400 MHz, CDCl_3) of compound **11b** (dr 3:1 *anti:syn*)



^{13}C NMR (100 MHz, CDCl_3) of compound **11b** (dr 3:1 *anti:syn*)

