

Supplementary Material

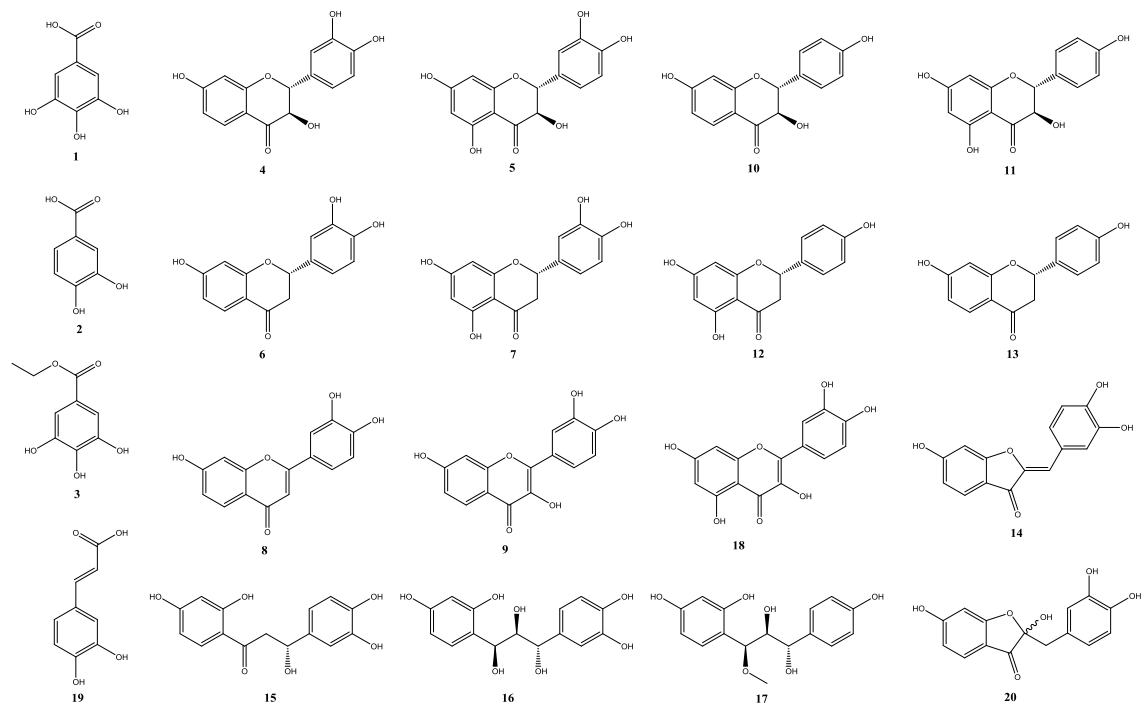
Immune Checkpoint PD-1/PD-L1 CTLA-4/CD80 are Blocked by *Rhus verniciflua* Stokes and its Active Compounds

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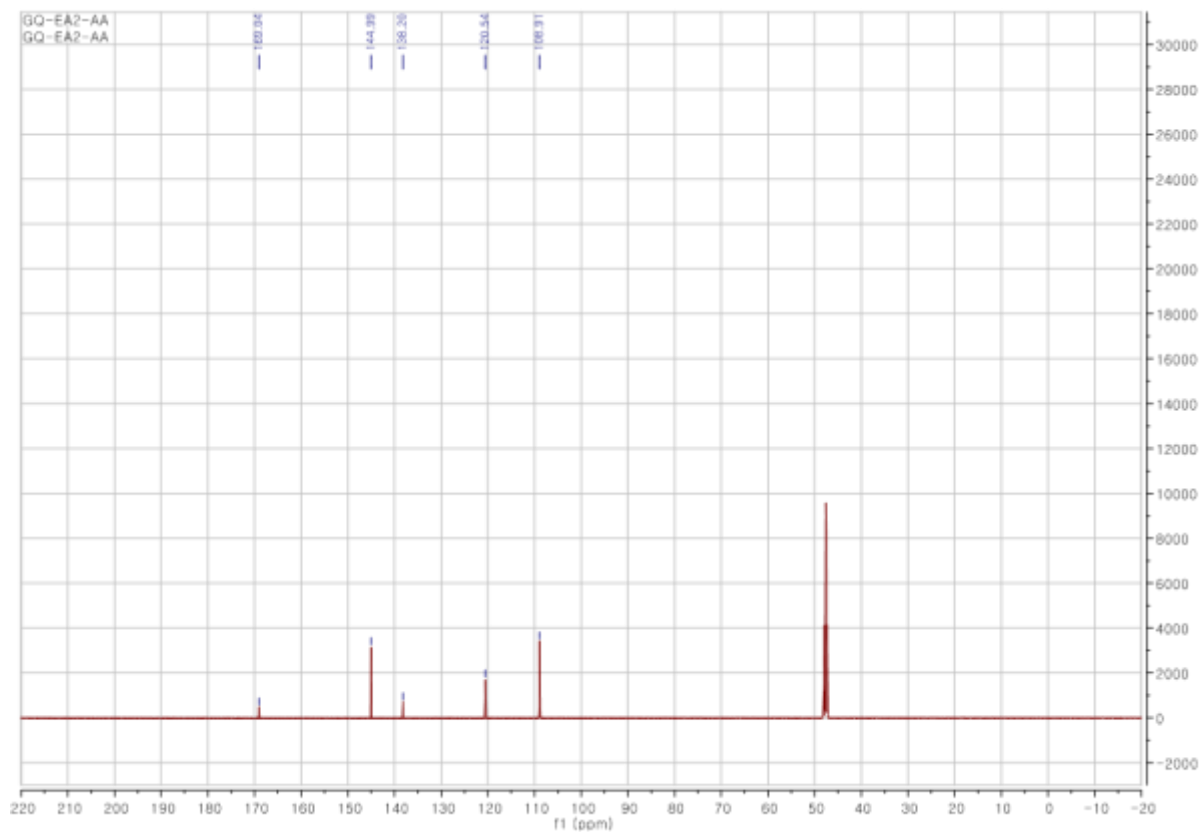
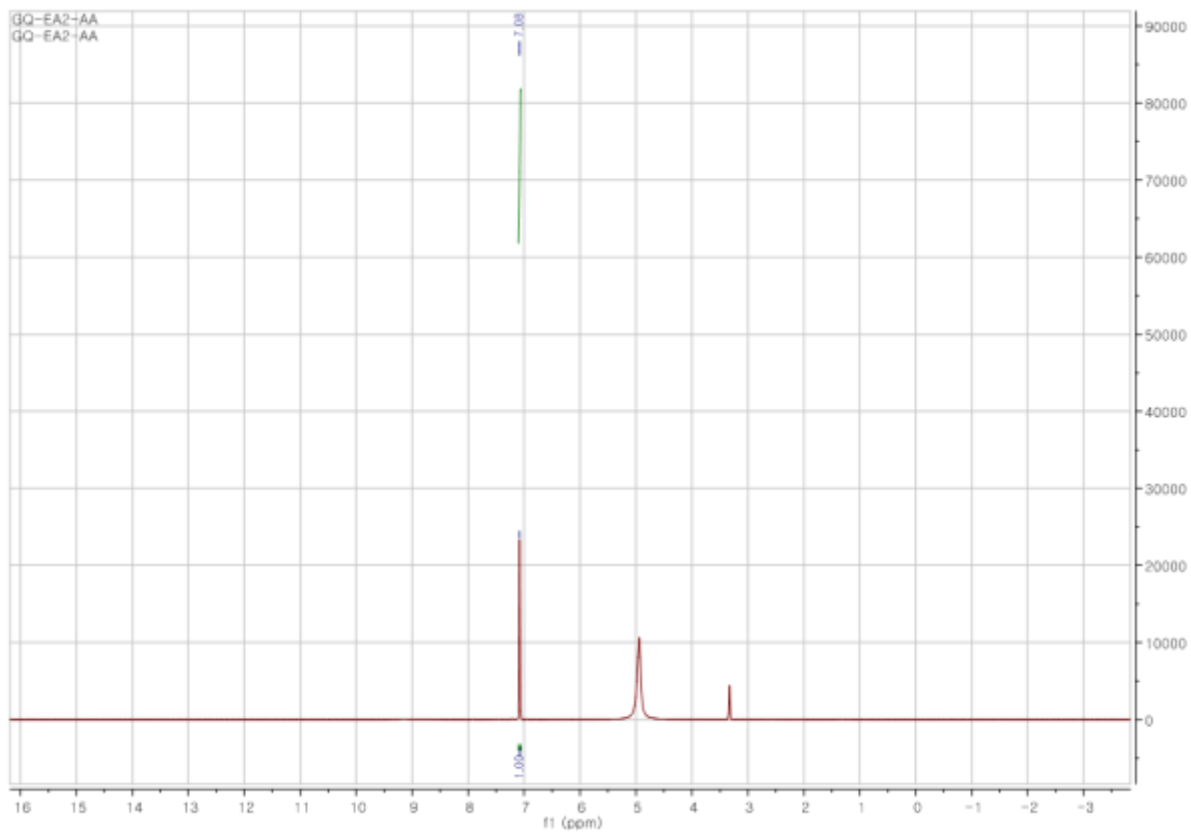
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[#] These authors contributed equally to this work.

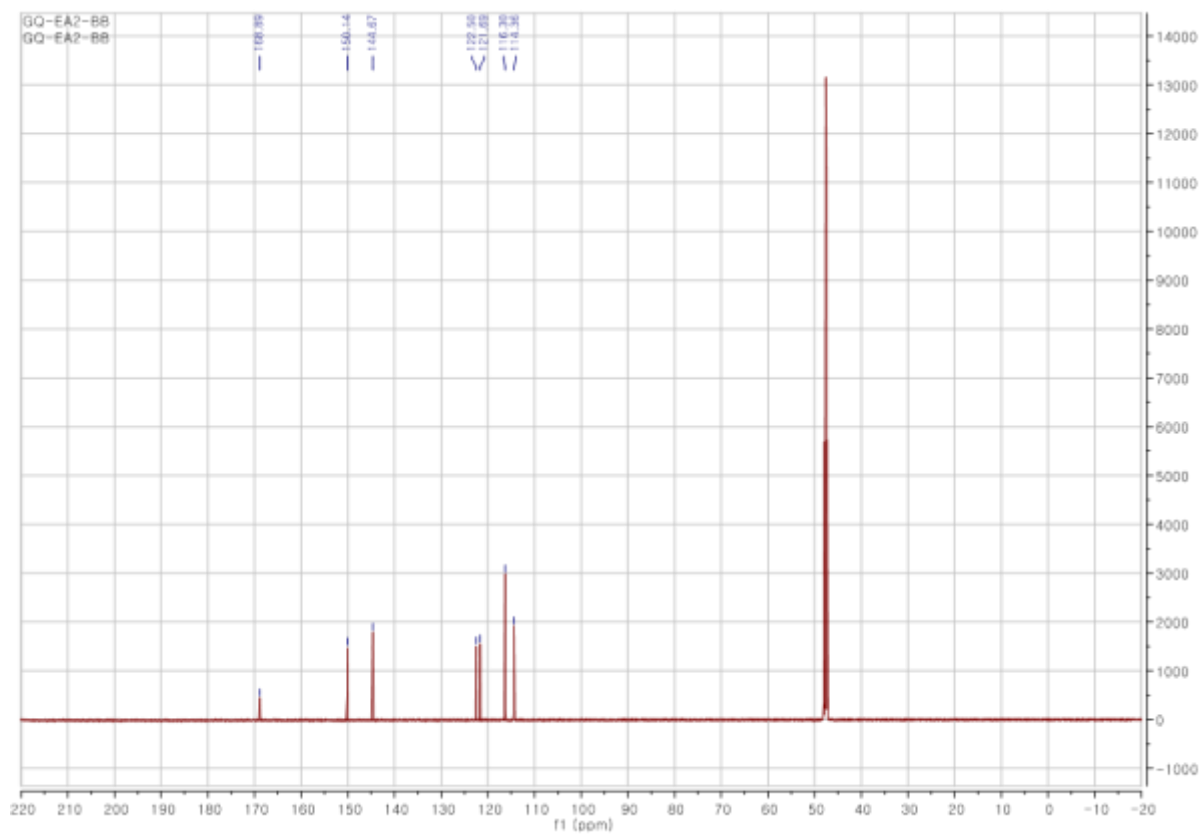
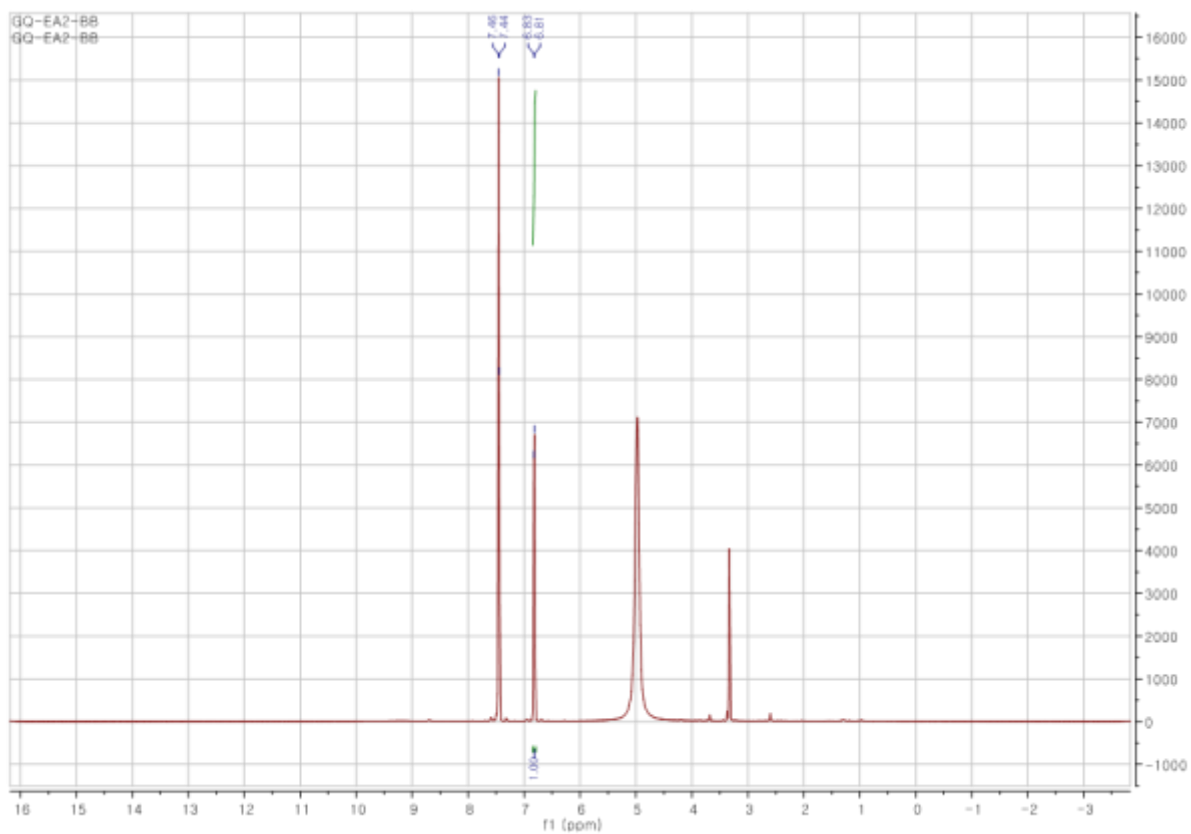
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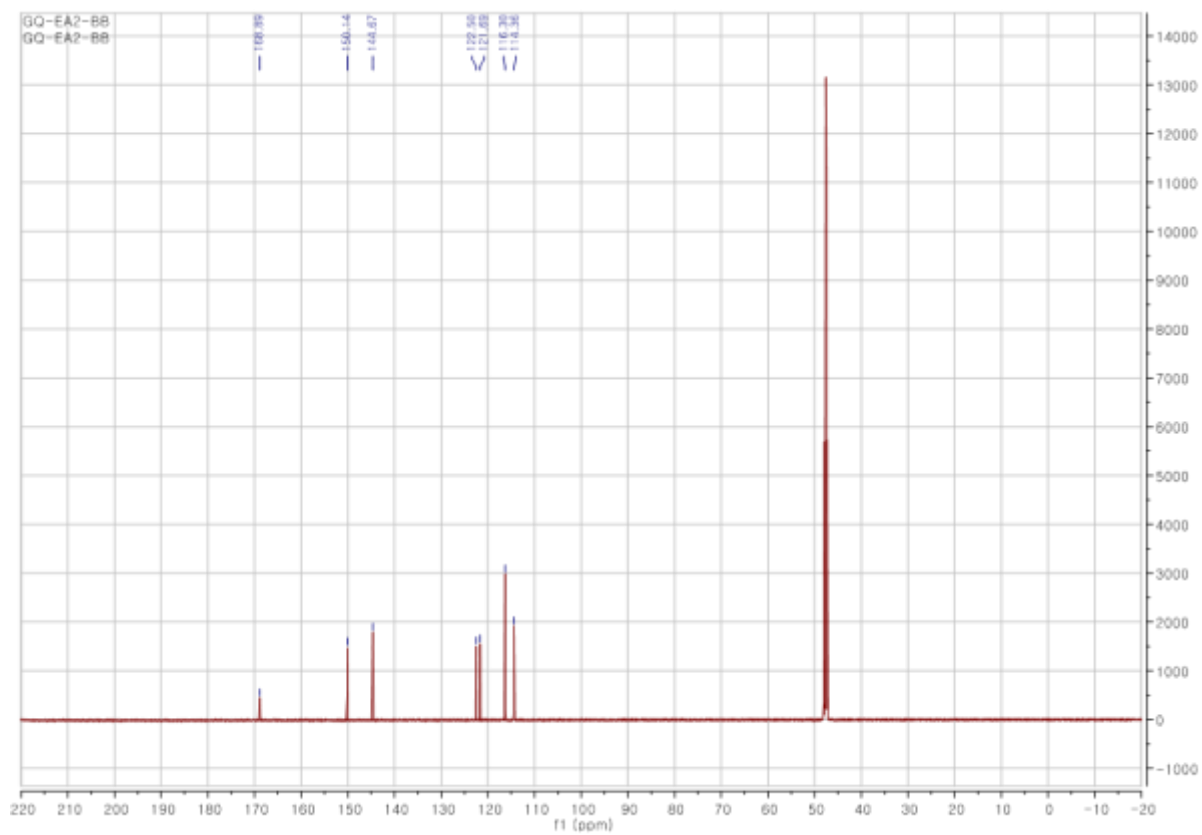
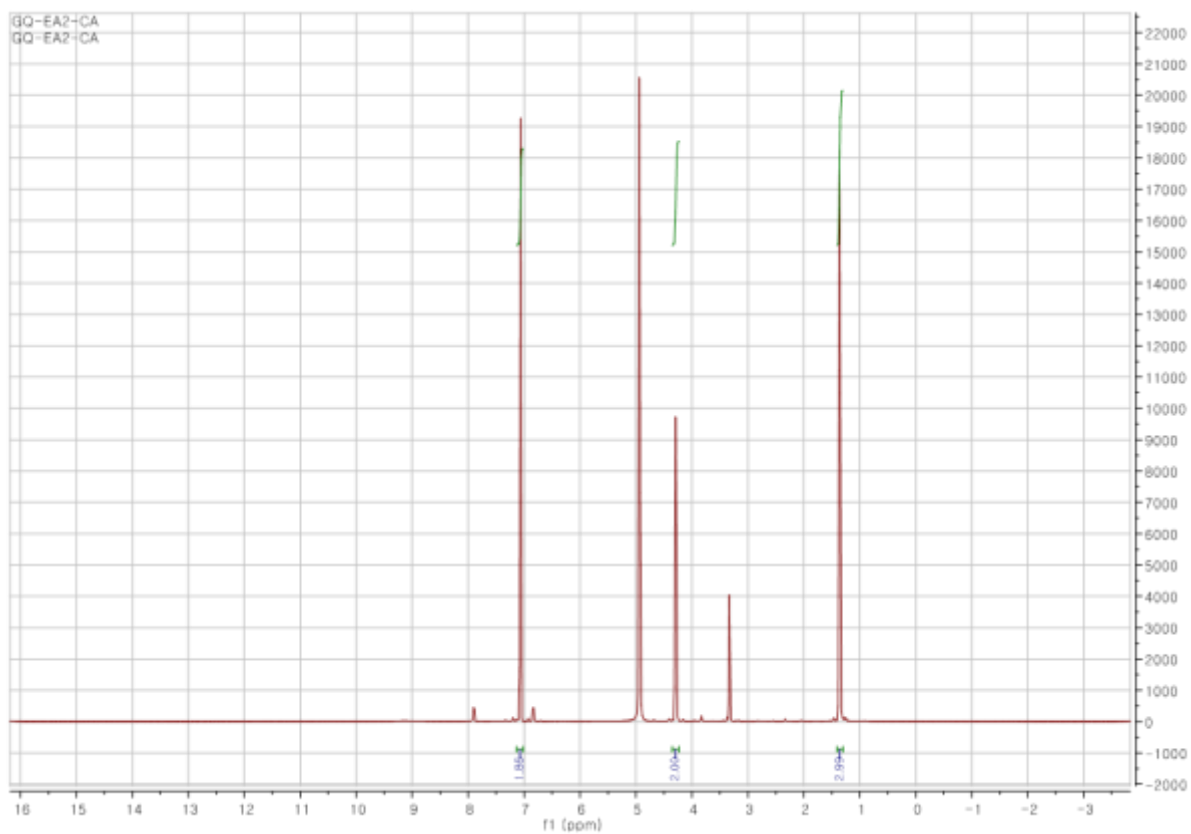
S1. Structures of compounds 1–20 from RVS.



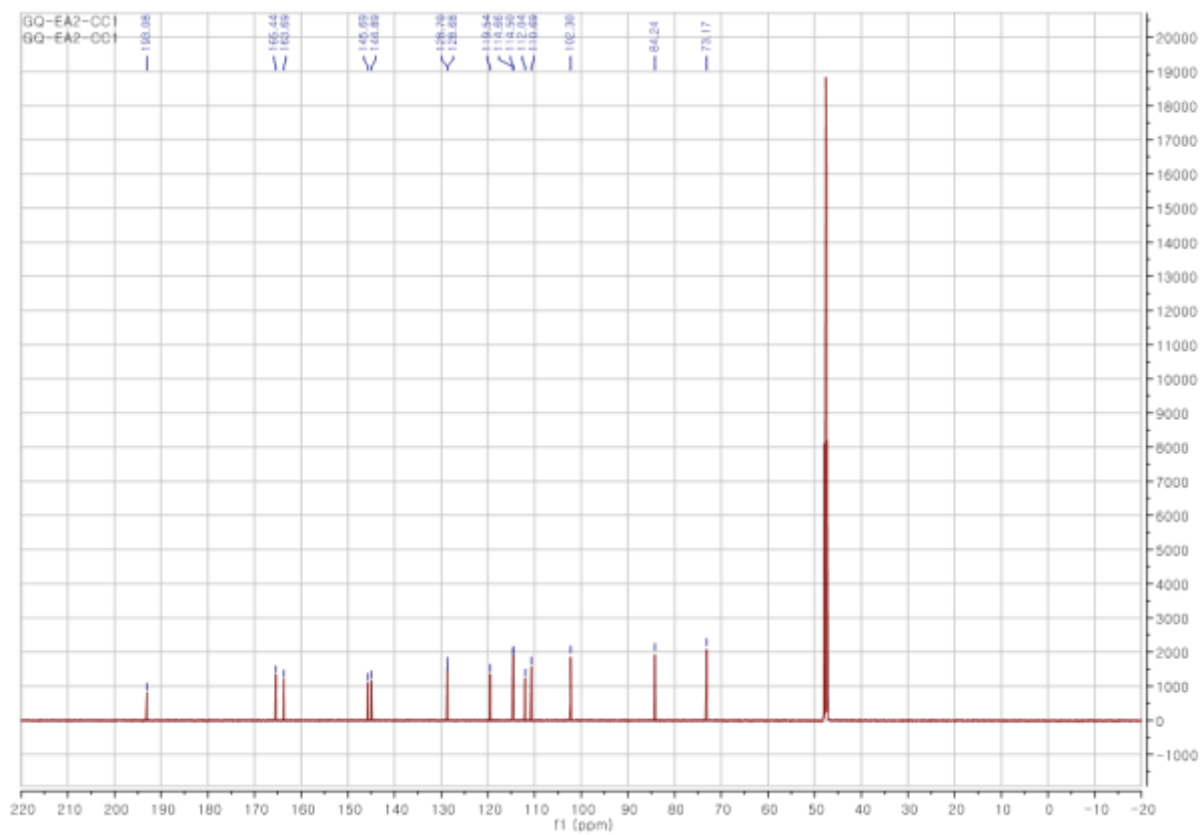
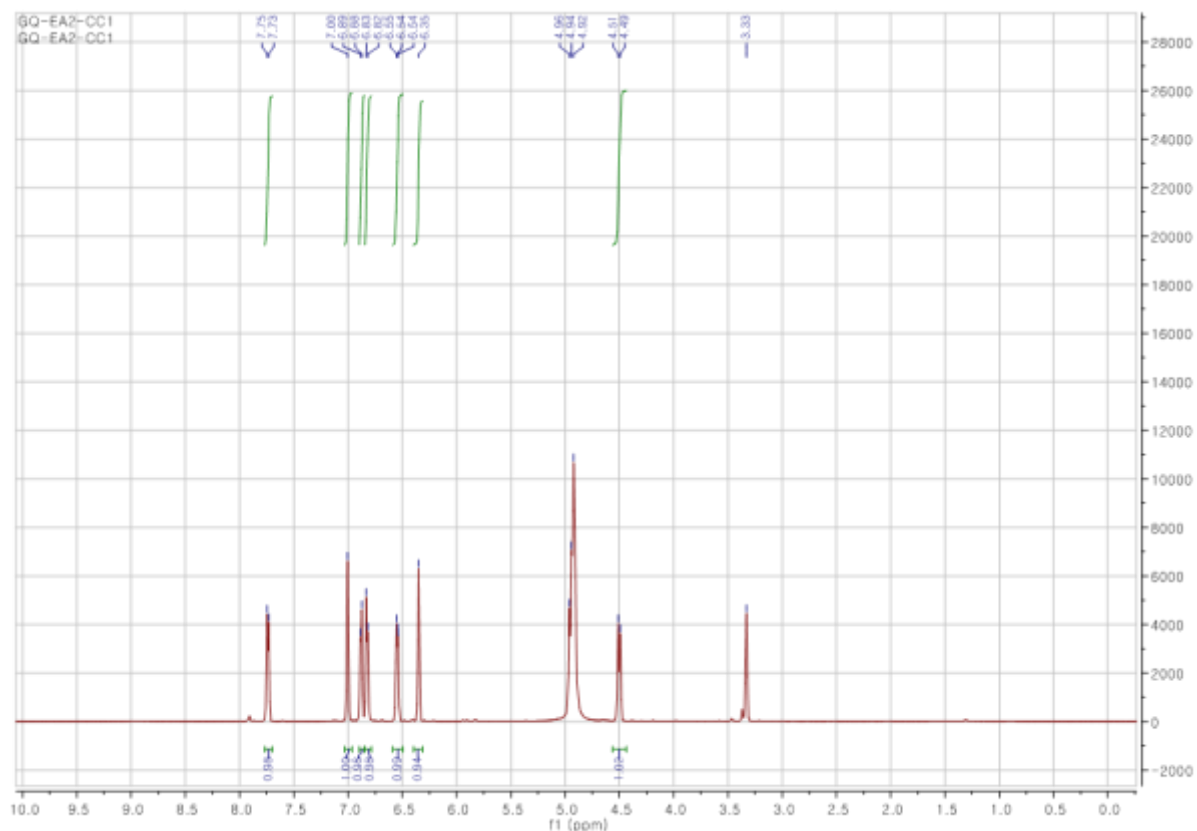
S2. ¹H and ¹³C NMR spectrum of compound **1** in methanol-*d*₄ (600 and 150 MHz)



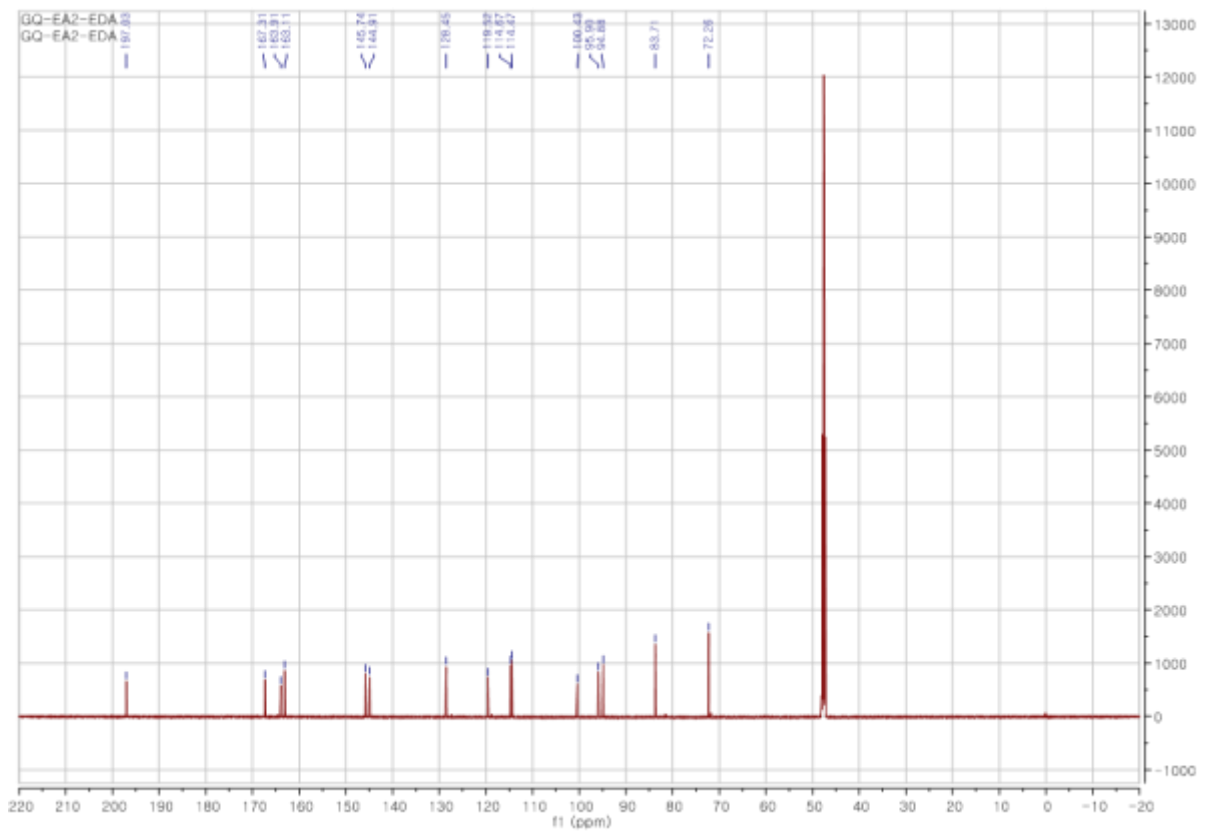
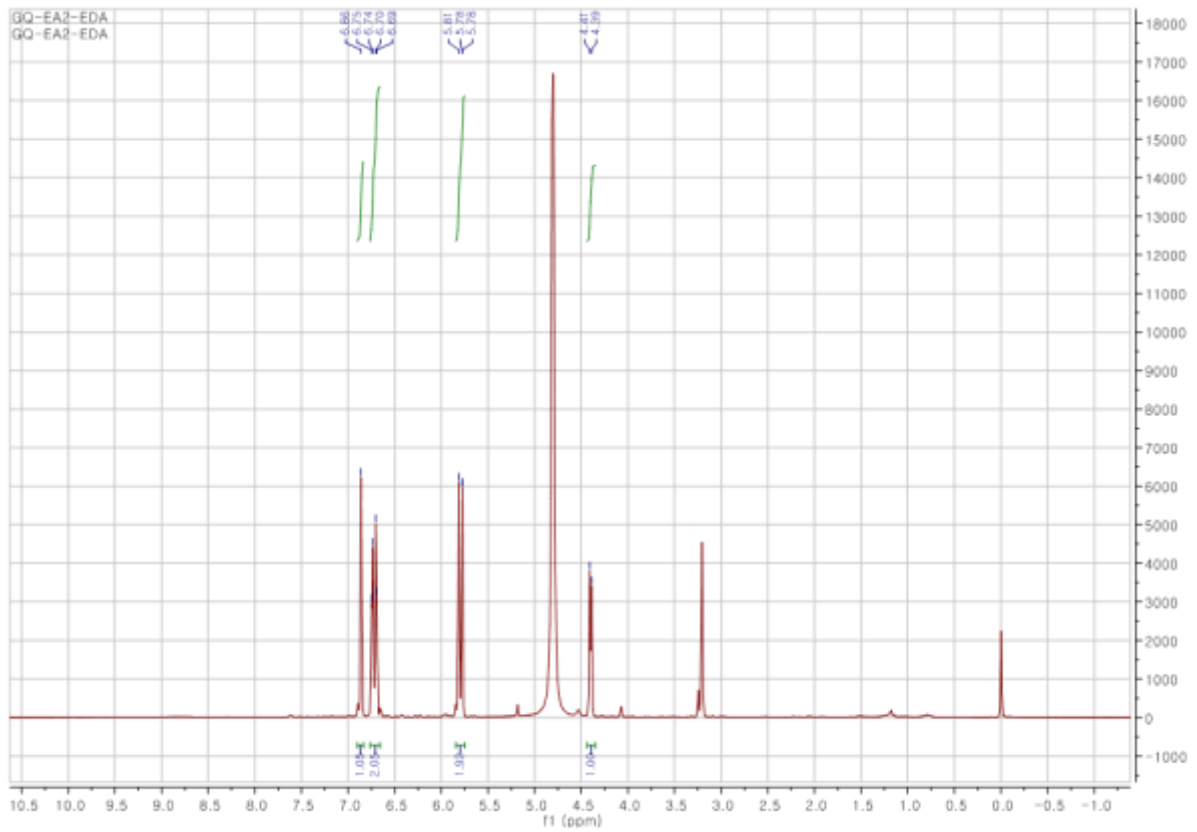
S3. ^1H and ^{13}C NMR spectrum of compound **2** in methanol- d_4 (600 and 150 MHz)



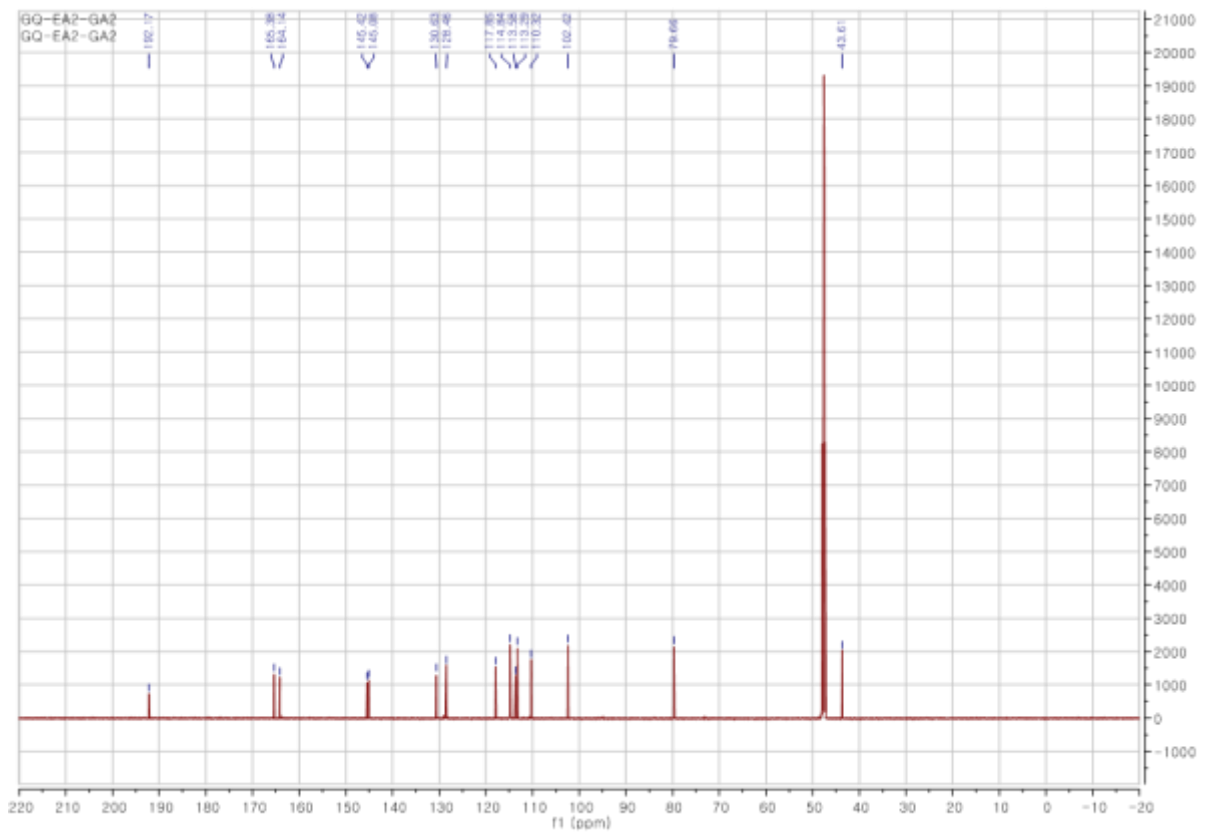
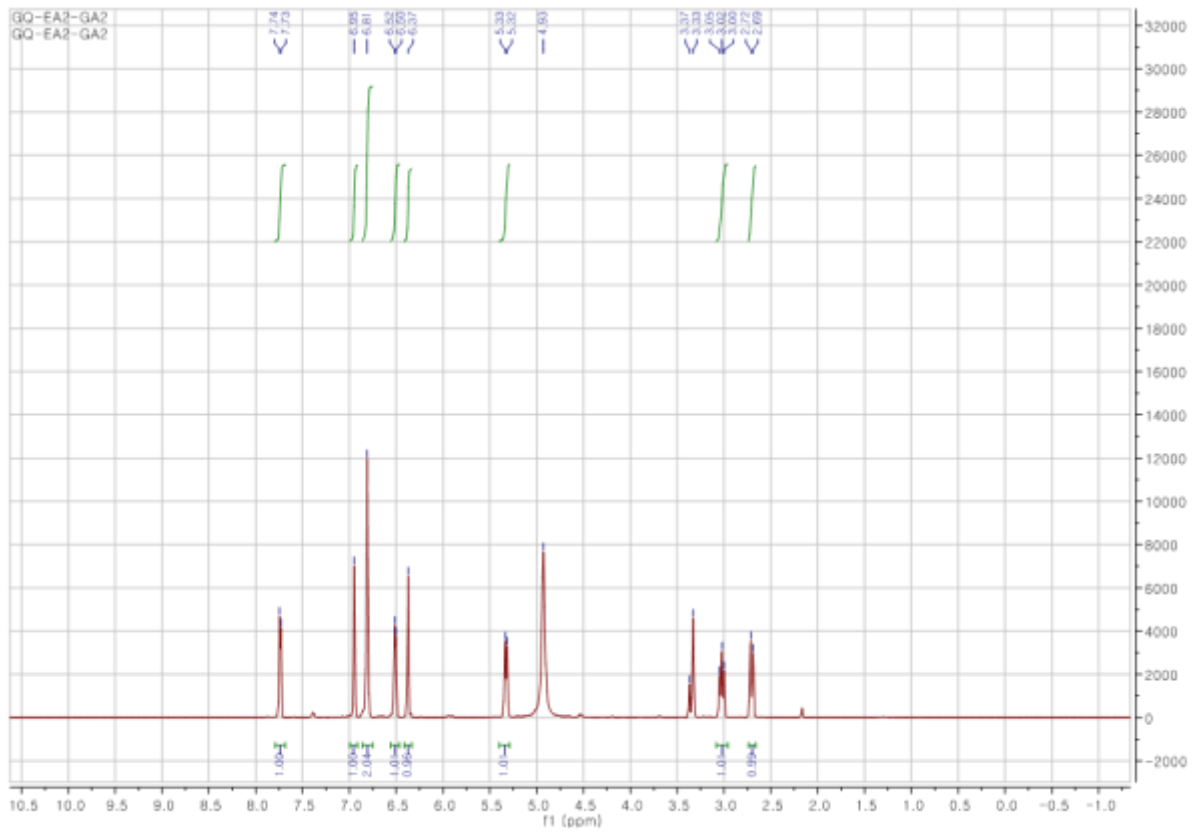
S4. ^1H and ^{13}C NMR spectrum of compound **3** in methanol- d_4 (600 and 150 MHz)



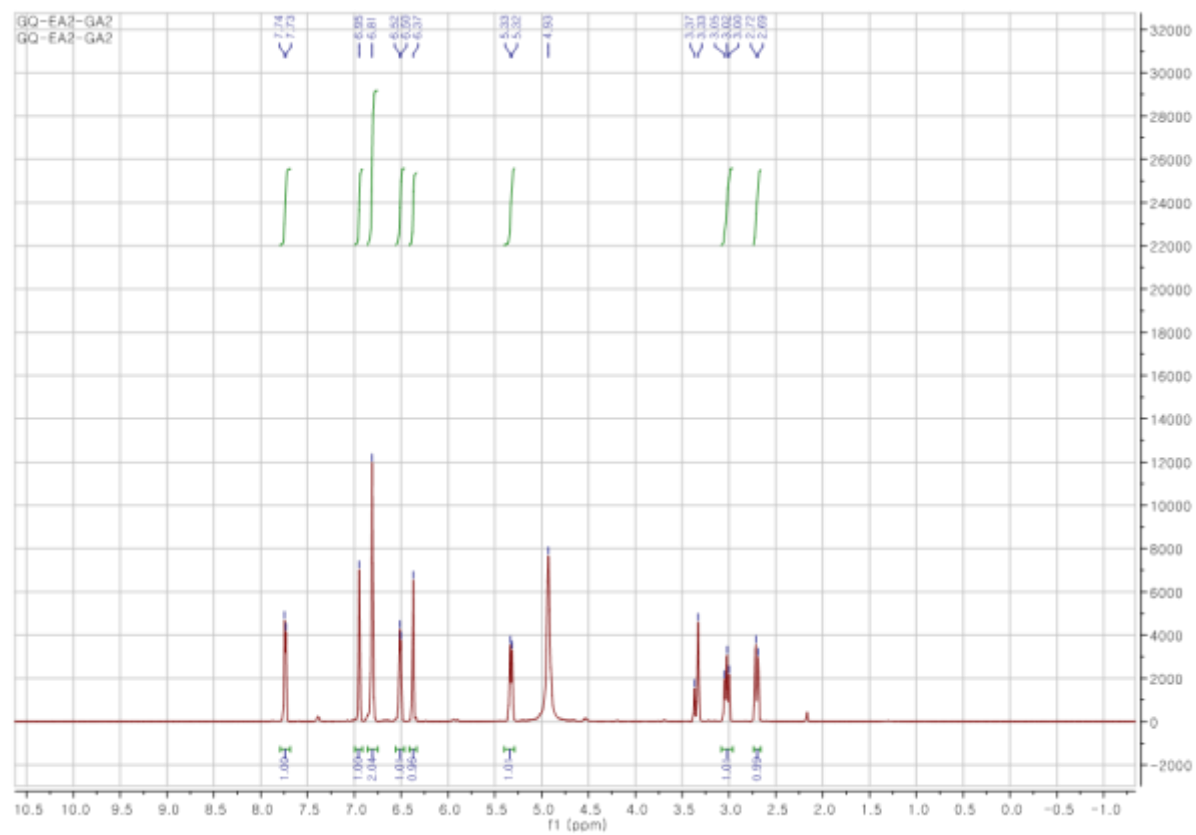
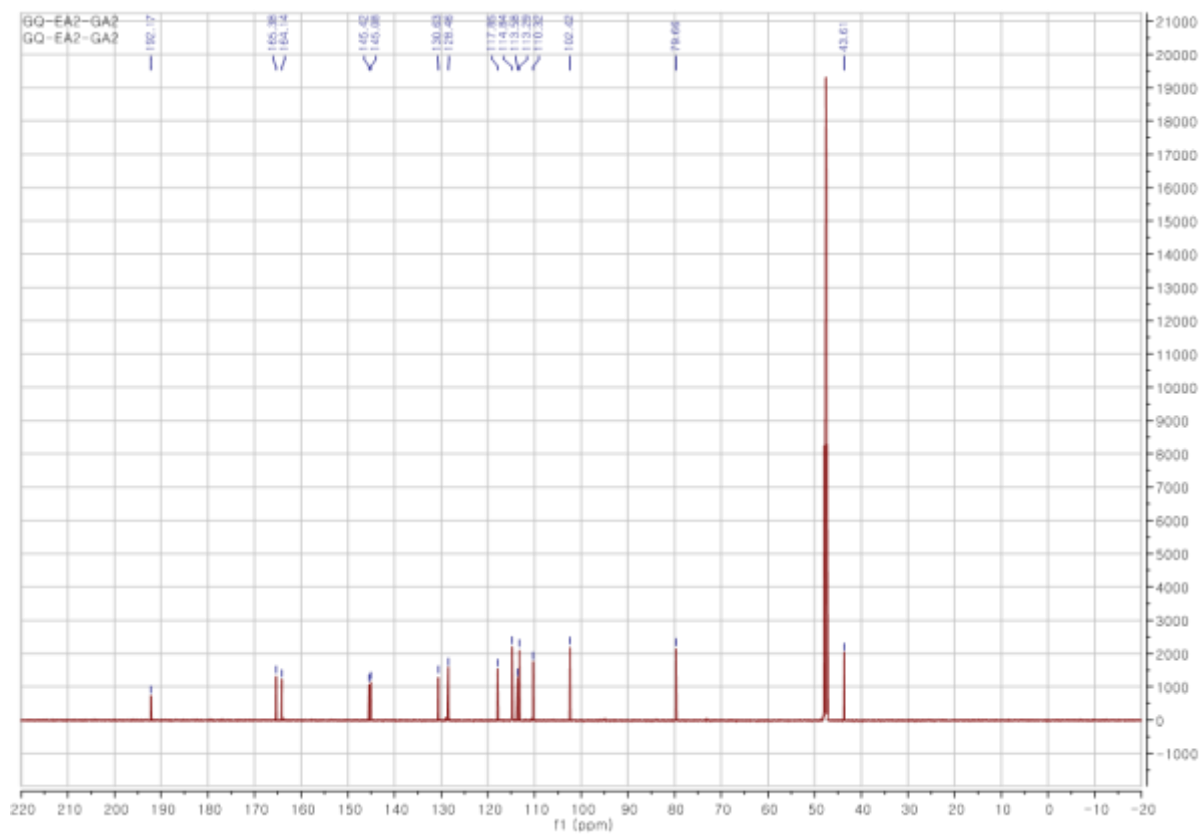
S5. ^1H and ^{13}C NMR spectrum of compound **4** in methanol- d_4 (600 and 150 MHz)



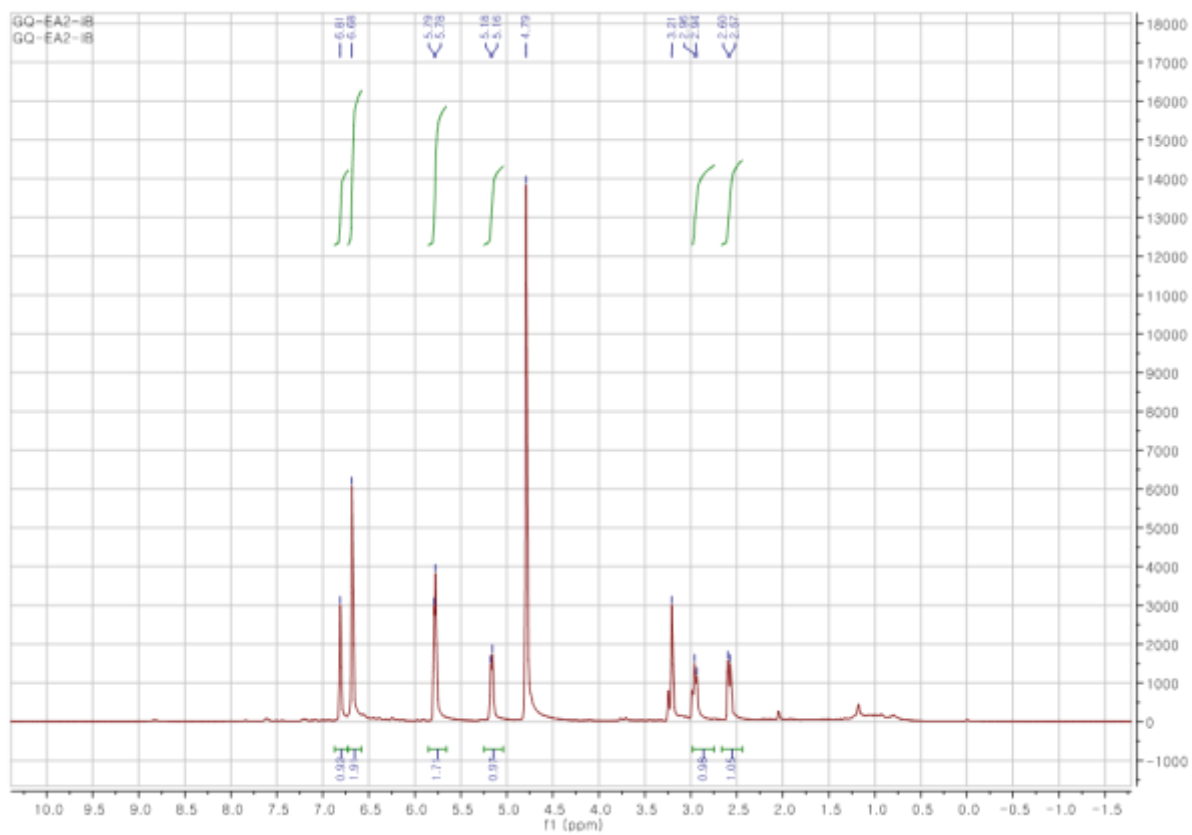
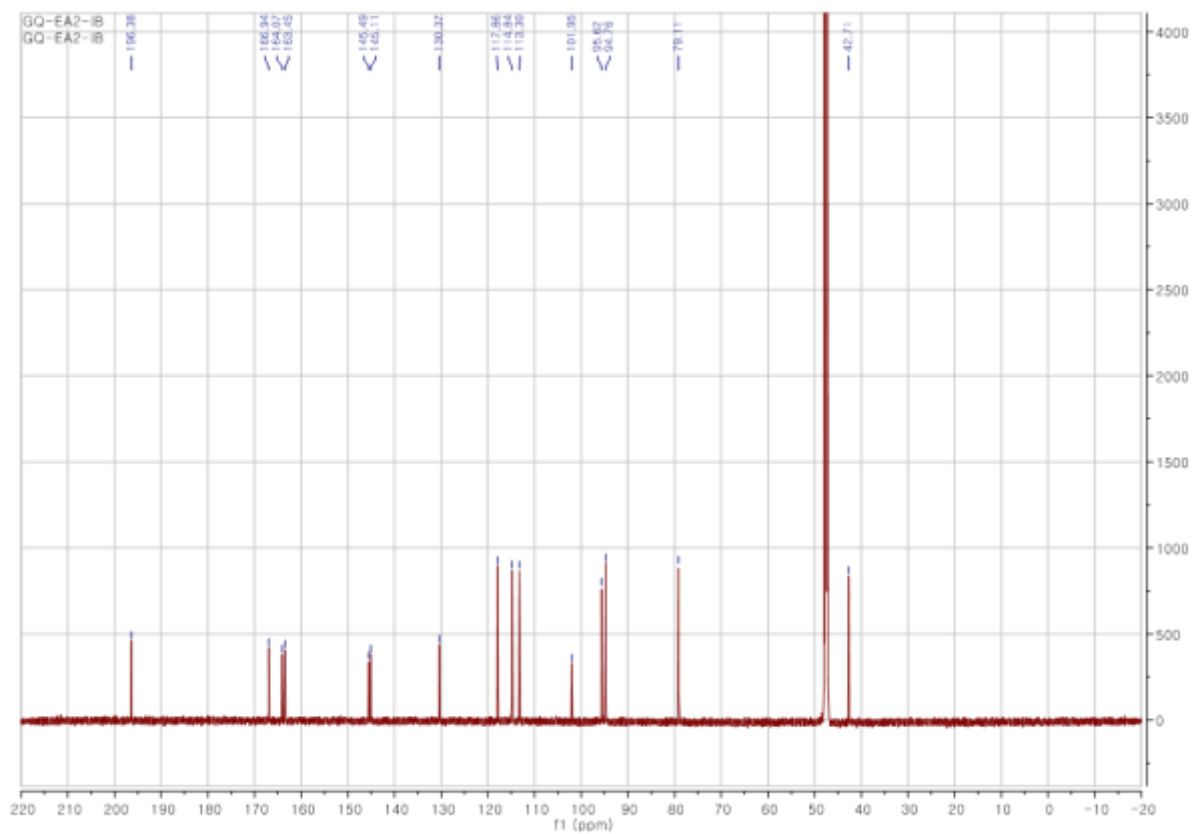
S5. ^1H and ^{13}C NMR spectrum of compound **4** in methanol- d_4 (600 and 150 MHz)



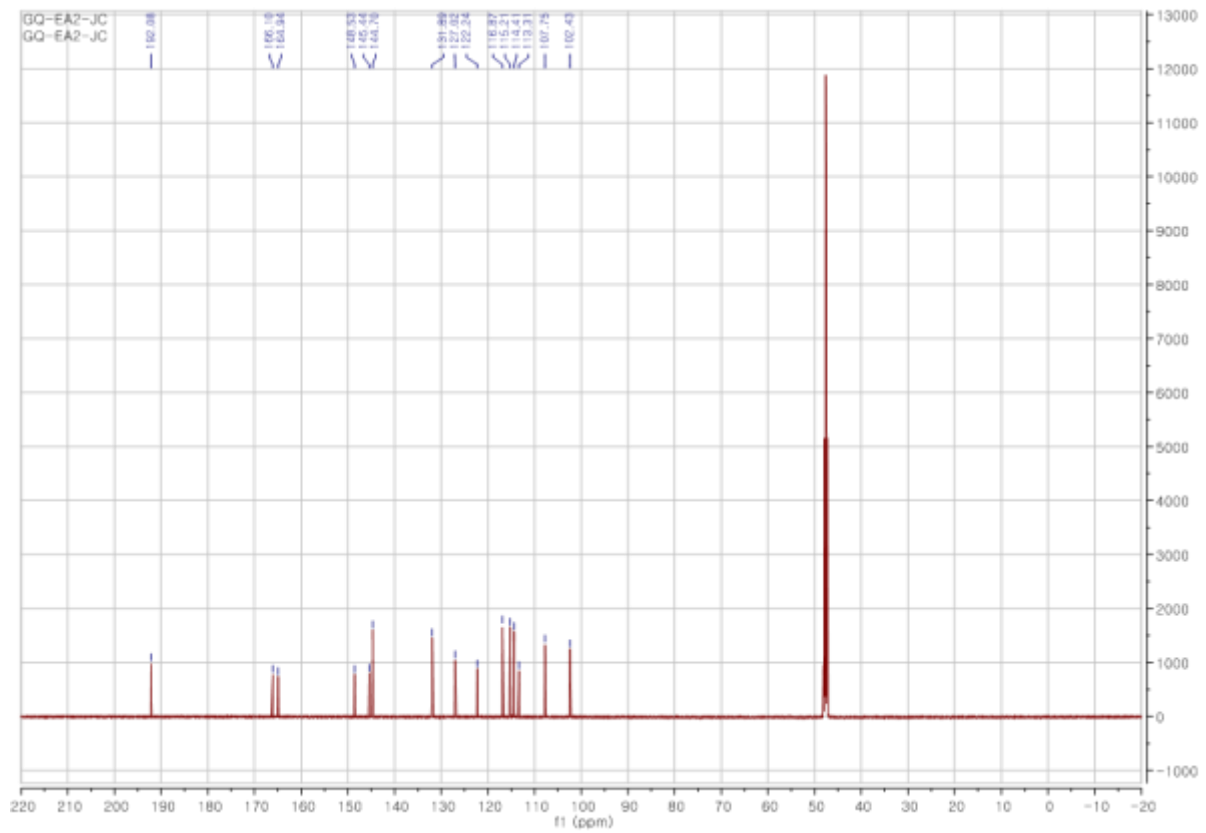
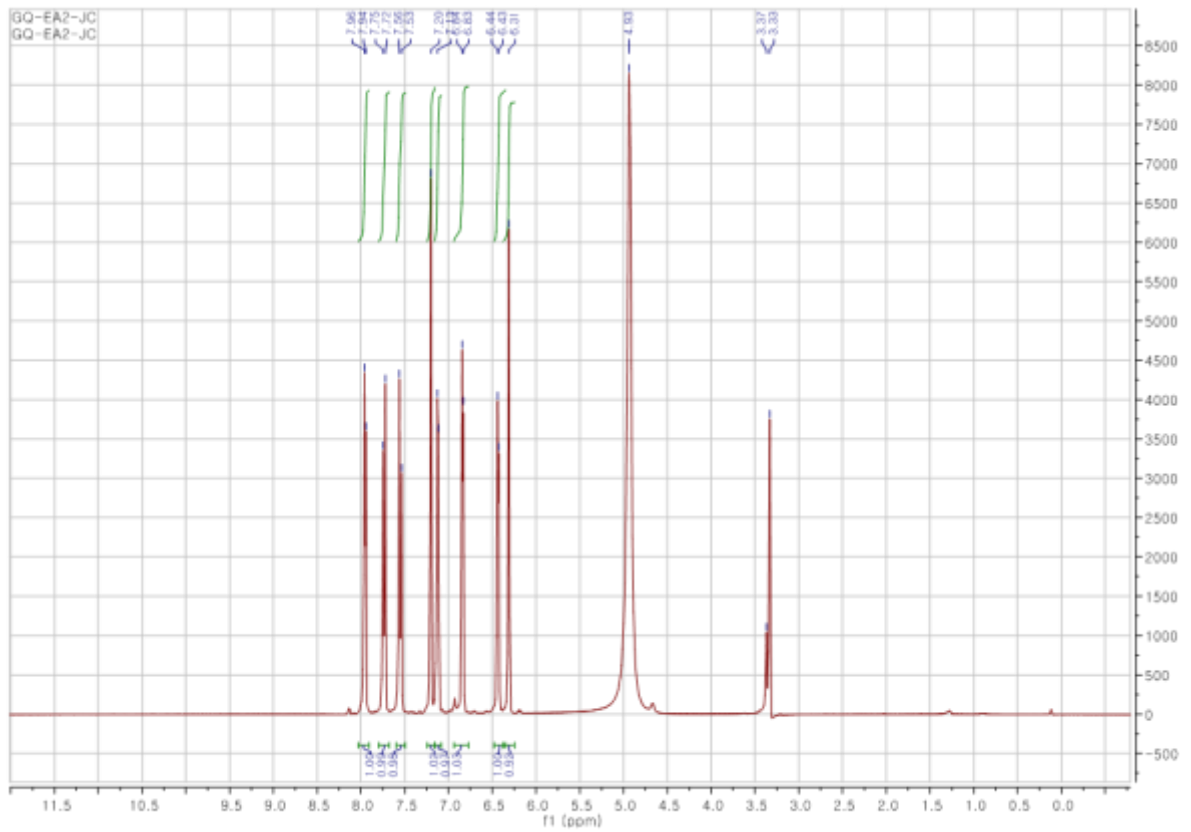
S6. ^1H and ^{13}C NMR spectrum of compound **5** in methanol- d_4 (600 and 150 MHz)



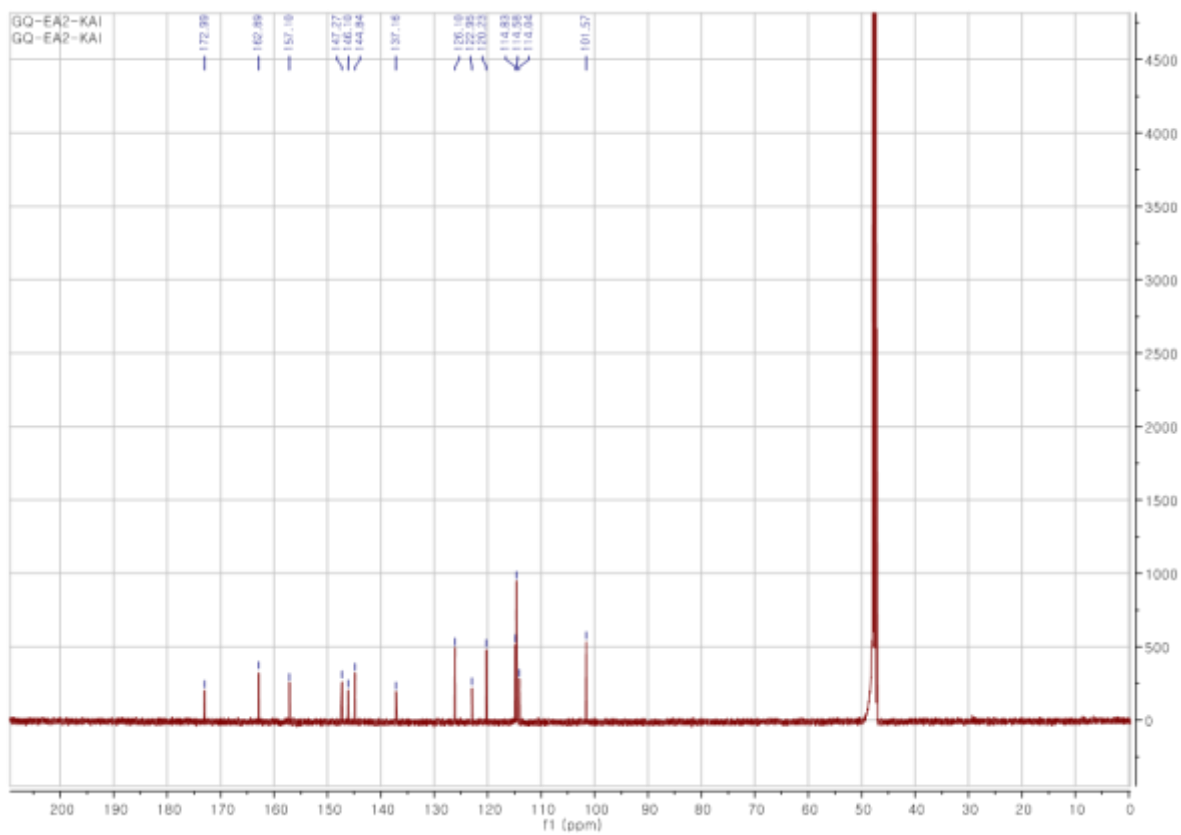
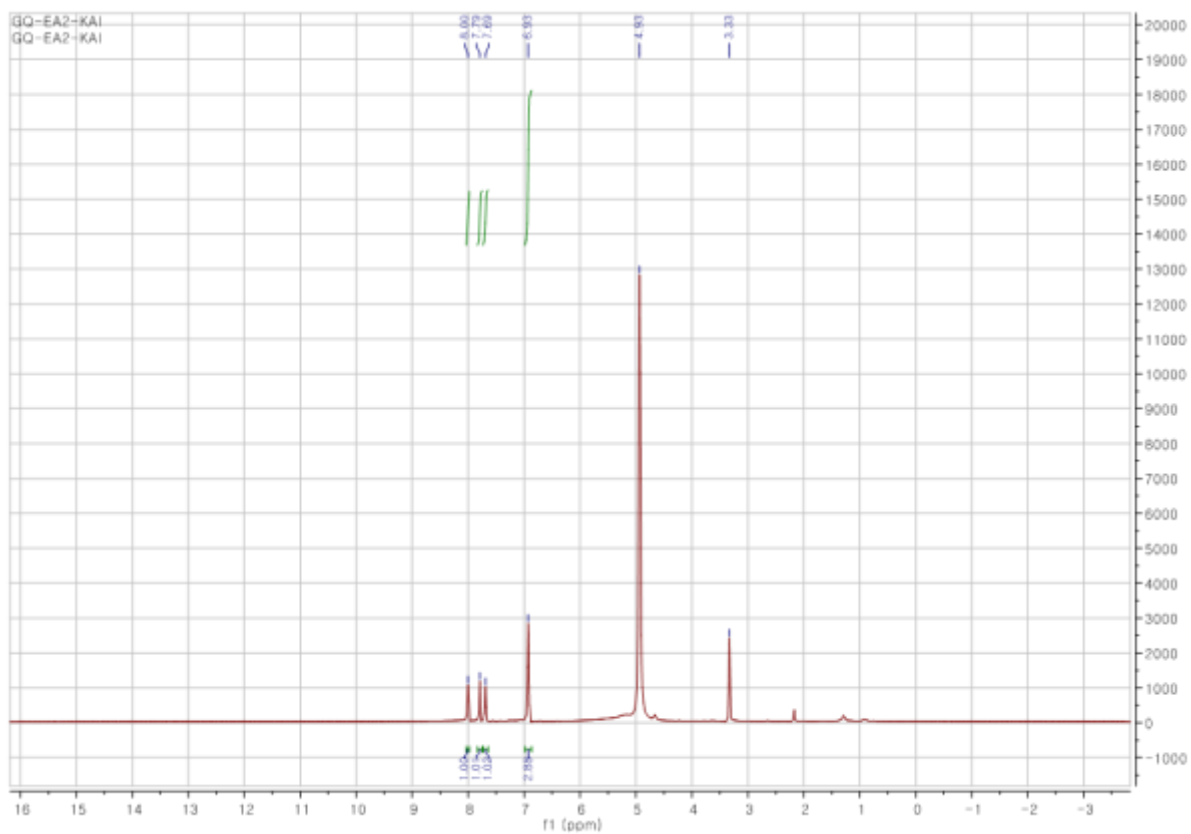
S7. ¹H and ¹³C NMR spectrum of compound **6** in methanol-*d*₄ (600 and 150 MHz)



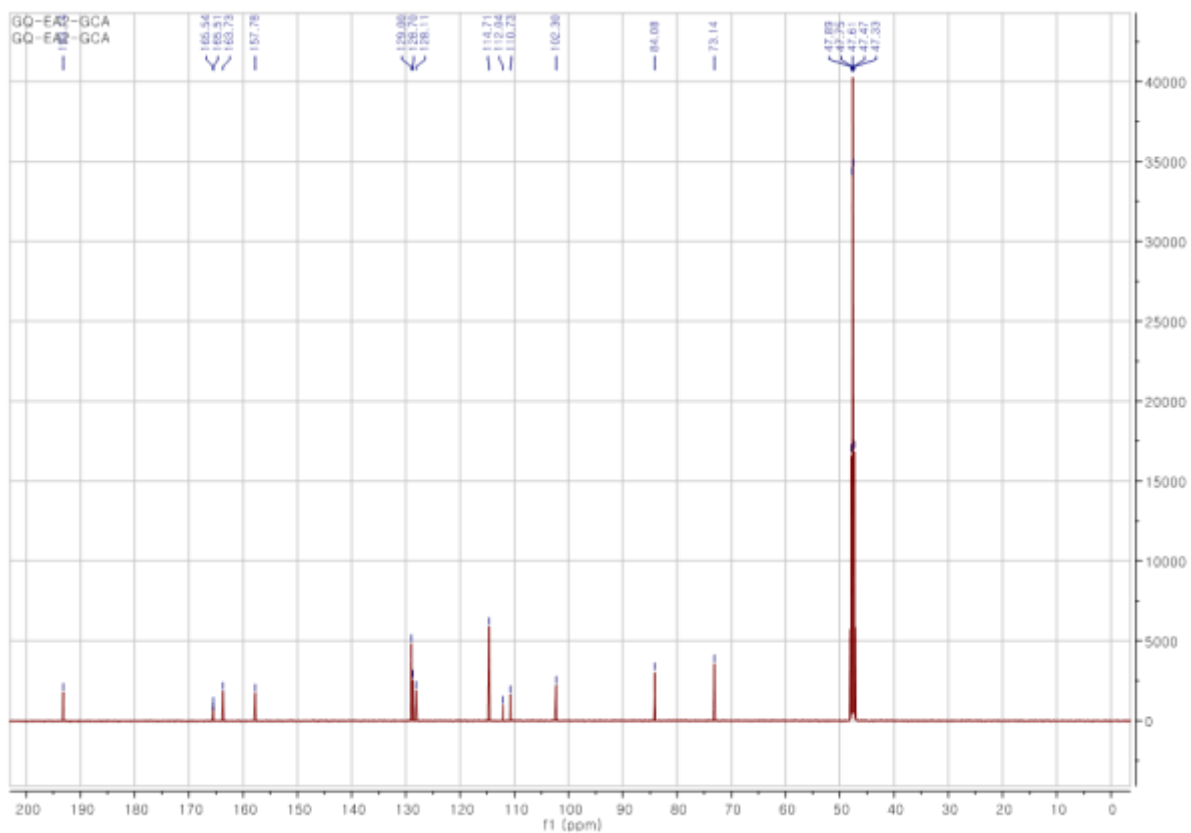
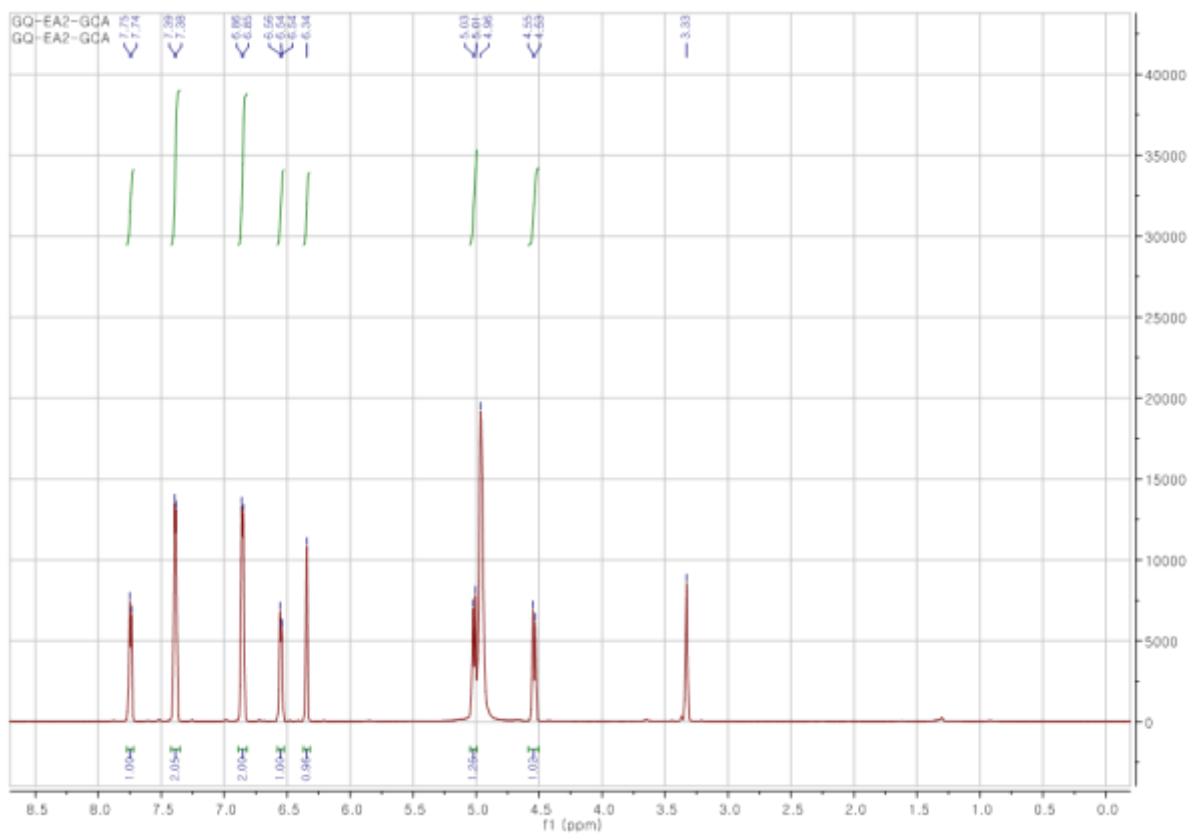
S8. ¹H and ¹³C NMR spectrum of compound **7** in methanol-*d*₄ (600 and 150 MHz)



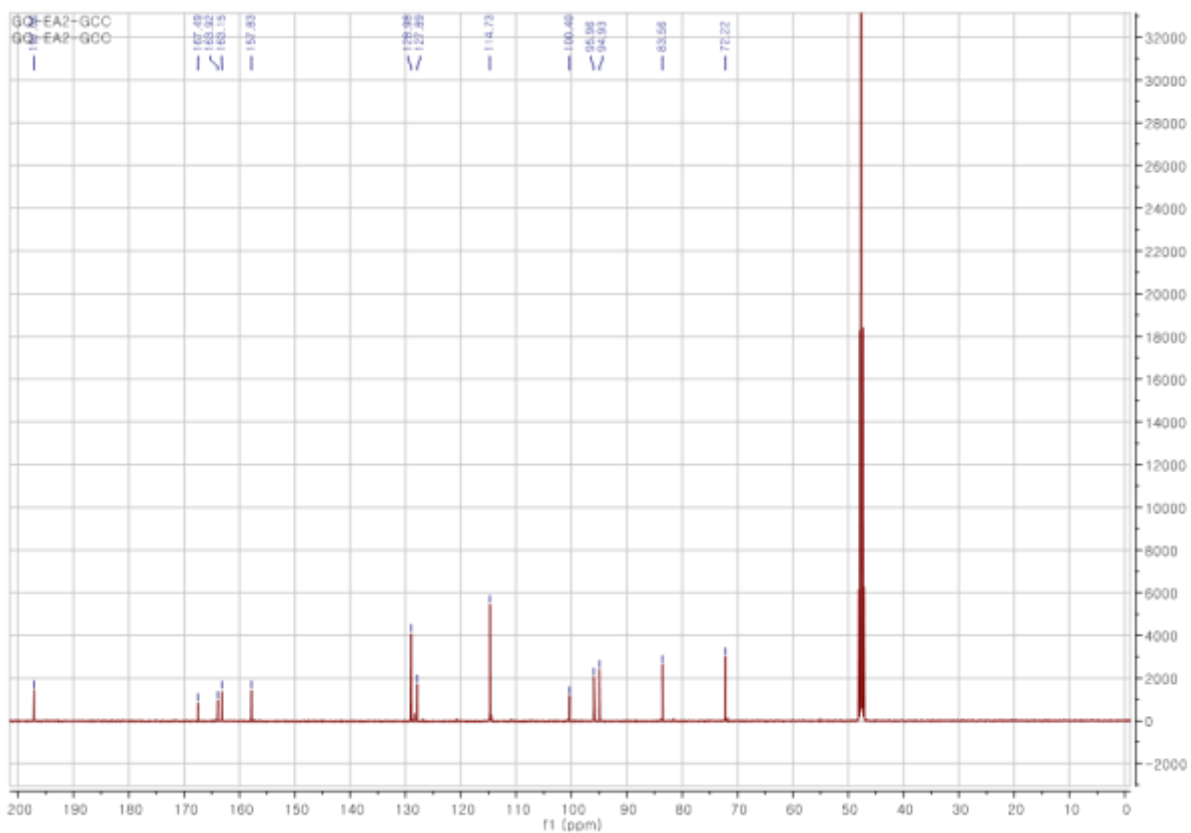
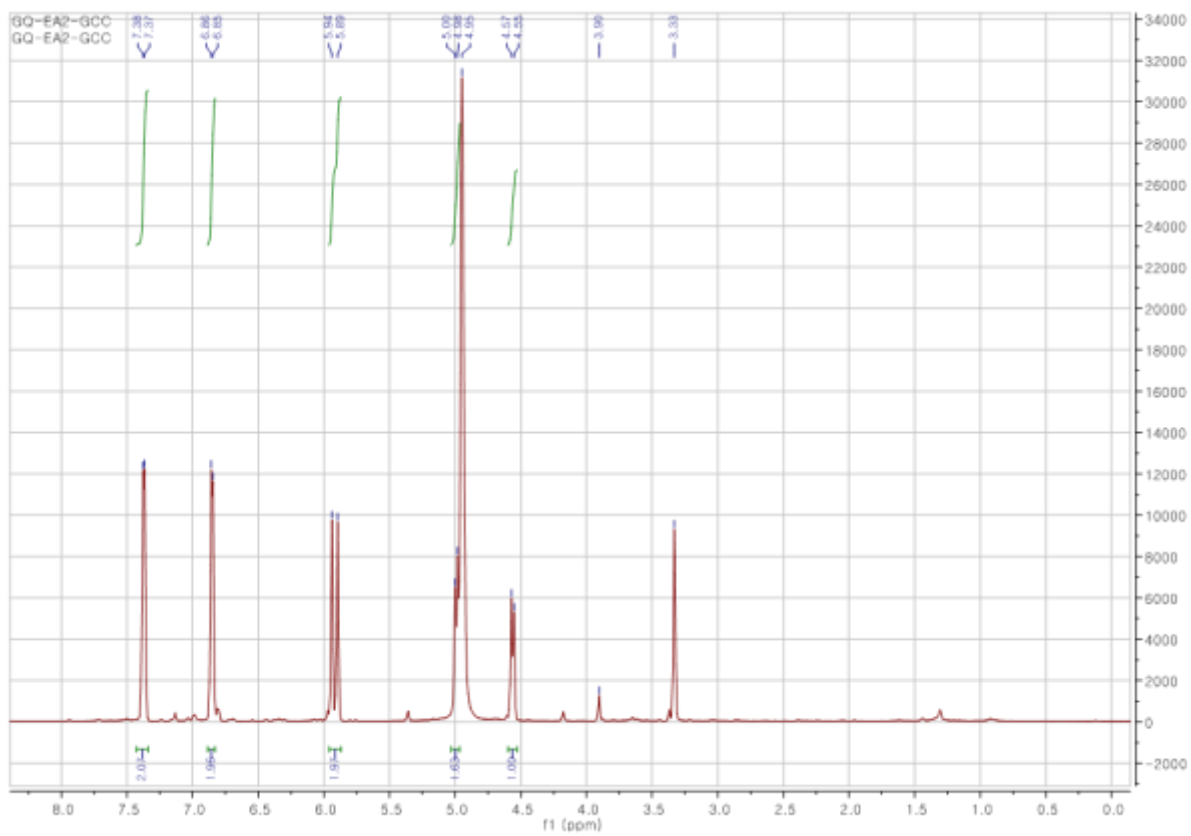
S9. ^1H and ^{13}C NMR spectrum of compound **8** in methanol- d_4 (600 and 150 MHz)



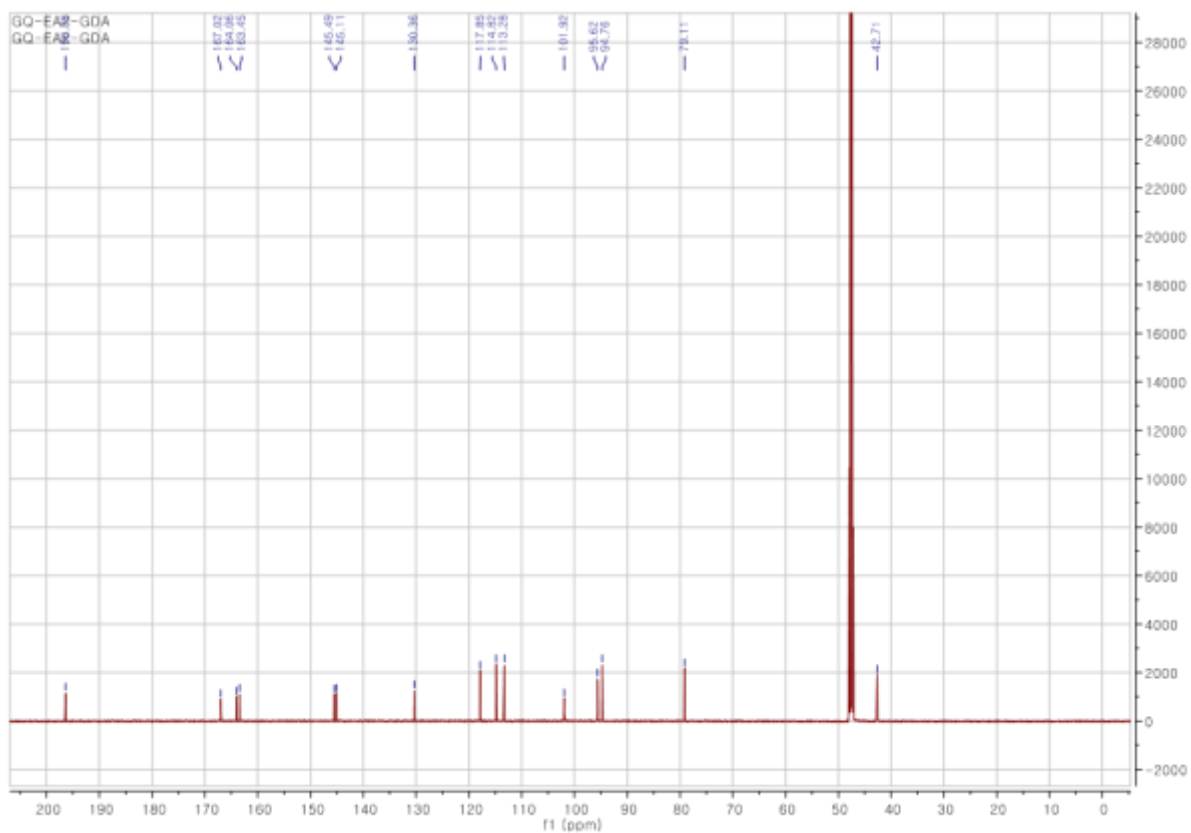
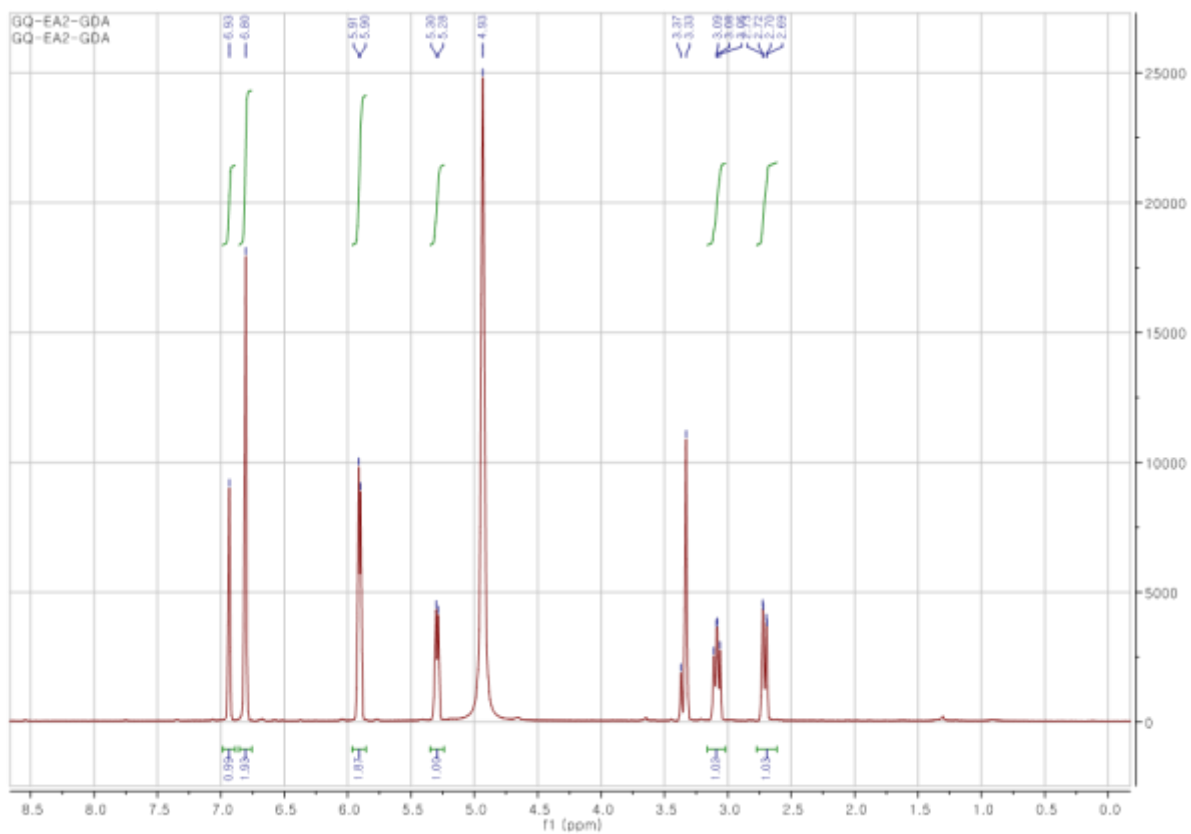
S10. ^1H and ^{13}C NMR spectrum of compound **9** in methanol- d_4 (600 and 150 MHz)



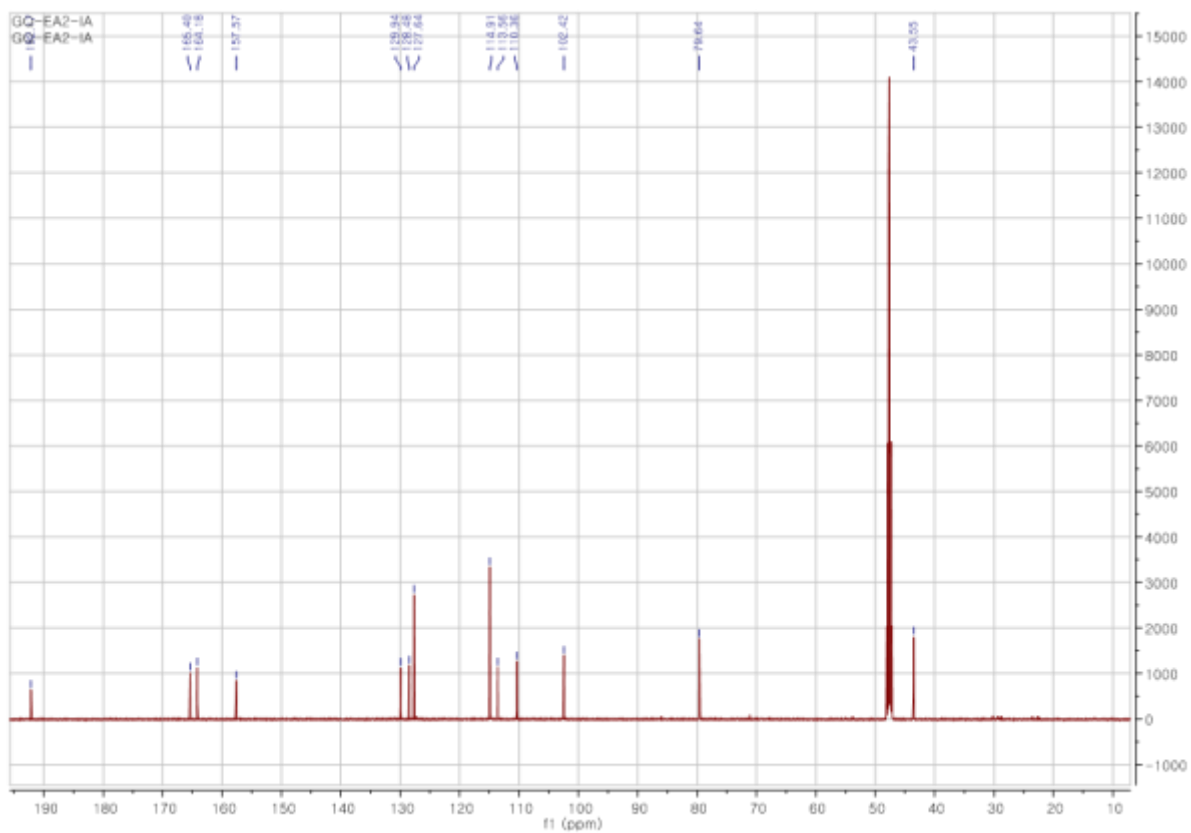
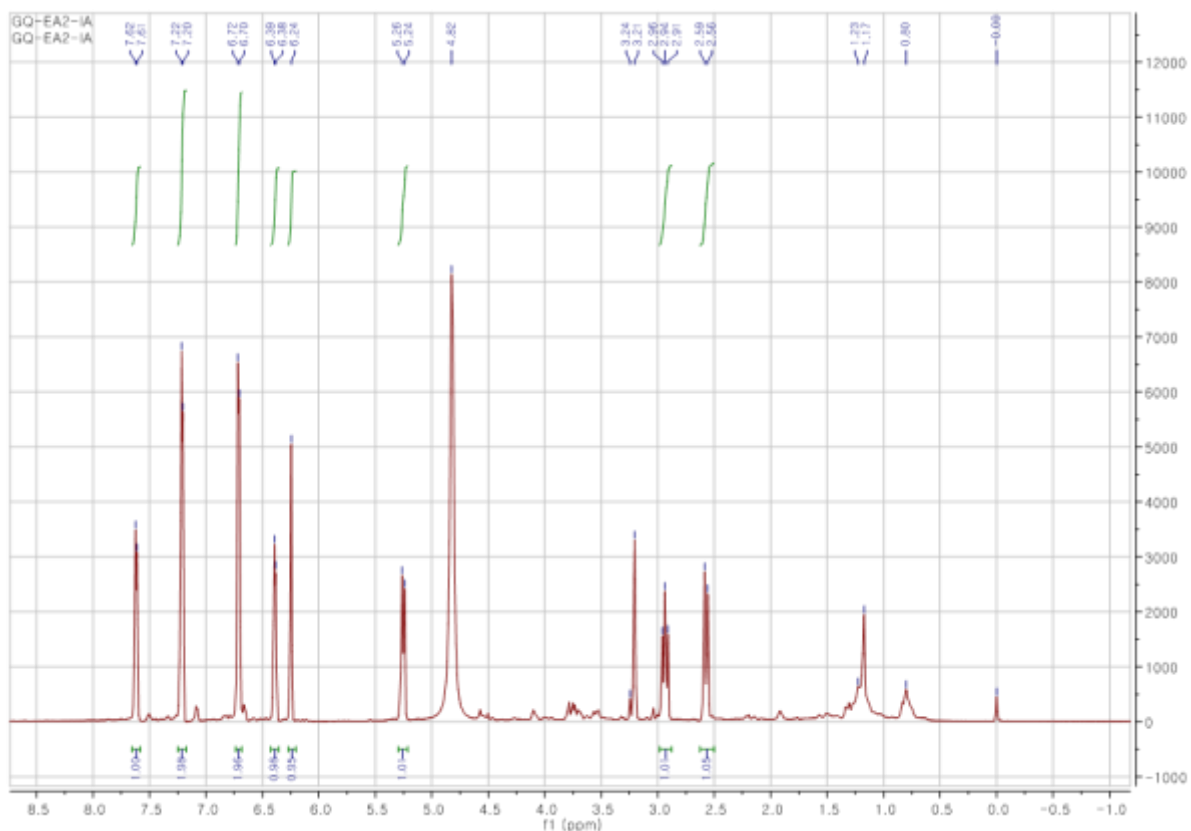
S11. ¹H and ¹³C NMR spectrum of compound **10** in methanol-*d*₄ (600 and 150 MHz)



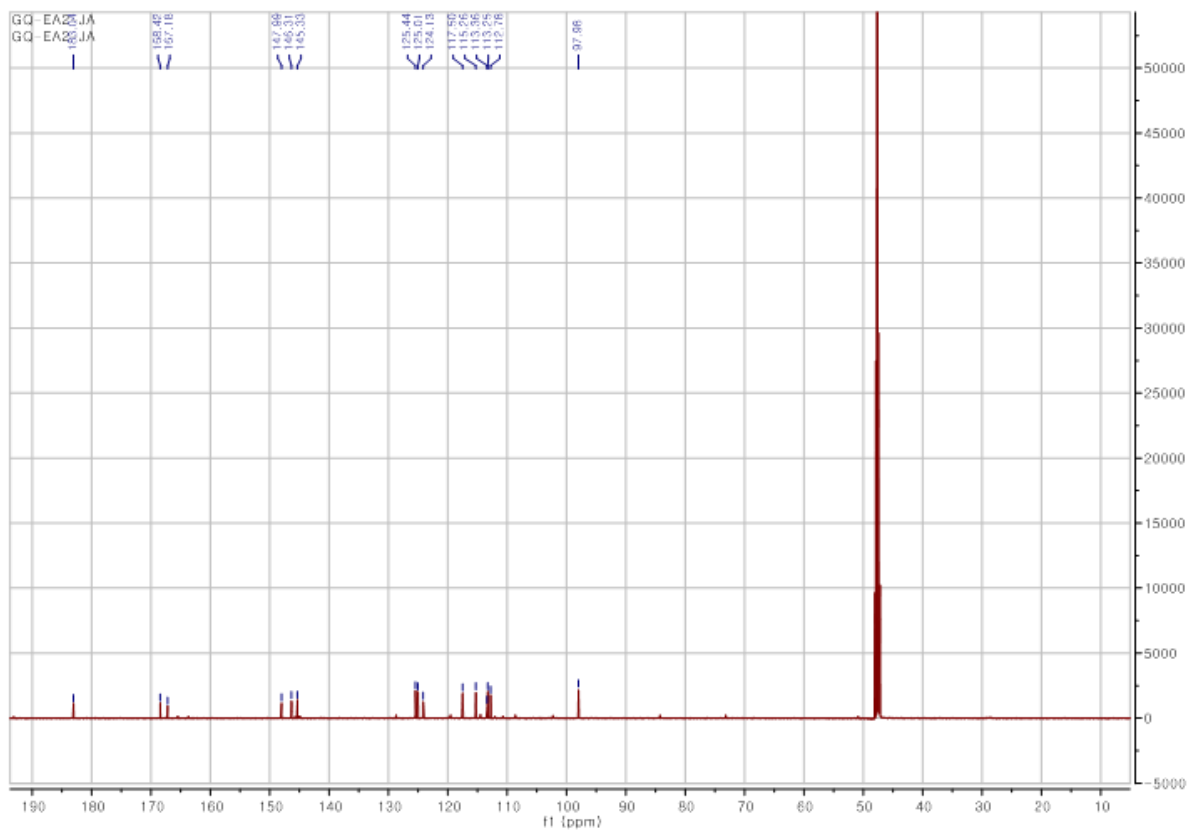
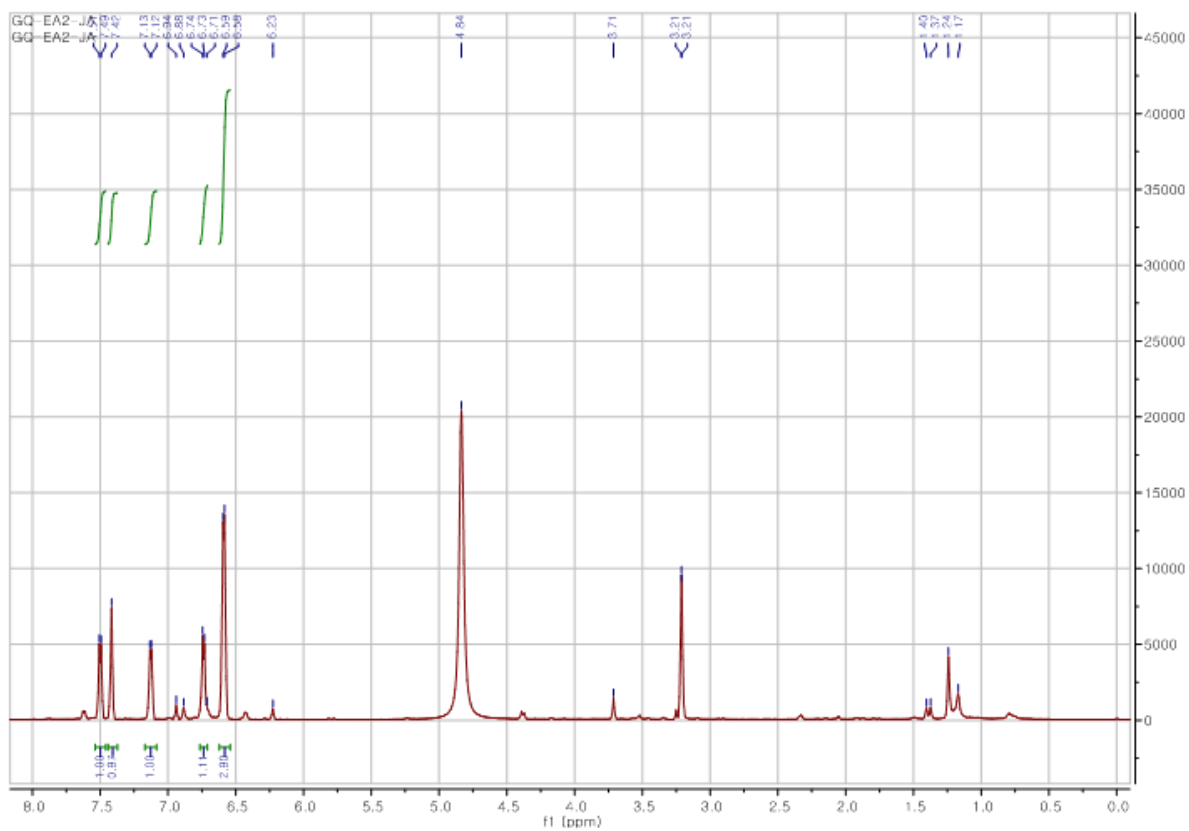
S12. ¹H and ¹³C NMR spectrum of compound **11** in methanol-*d*₄ (600 and 150 MHz)



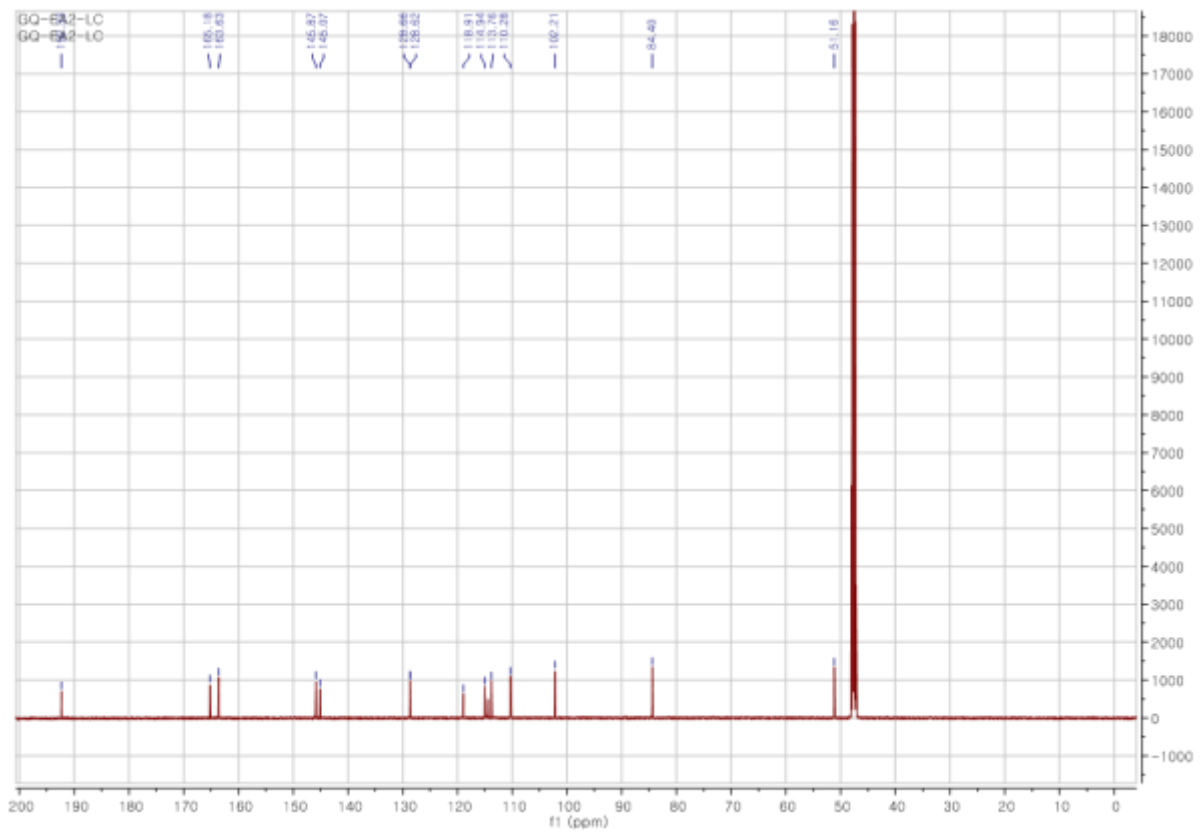
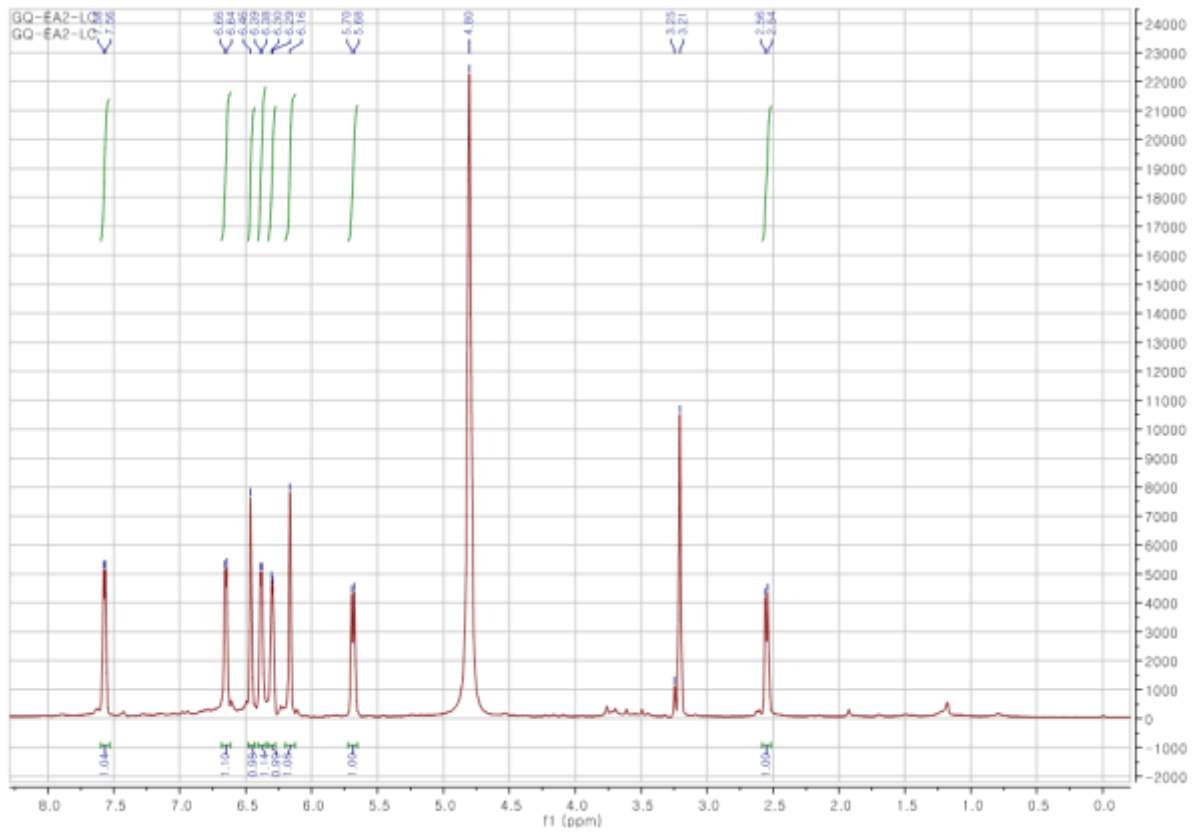
S13. ^1H and ^{13}C NMR spectrum of compound **12** in methanol- d_4 (600 and 150 MHz)



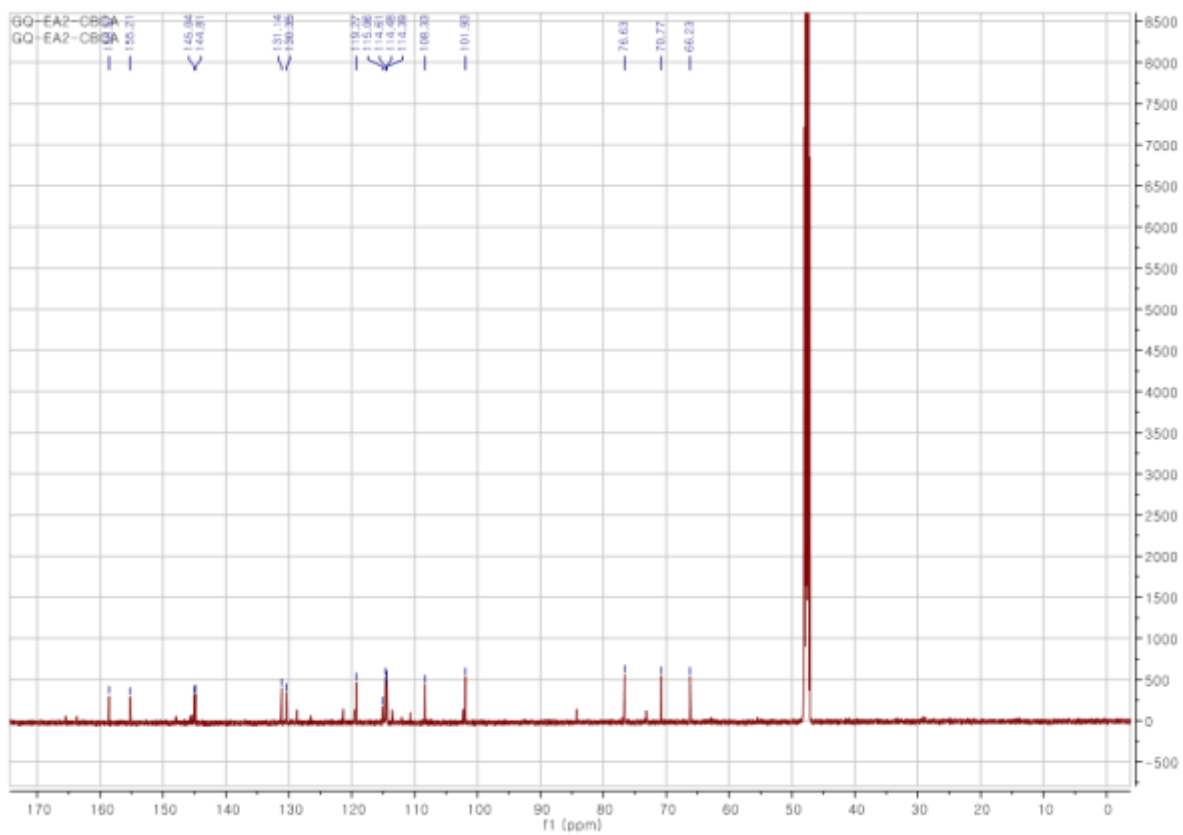
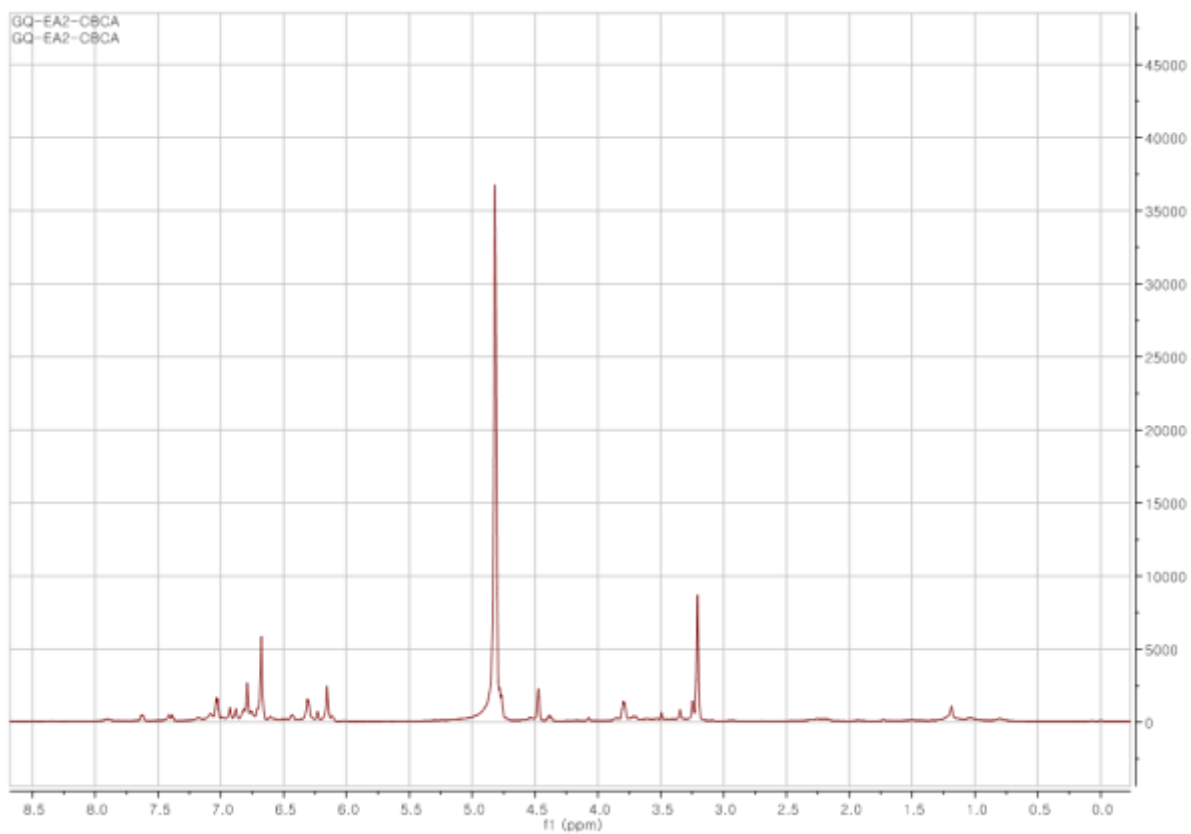
S14. ¹H and ¹³C NMR spectrum of compound **13** in methanol-*d*₄ (600 and 150 MHz)



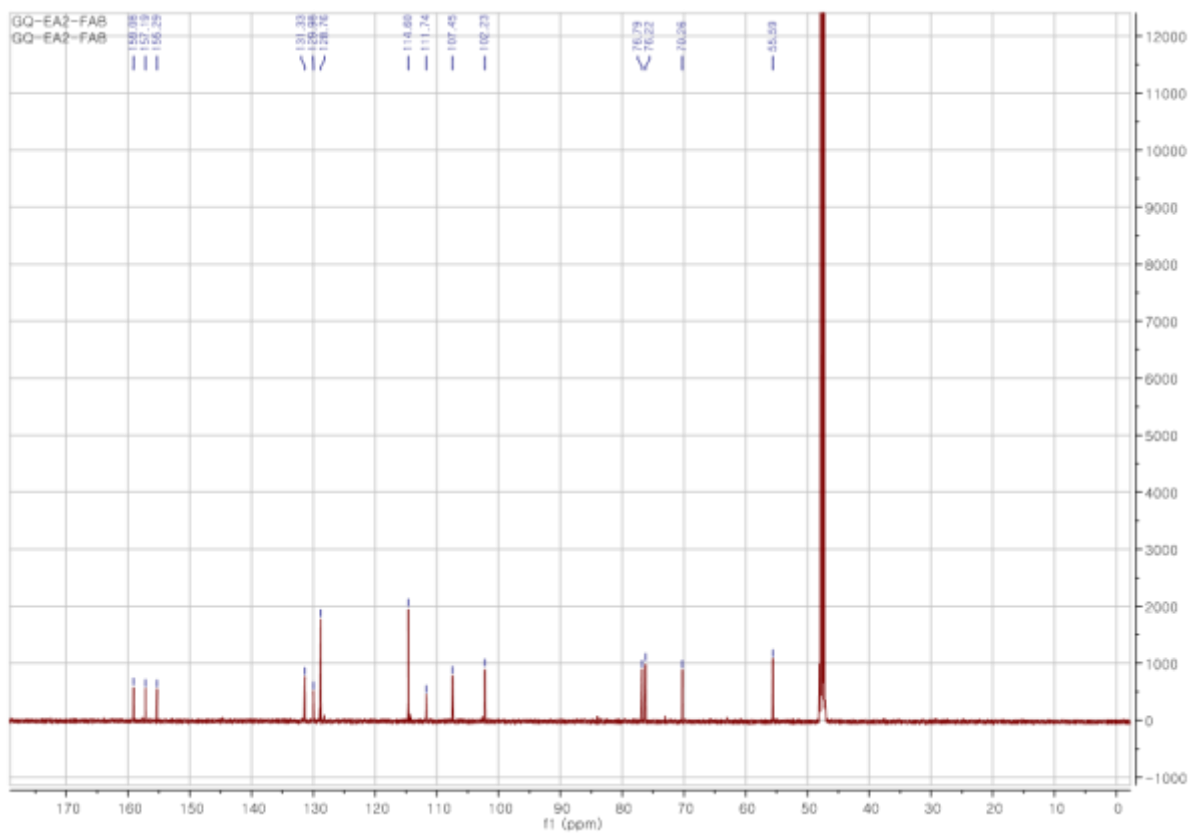
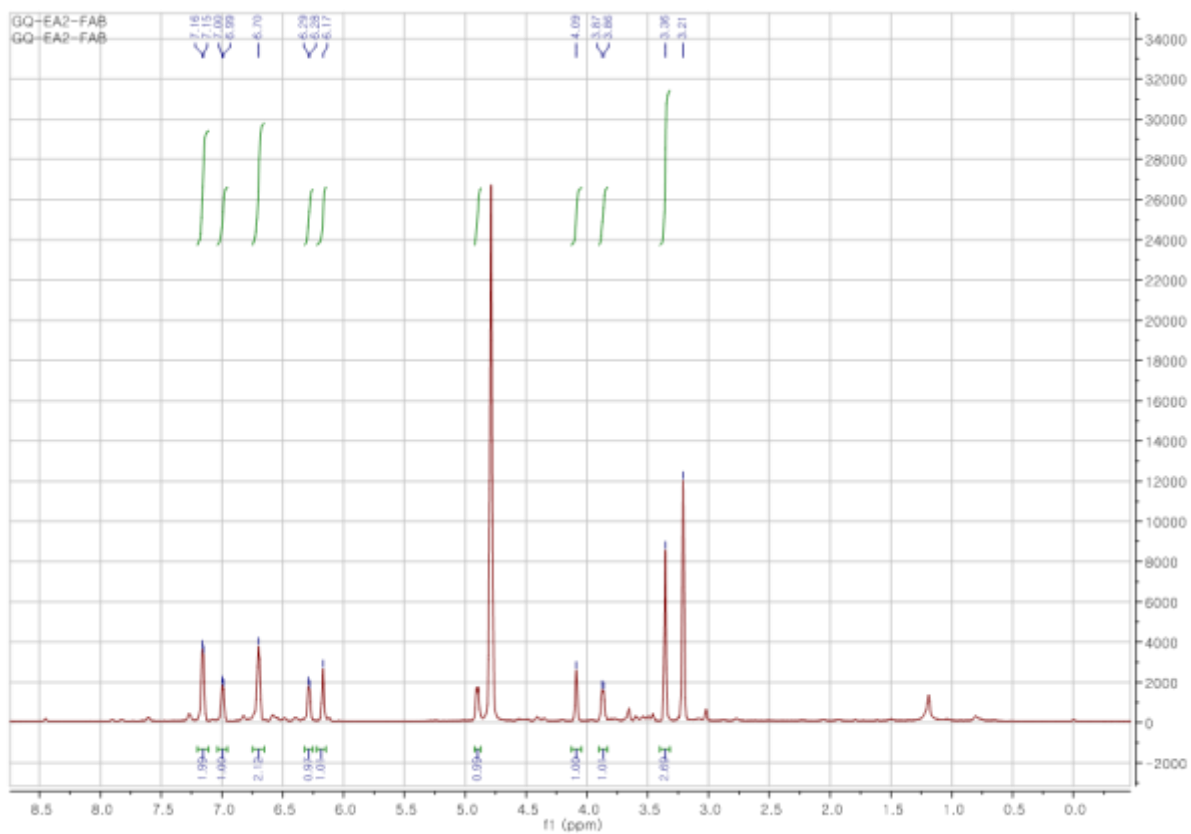
S15. ¹H and ¹³C NMR spectrum of compound **14** in methanol-*d*₄ (600 and 150 MHz)



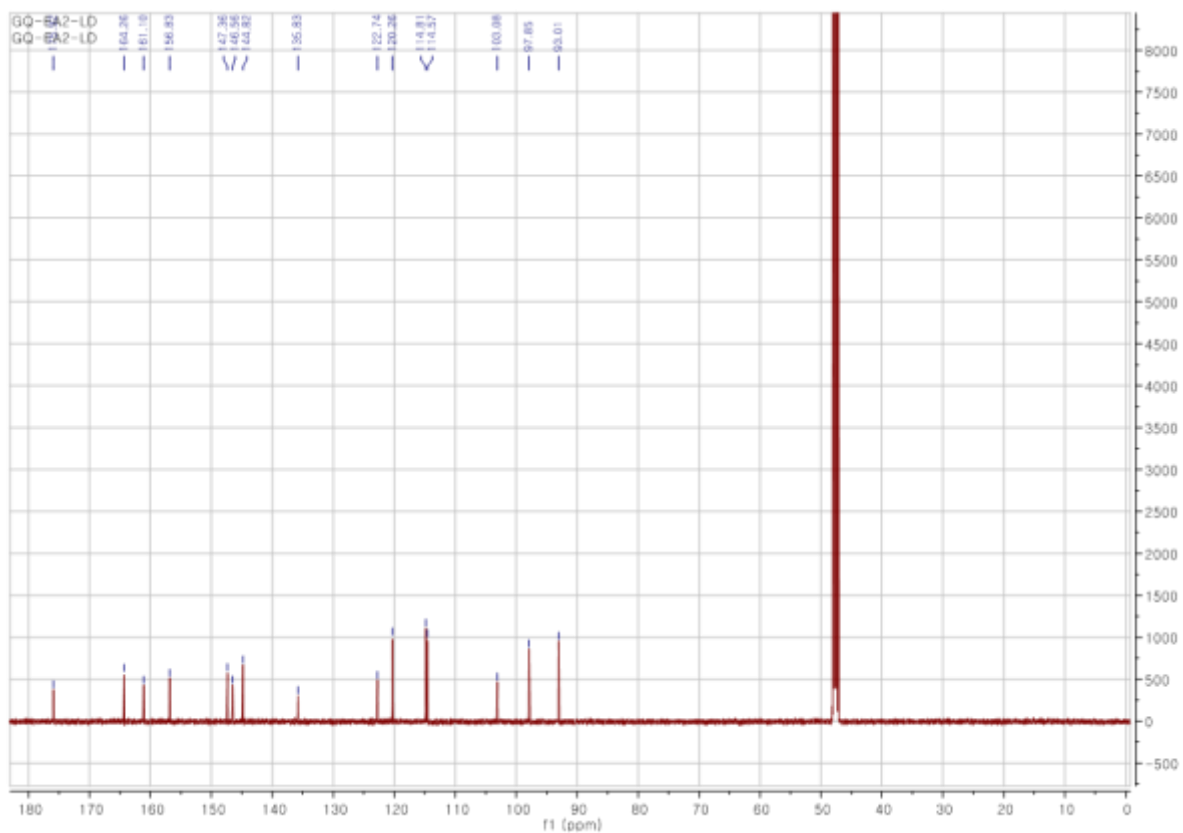
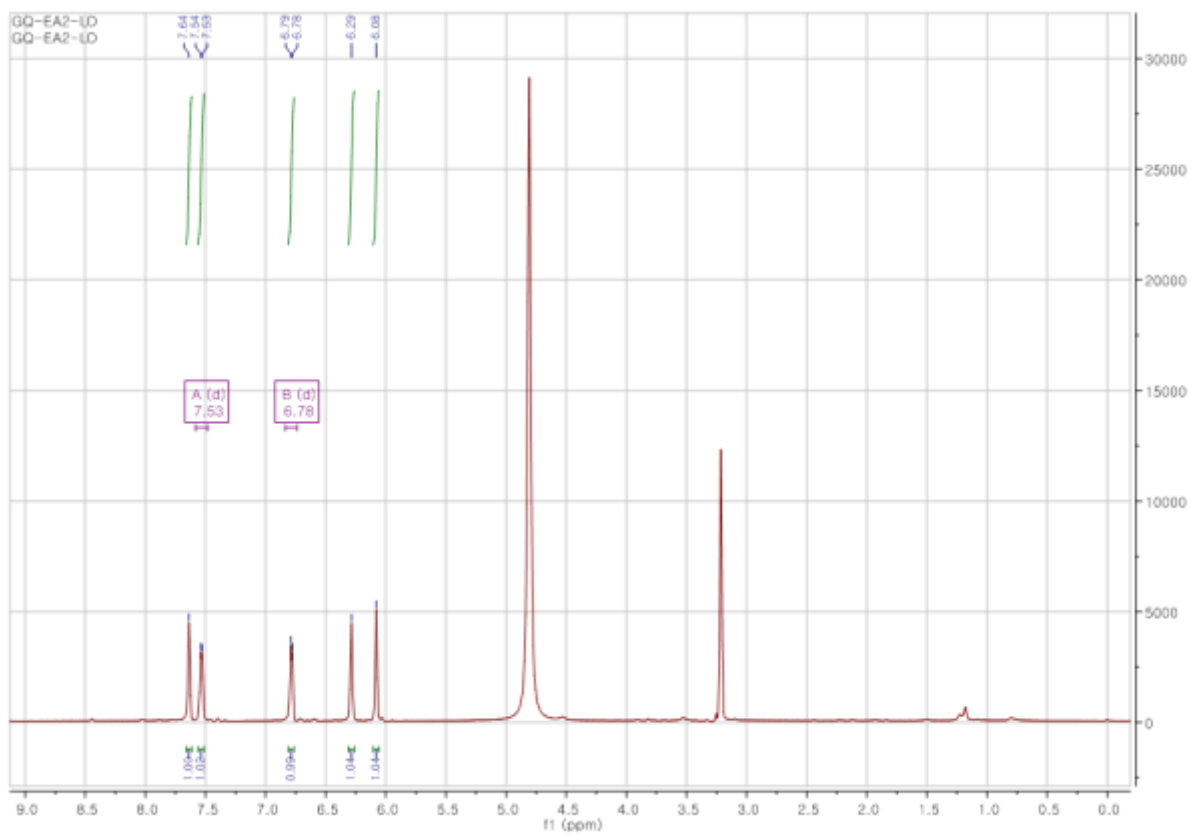
S16. ¹H and ¹³C NMR spectrum of compound **15** in methanol-*d*₄ (600 and 150 MHz)



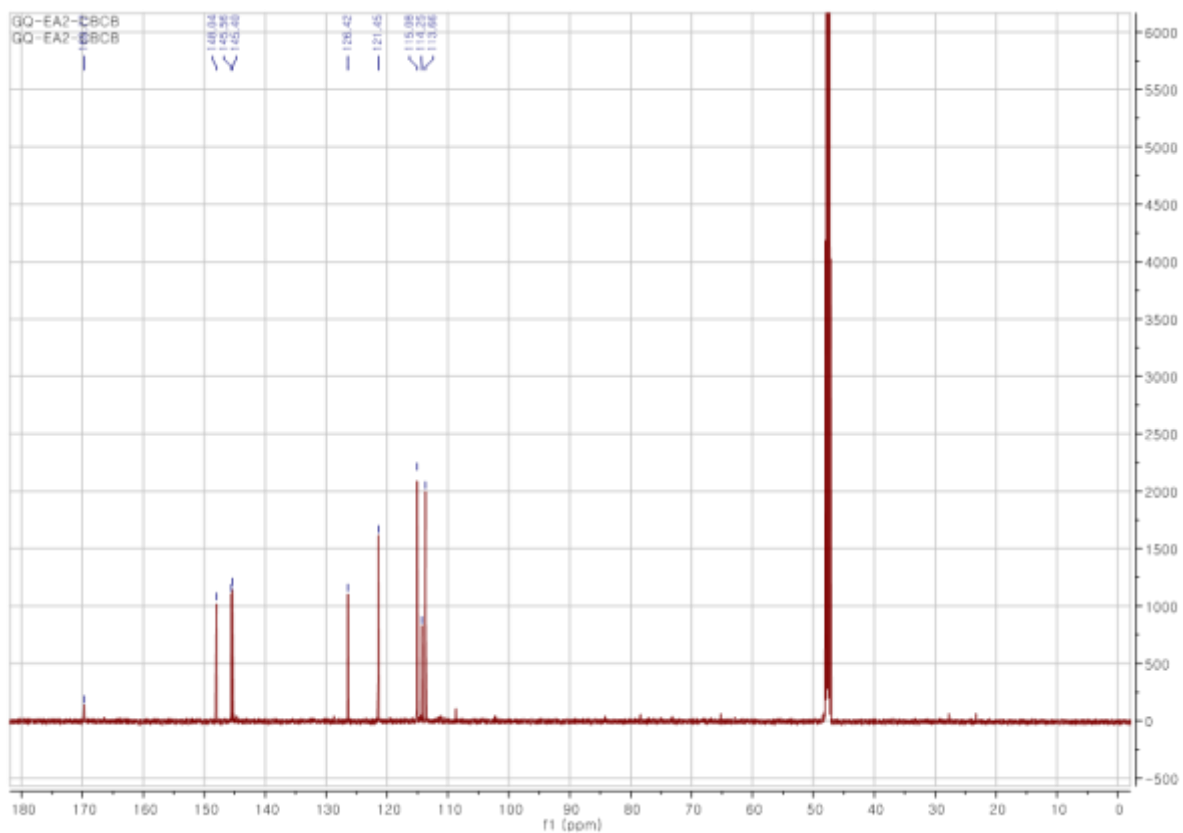
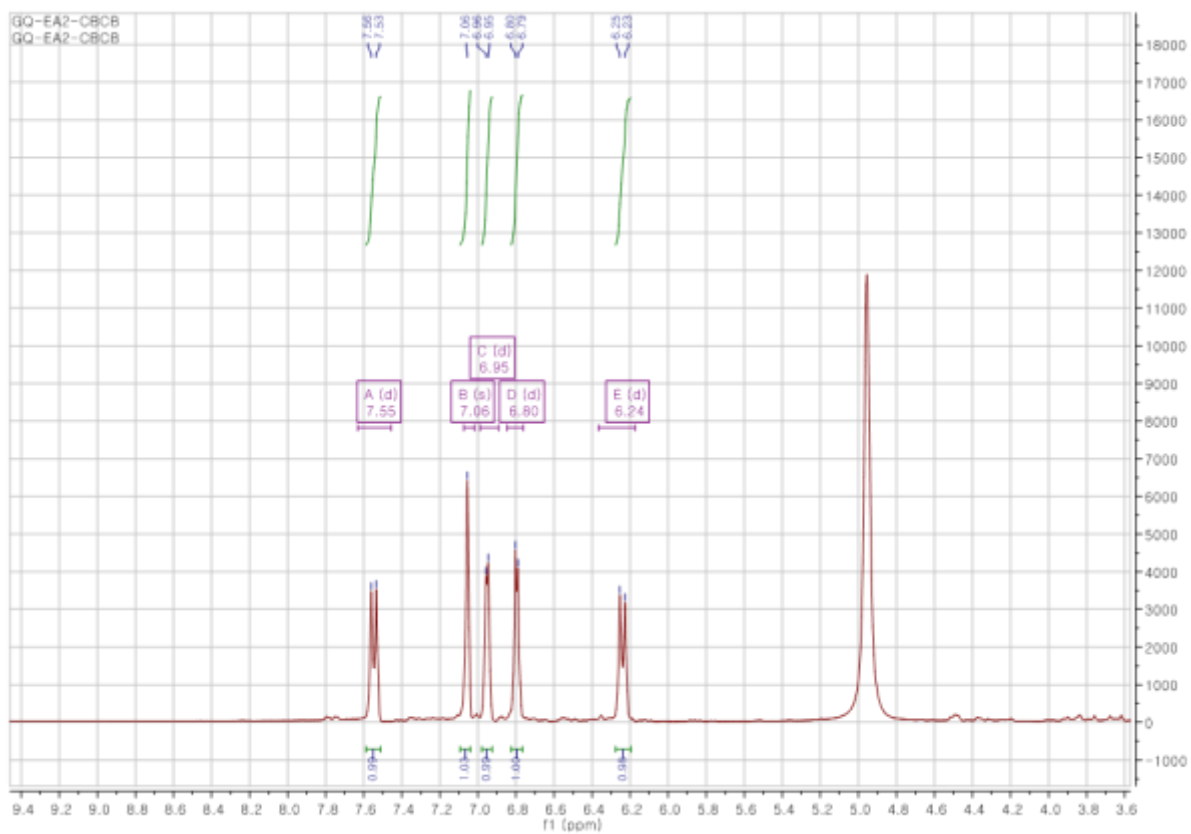
S17. ^1H and ^{13}C NMR spectrum of compound **16** in methanol- d_4 (600 and 150 MHz)



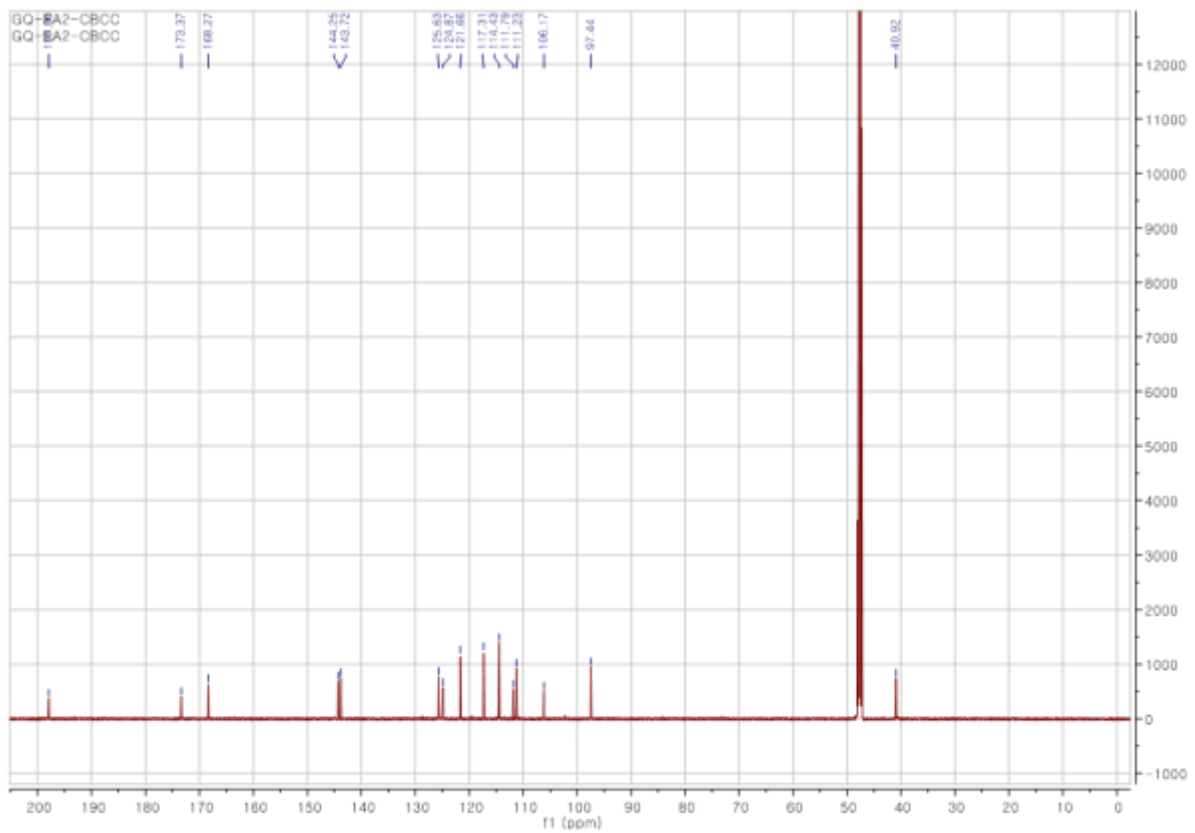
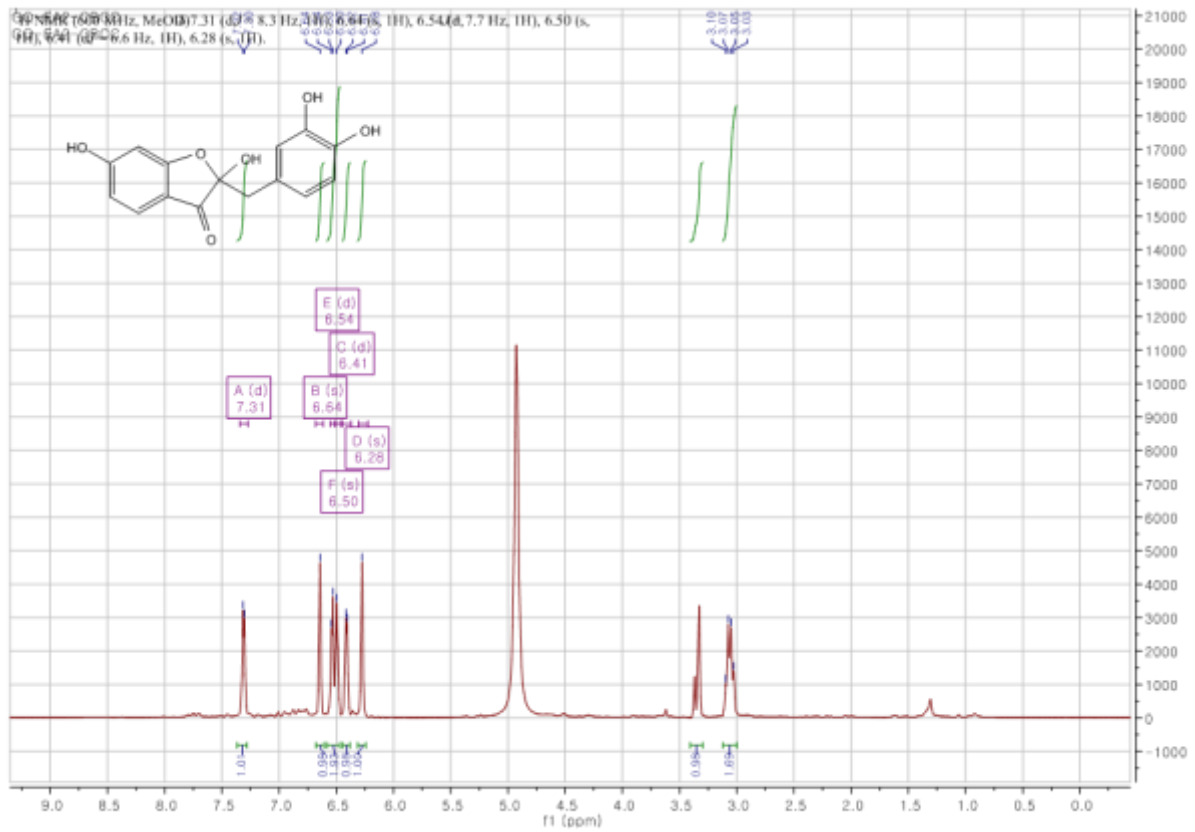
S18. ^1H and ^{13}C NMR spectrum of compound **17** in methanol- d_4 (600 and 150 MHz)



S19. ¹H and ¹³C NMR spectrum of compound **18** in methanol-*d*₄ (600 and 150 MHz)

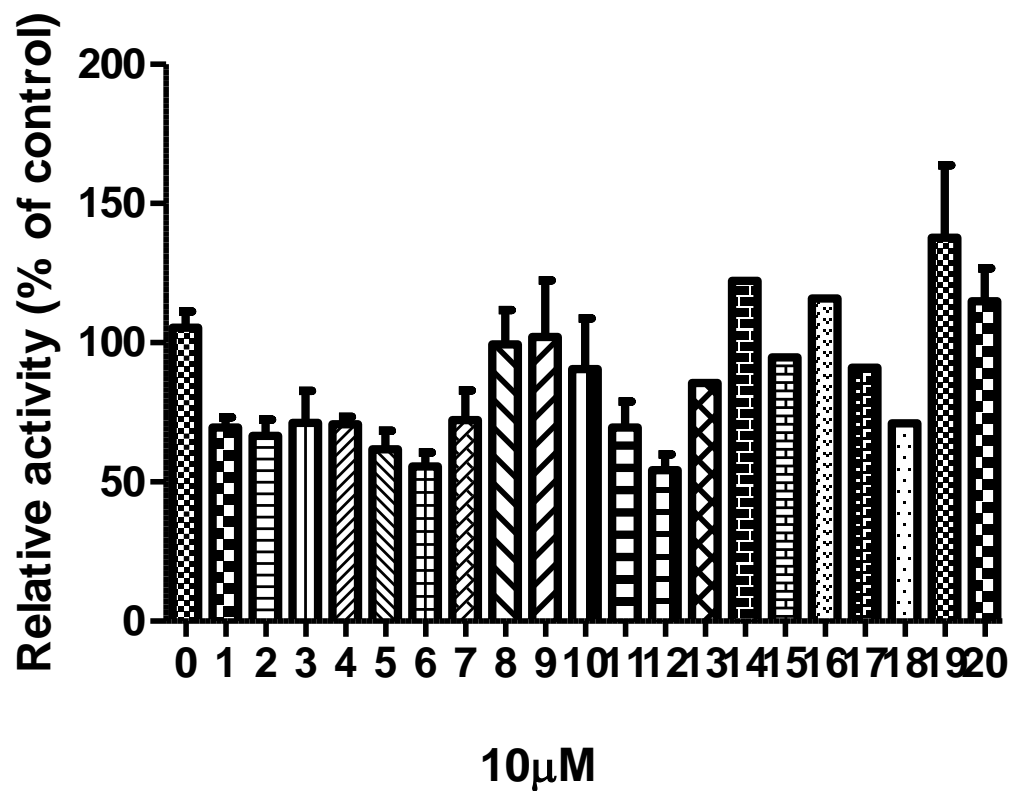


S20. ^1H and ^{13}C NMR spectrum of compound **19** in methanol- d_4 (600 and 150 MHz)



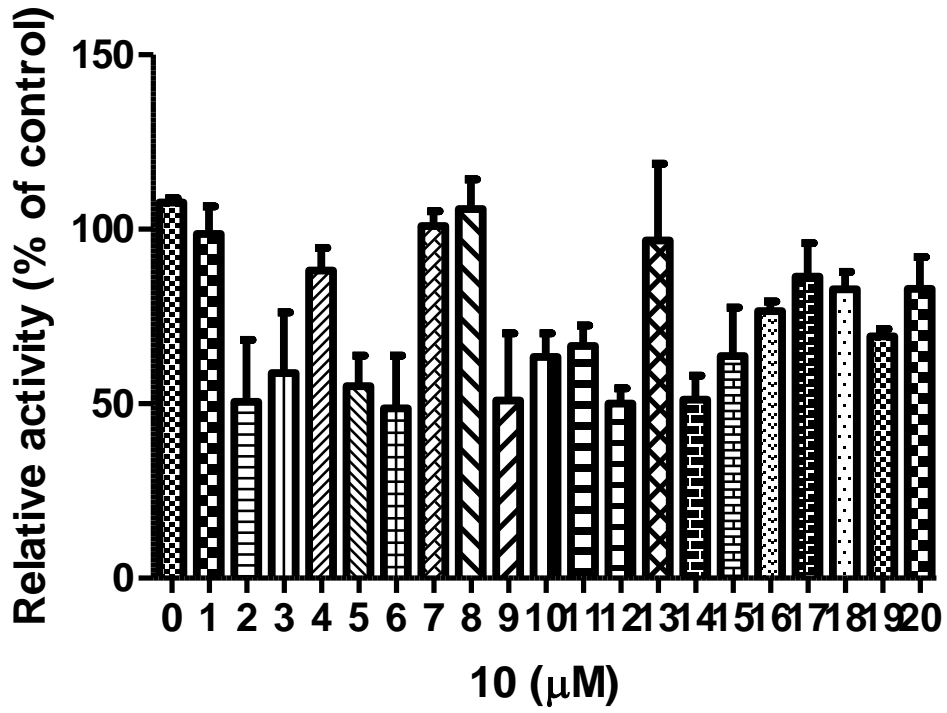
S21. ¹H and ¹³C NMR spectrum of compound **20** in methanol-*d*₄ (600 and 150 MHz)

PD-1/PD-L1



S22. Blocking effect of PD-1/PD-L1 interaction of isolated compound 1–20 at 10 μ M.

CTLA4/CD80



S23. Blocking effect of CTLA4/CD80 interaction of isolated compound 1–20 at 10 μM .