SUPPORTING INFORMATION

Synthesis and antiviral activity of conjugates of chloro-containing *N*-heterocycles with *N*-aminosulfonyl glutamic acids

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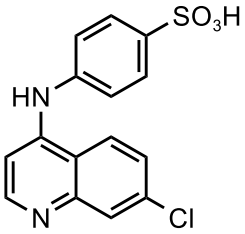
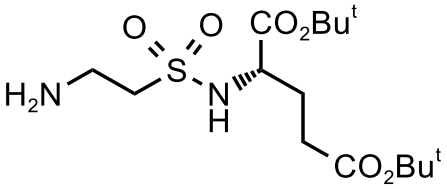
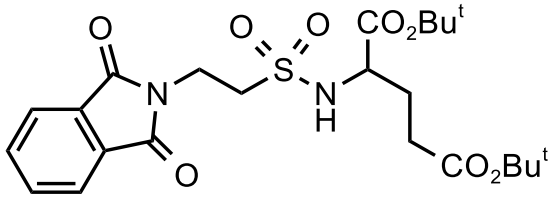
Experimental. Synthesis of some starting compounds



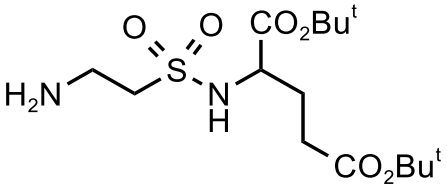
***N*-(7-Chloroquinolin-4-yl)-4-aminobenzenesulfonic acid, hydrate (12)** was obtained according US Patent 3933829. Yield 46%, light gray crystals, mp > 360 °C. ^{1}H NMR spectrum (500 MHz, DMSO-d_6): 6.87 (d, 1H, H(3)$_{Quin}$, $J_{3–2}$ = 7.0 Hz); 7.44 (d, 2H, H_{Ar}, J = 8.4 Hz); 7.79 (d, 2H, H_{Ar}, J = 8.4 Hz); 7.91 (dd, 1H, H(6)$_{Quin}$, $J_{6–5}$ = 9.1 Hz, $J_{6–8}$ = 2.0 Hz); 8.01 (d, 1H, H(8)$_{Quin}$, $J_{8–6}$ = 2.0 Hz); 8.56 (d, 1H, H(2)$_{Quin}$, $J_{2–3}$ = 7.0 Hz); 8.72 (d, 1H, H(5)$_{Quin}$, $J_{5–6}$ = 9.1 Hz); 10.94 (s, 1H, NH). Signal of SO_3H-group is not detected. ^{13}C NMR spectrum could not be registered due to the low solubility of this compound in both DMSO-d_6 and D_2O+NaOD. Found (%): C, 51.88; H, 3.54; Cl 10.43; N, 7.84; S, 9.14. $C_{15}H_{11}ClN_2O_3$ • 0.75 H_2O. Calculated (%): C, 51.73; H, 3.62; Cl 10.18; N, 8.04; S, 9.20.



Di-*tert*-butyl *N*-(2-aminoethanesulfonyl)-(*S*)-glutamate [(*S*)-13] was obtained according [A. Yu. Vigorov, E. B. Gorbunov, M. A. Ezhikova, M. I. Kodess, D. V. Belyaev, D. V. Vakhrusheva, G. L. Levit, V. P. Krasnov, *Russ. Chem. Bull.*, 2022, **71**, 2685]. White solid, mp 94–95 °C (Et_2O).



Di-*tert*-butyl *N*-(2-phthalimidoethanesulfonyl)-(*RS*)-glutamate was obtained similarly to the corresponding (*S*)-isomer [A. Yu. Vigorov, E. B. Gorbunov, M. A. Ezhikova, M. I. Kodess, D. V. Belyaev, D. V. Vakhrusheva, G. L. Levit, V. P. Krasnov, *Russ. Chem. Bull.*, 2022, **71**, 2685]. The yield of crude product 92%. The yield after crystallization from 95% aq. EtOH 80%. White solid, mp 128–130 °C (EtOH).



Di-*tert*-butyl *N*-(2-aminoethanesulfonyl)-(*RS*)-glutamate [(*RS*)-13] was obtained similarly to the corresponding (*S*)-isomer [A. Yu. Vigorov, E. B. Gorbunov, M. A. Ezhikova, M. I. Kodess, D. V. Belyaev, D. V. Vakhrusheva, G. L. Levit, V. P. Krasnov, *Russ. Chem. Bull.*, 2022, **71**, 2685]. White solid, mp 74–75 °C (Et_2O).

NMR Spectra

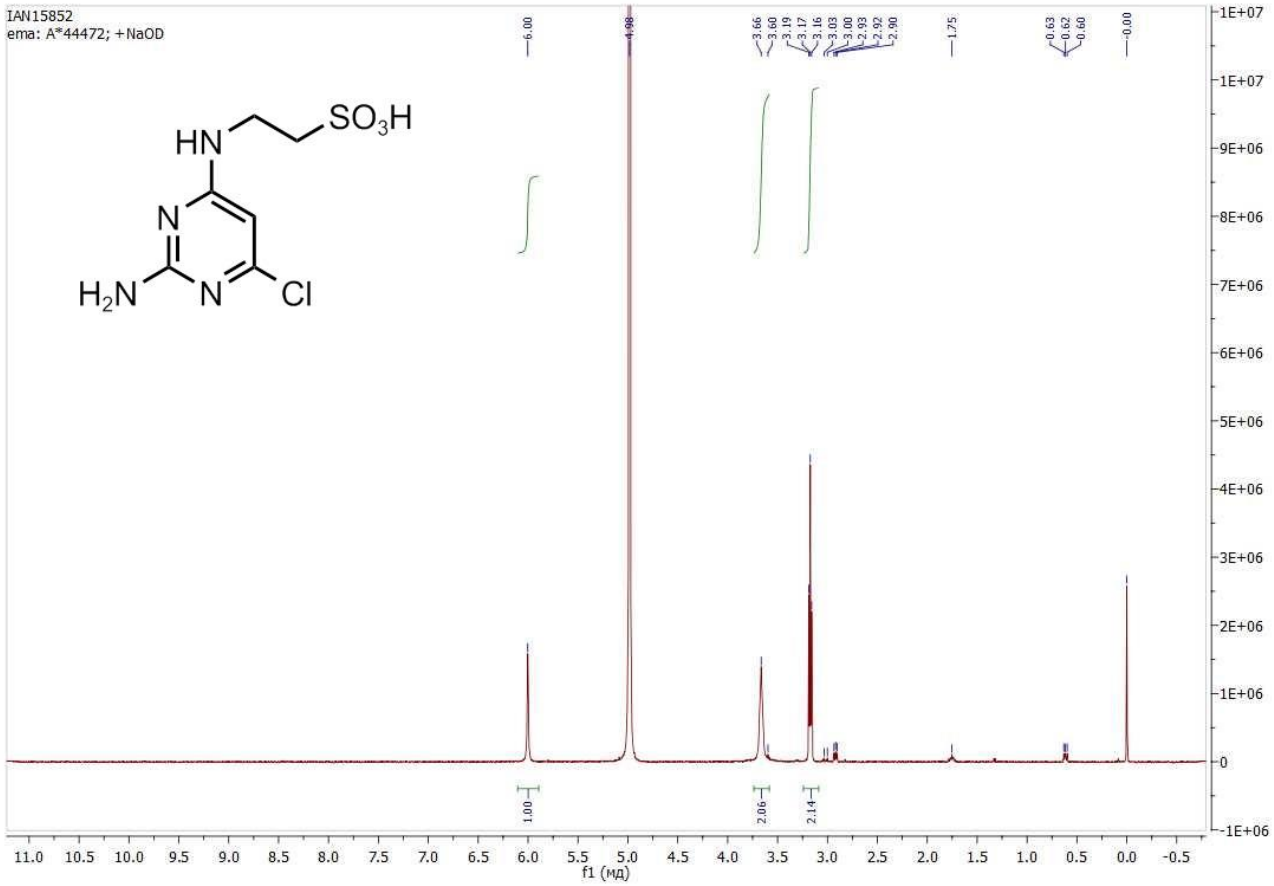


Figure S1. ^{1}H NMR spectrum of compound **8** (500 MHz, D_2O+NaON). Internal standard DSS.

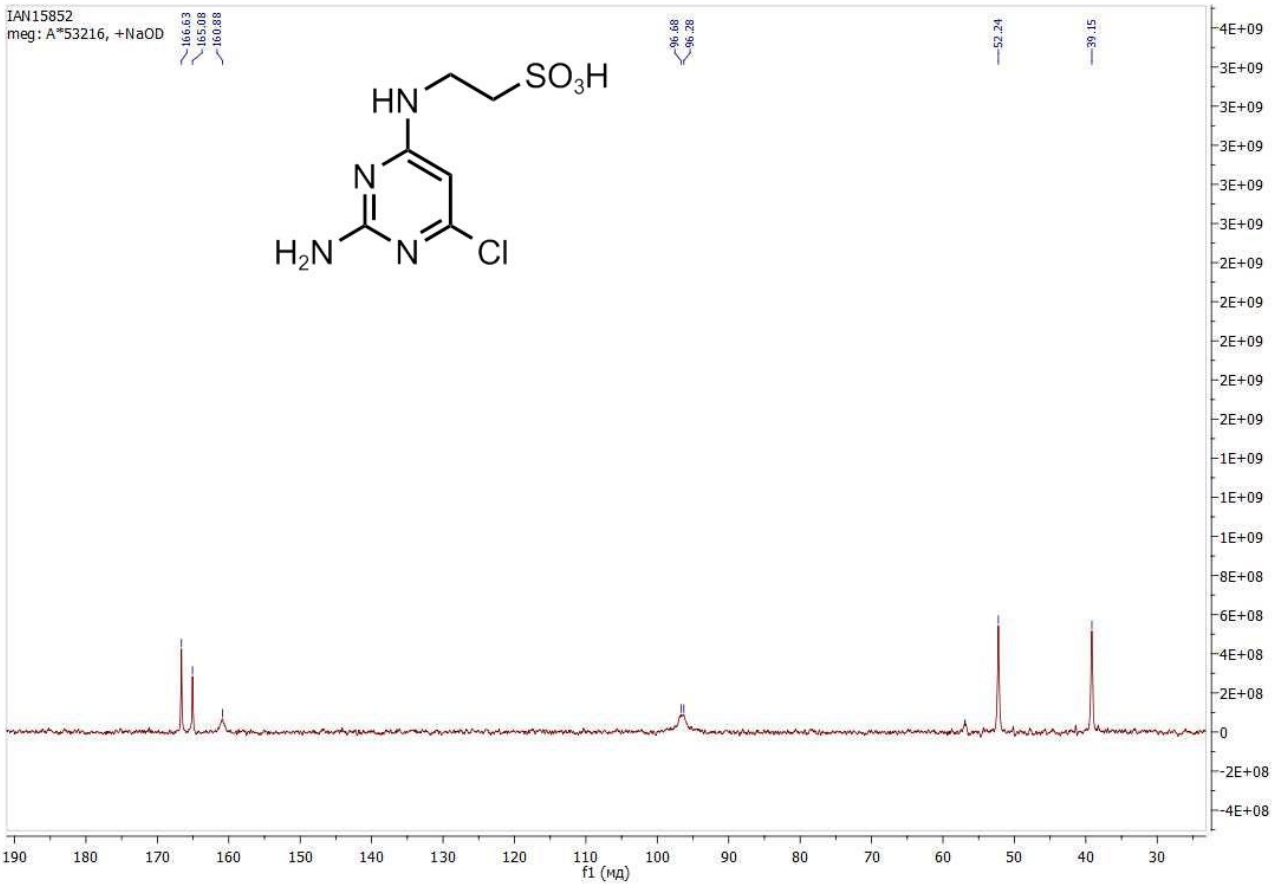


Figure S2. ^{13}C NMR spectrum of compound **8** (126 MHz, D_2O+NaON). Internal standard DSS.

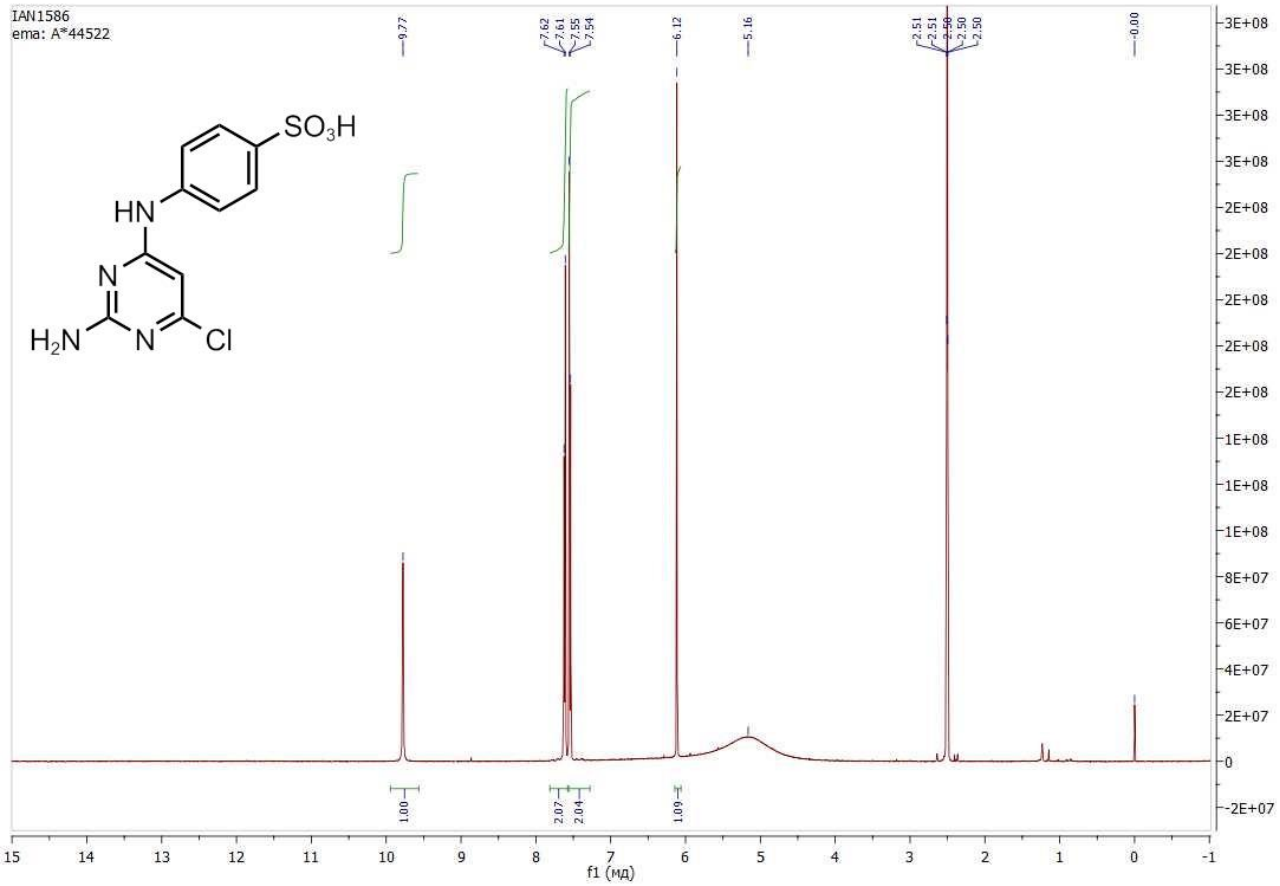


Figure S3. ^{1}H NMR spectrum of compound **9** (500 MHz, DMSO-d_6). Internal standard TMS.

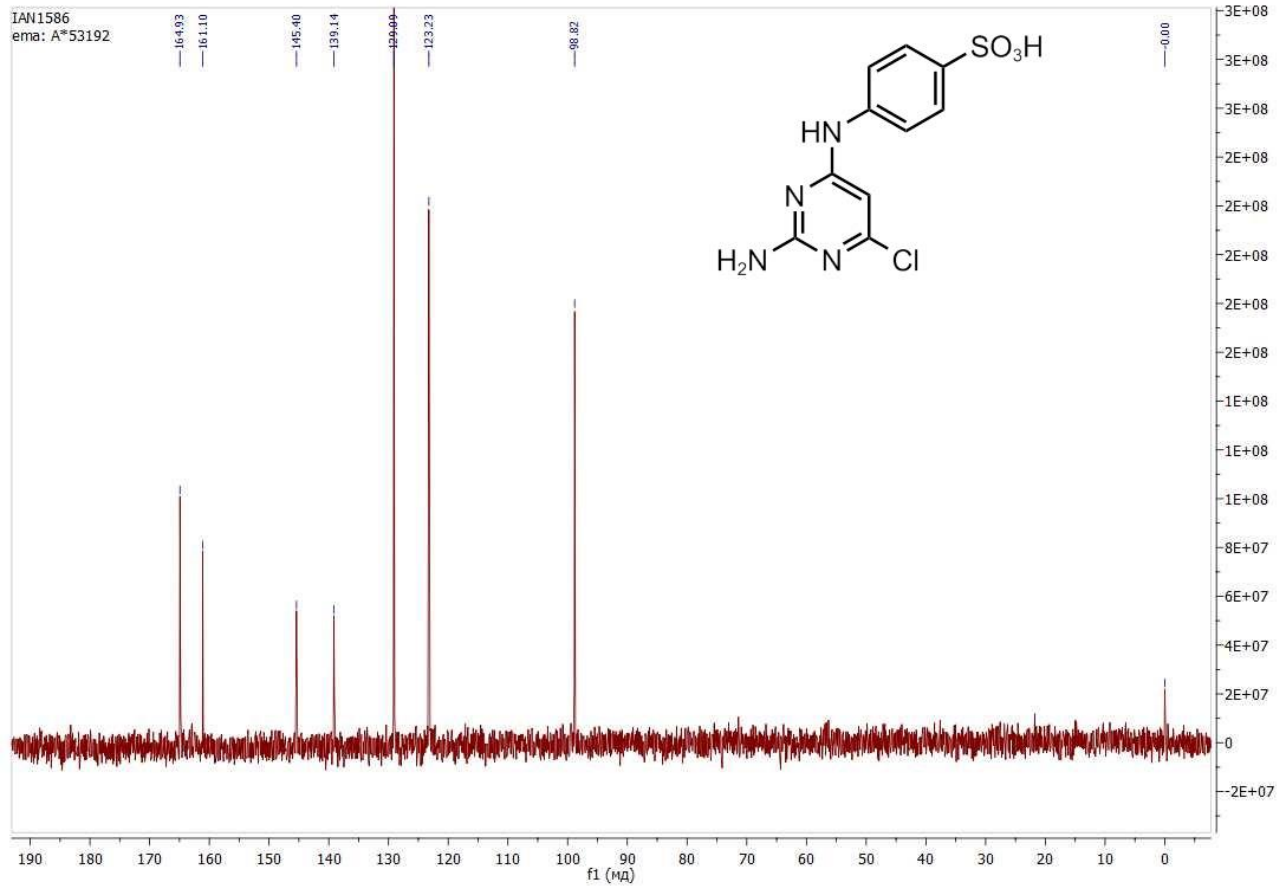


Figure S4. ^{13}C NMR spectrum of compound **9** (126 MHz, DMSO-d_6). Internal standard TMS.

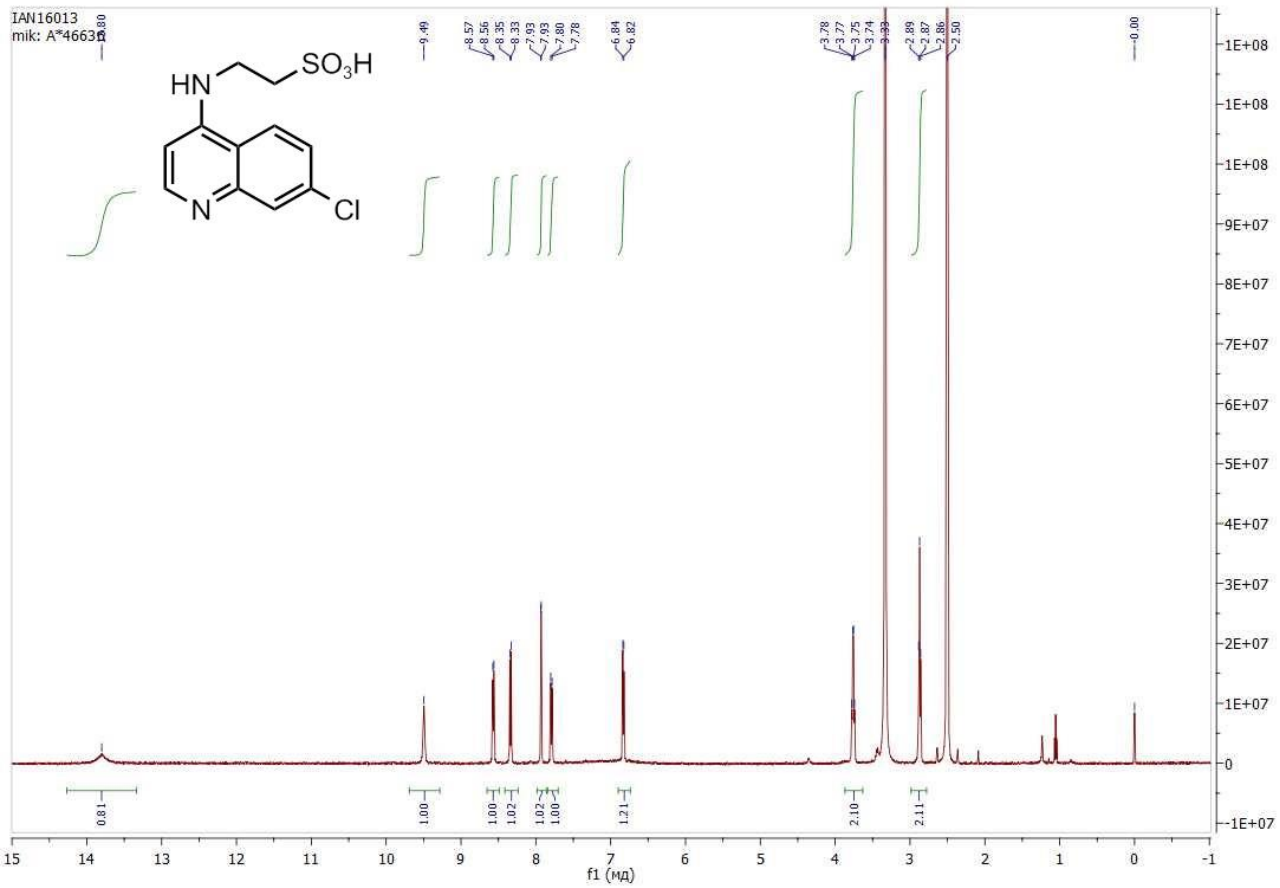


Figure S5. ^{1}H NMR spectrum of compound **11** (500 MHz, DMSO-d_6). Internal standard TMS.

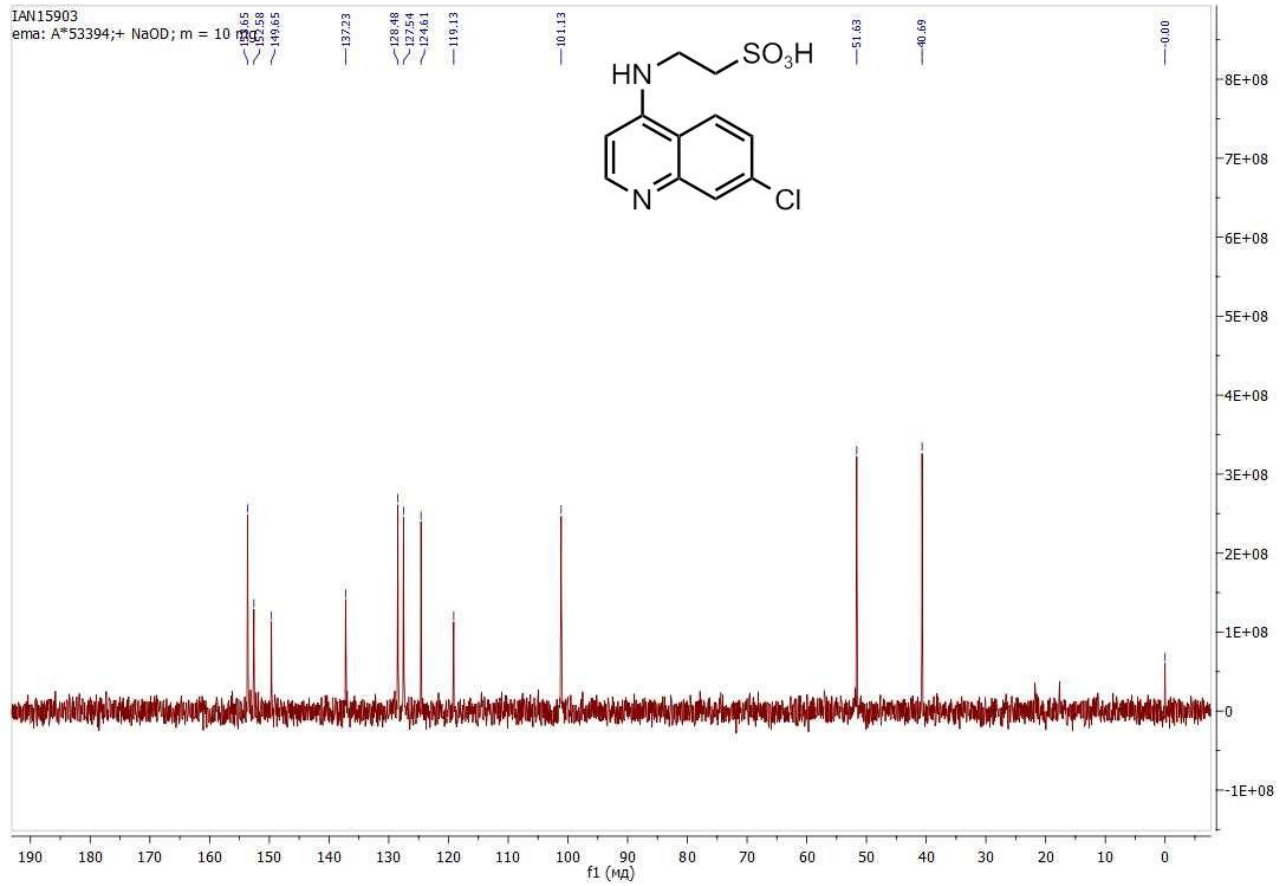


Figure S6. ^{13}C NMR spectrum of compound **11** (126 MHz, D_2O+NaON). Internal standard DSS.

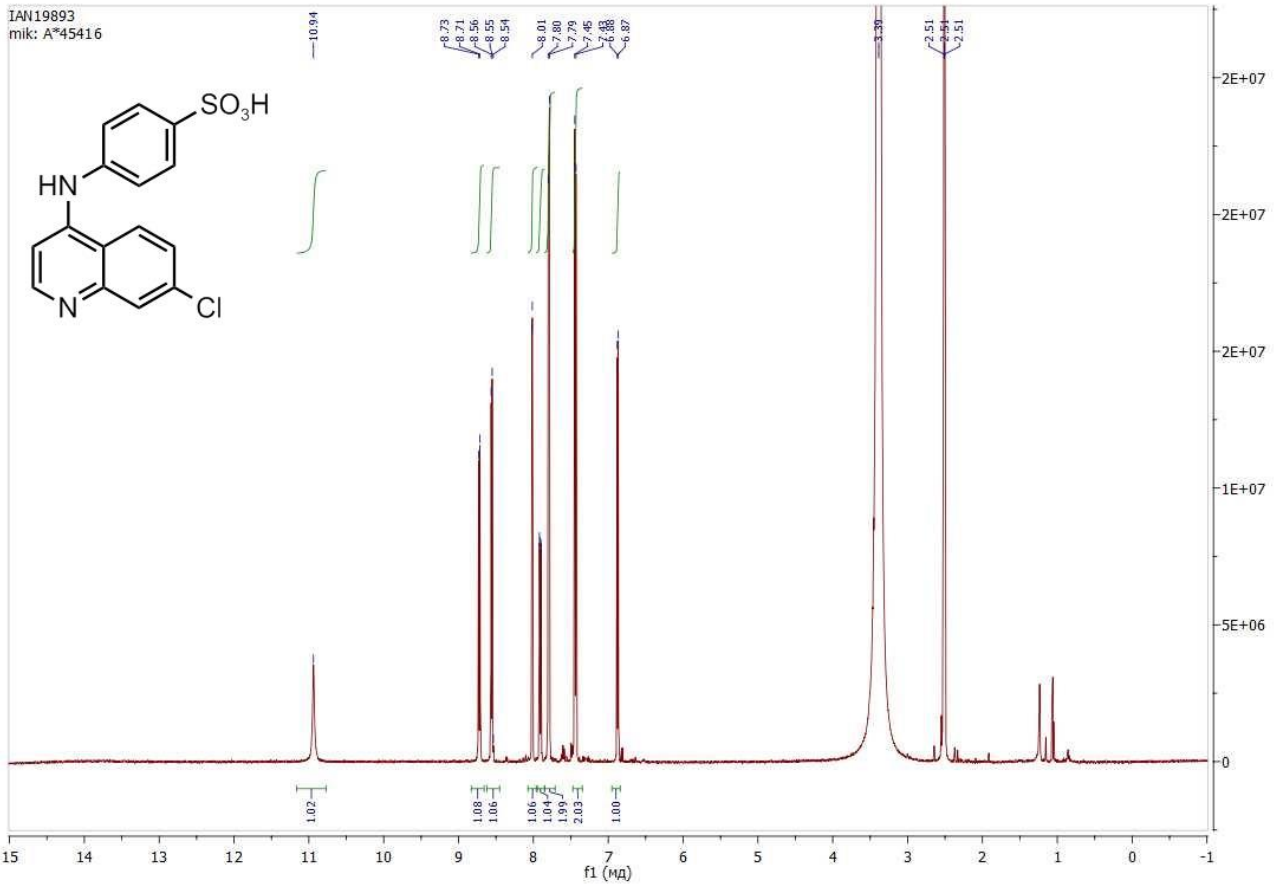


Figure S7. ^{1}H NMR spectrum of compound **12** (500 MHz, DMSO-d_6). Internal standard TMS.

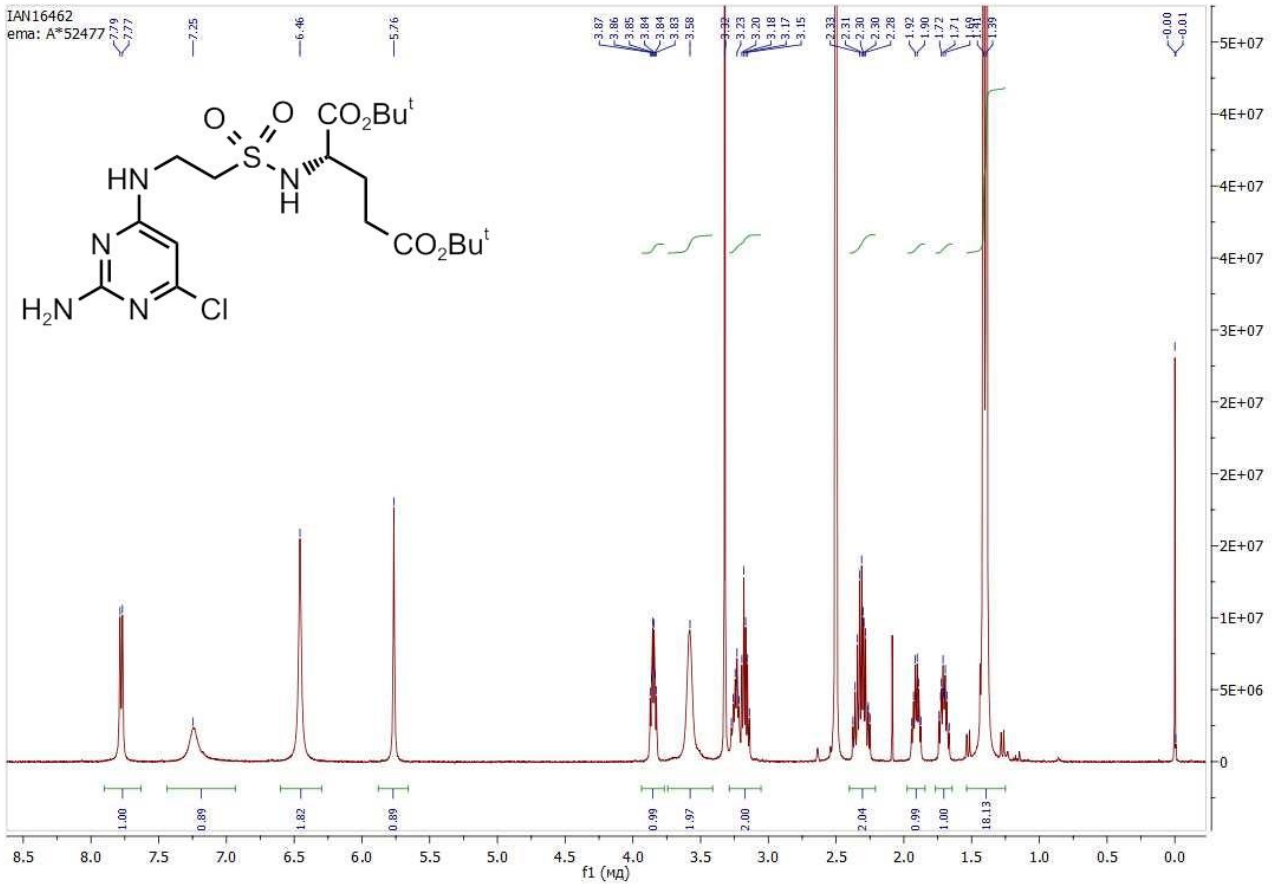


Figure S8. ^{1}H NMR spectrum of compound (*S*)-**14** (500 MHz, DMSO-d_6). Internal standard TMS.

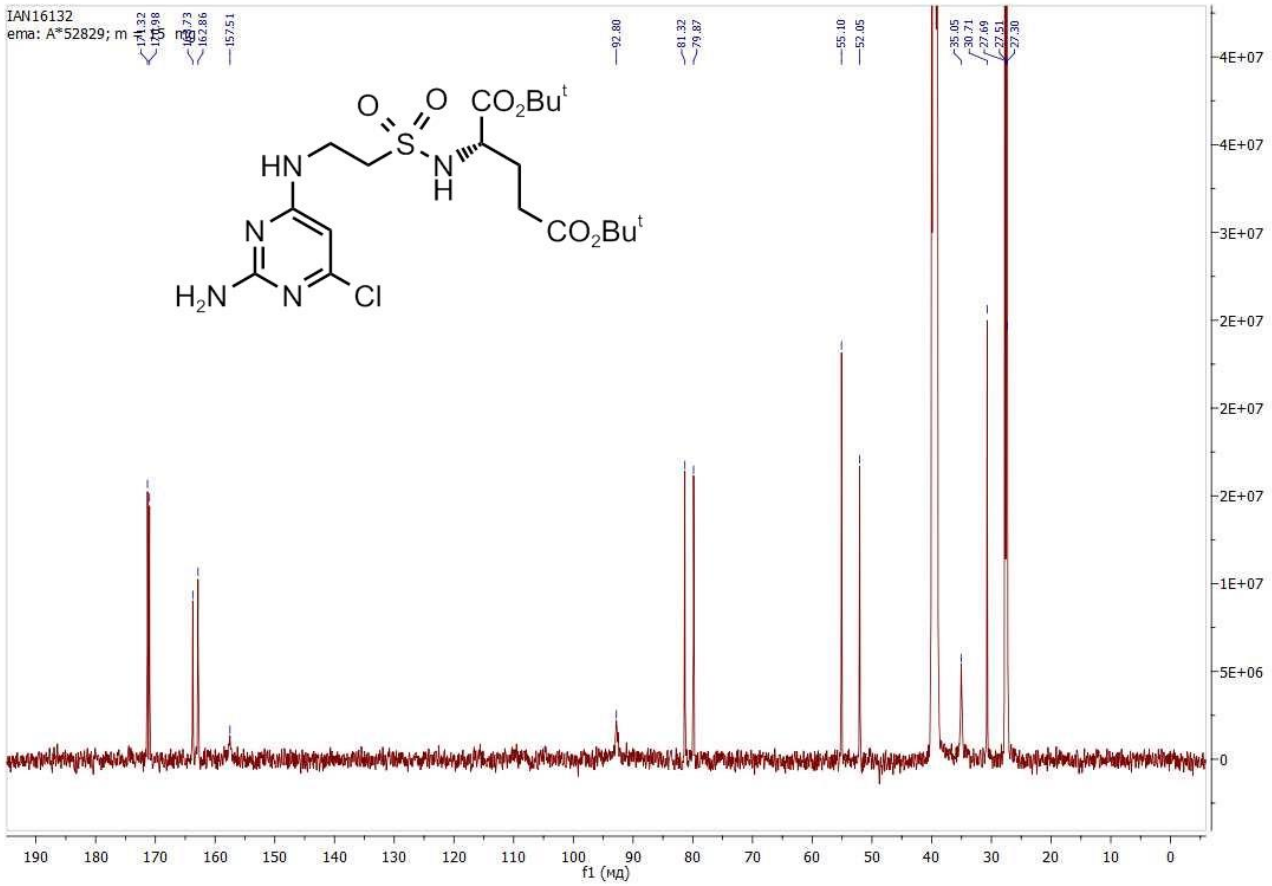


Figure S9. ^{13}C NMR spectrum of compound (*S*)-**14** (126 MHz, DMSO-d_6). Internal standard TMS.

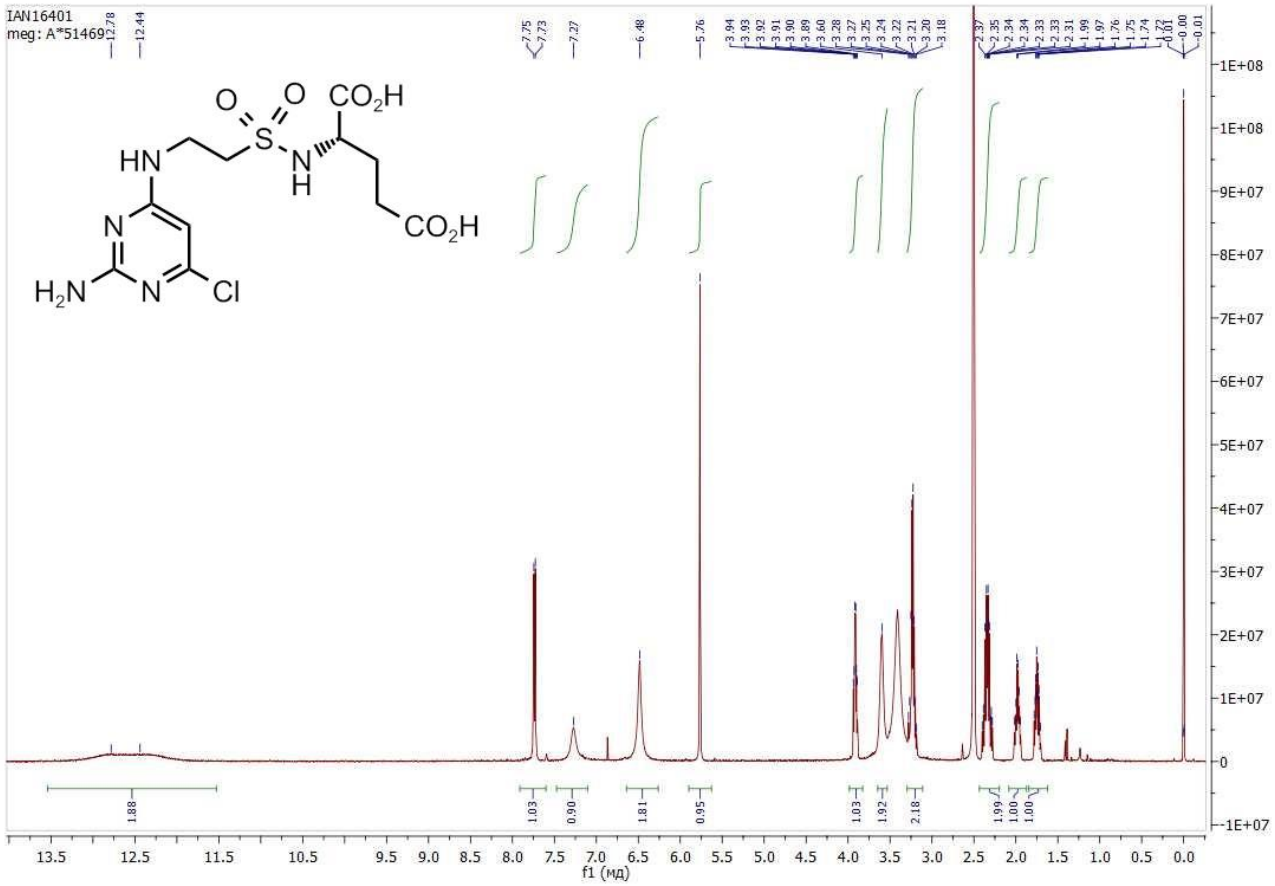


Figure S10. ^{1}H NMR spectrum of compound (*S*)-**15** (500 MHz, DMSO-d_6). Internal standard TMS.

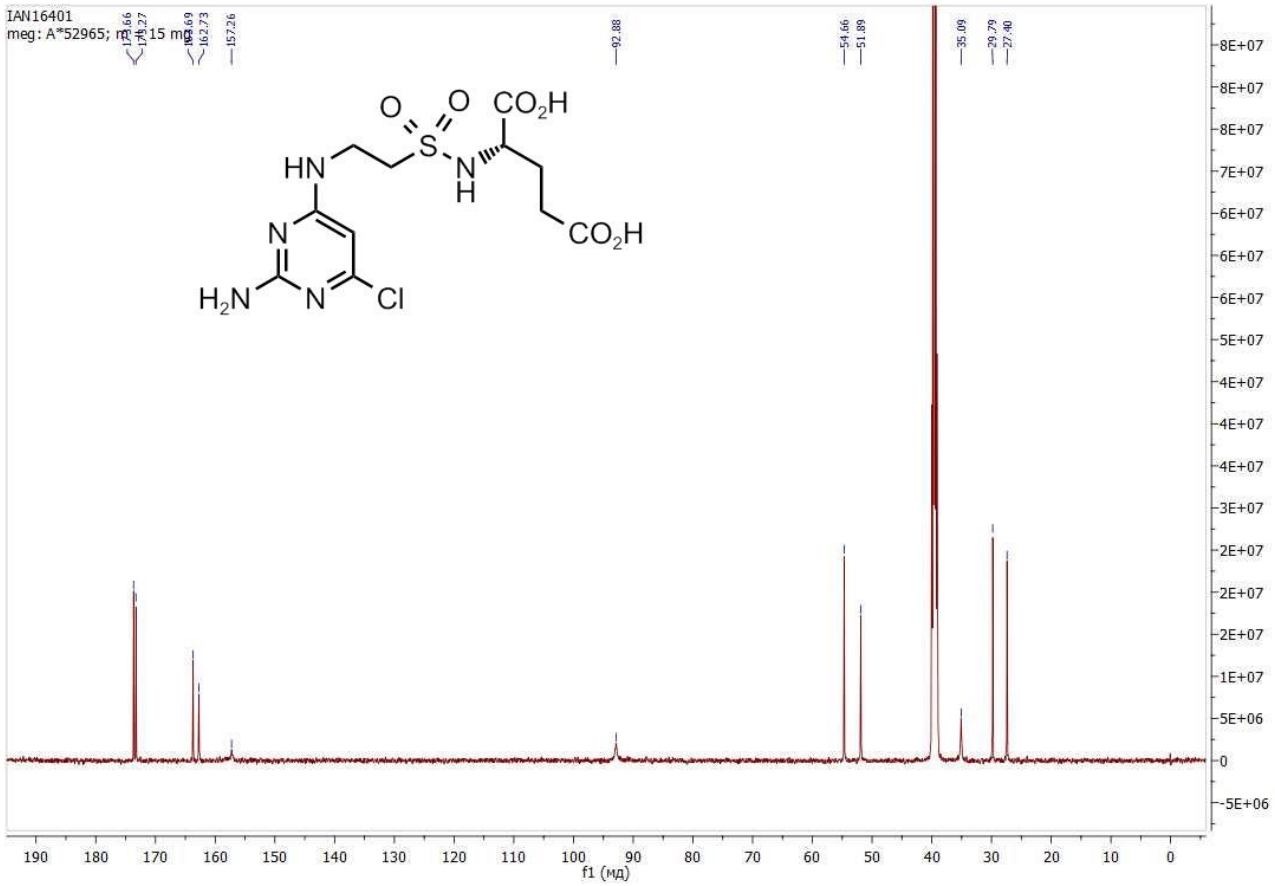


Figure S11. ^{13}C NMR spectrum of compound (*S*)-**15** (126 MHz, DMSO-d_6). Internal standard TMS.

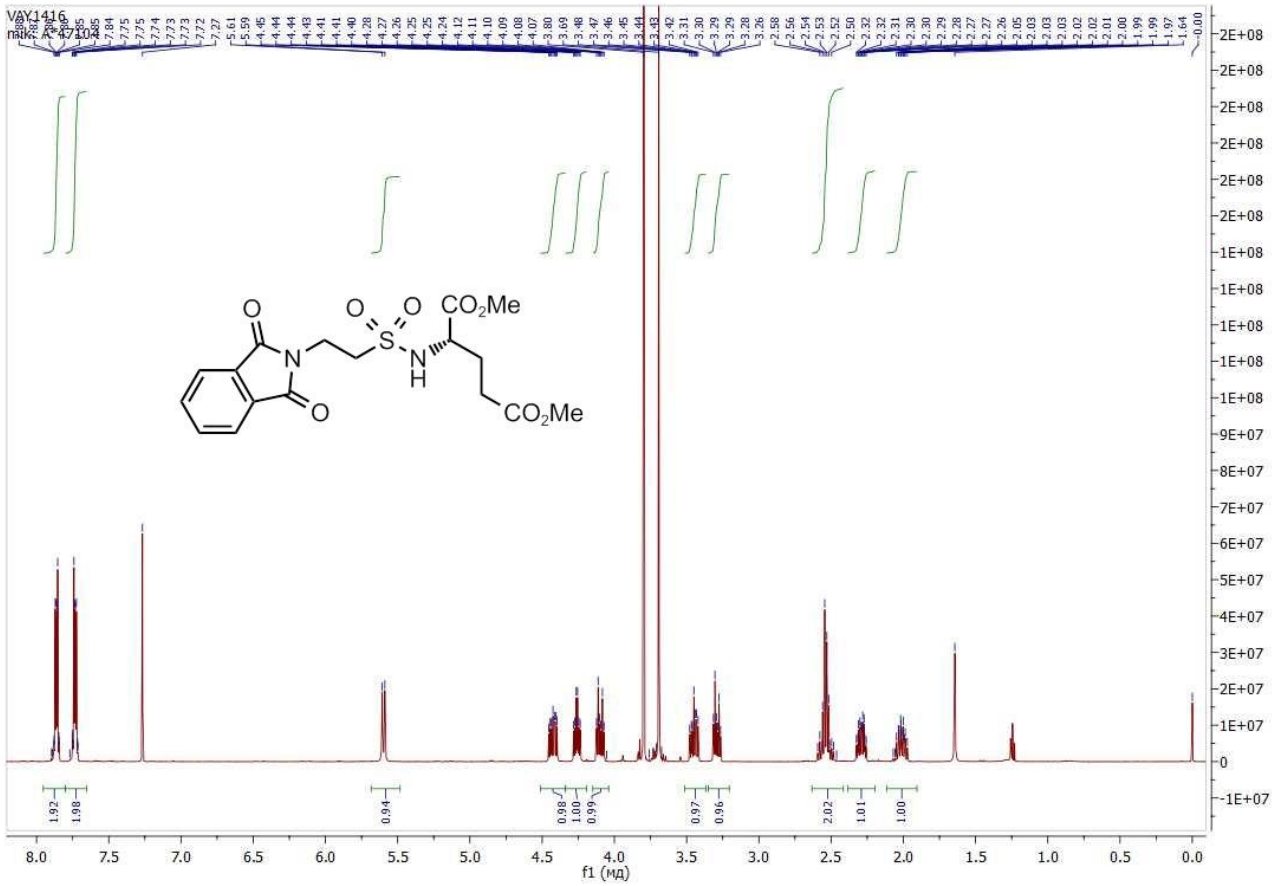


Figure S12. ^{1}H NMR spectrum of compound (*S*)-**16** (500 MHz, $CDCl_3$). Internal standard TMS.

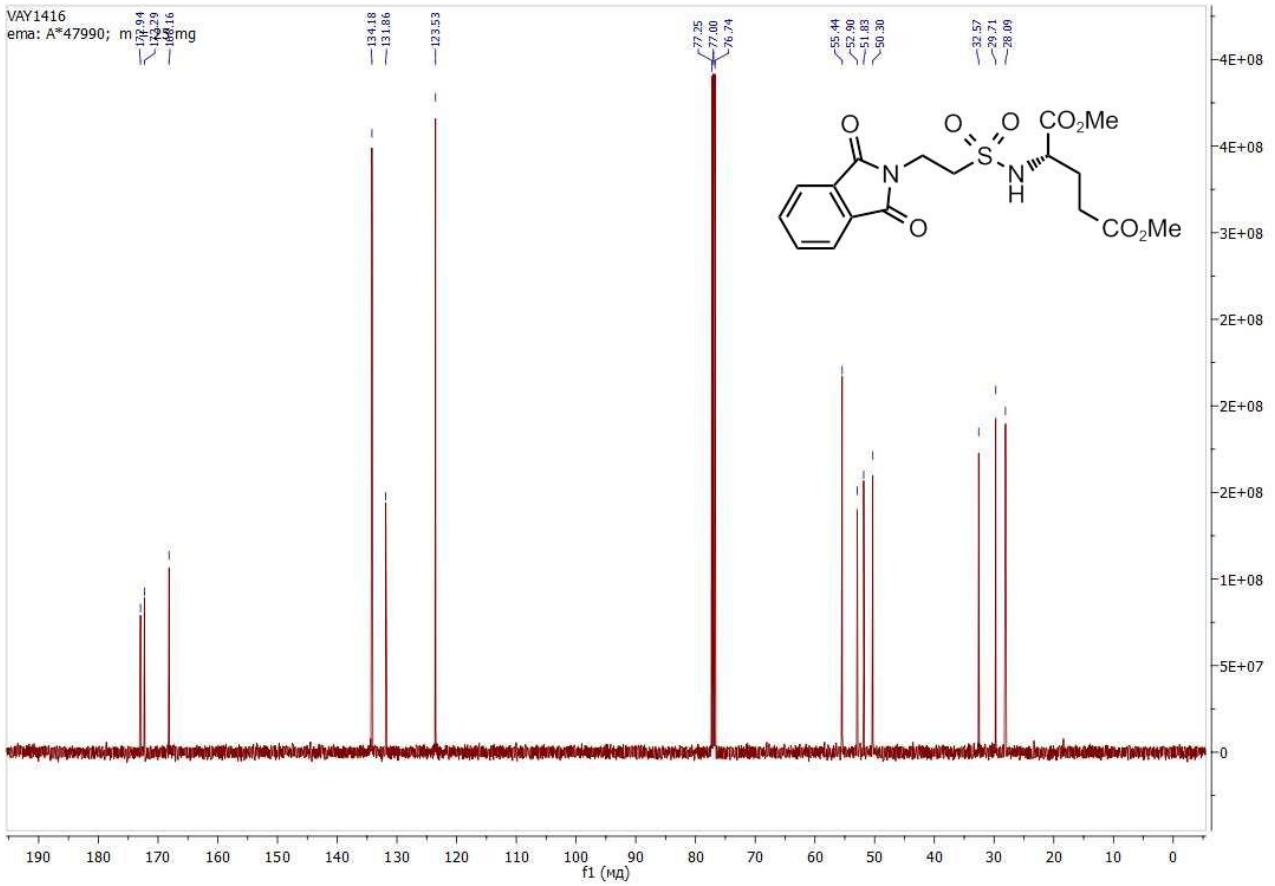


Figure S13. ^{13}C NMR spectrum of compound (*S*)-**16** (126 MHz, $CDCl_3$). Internal standard TMS.

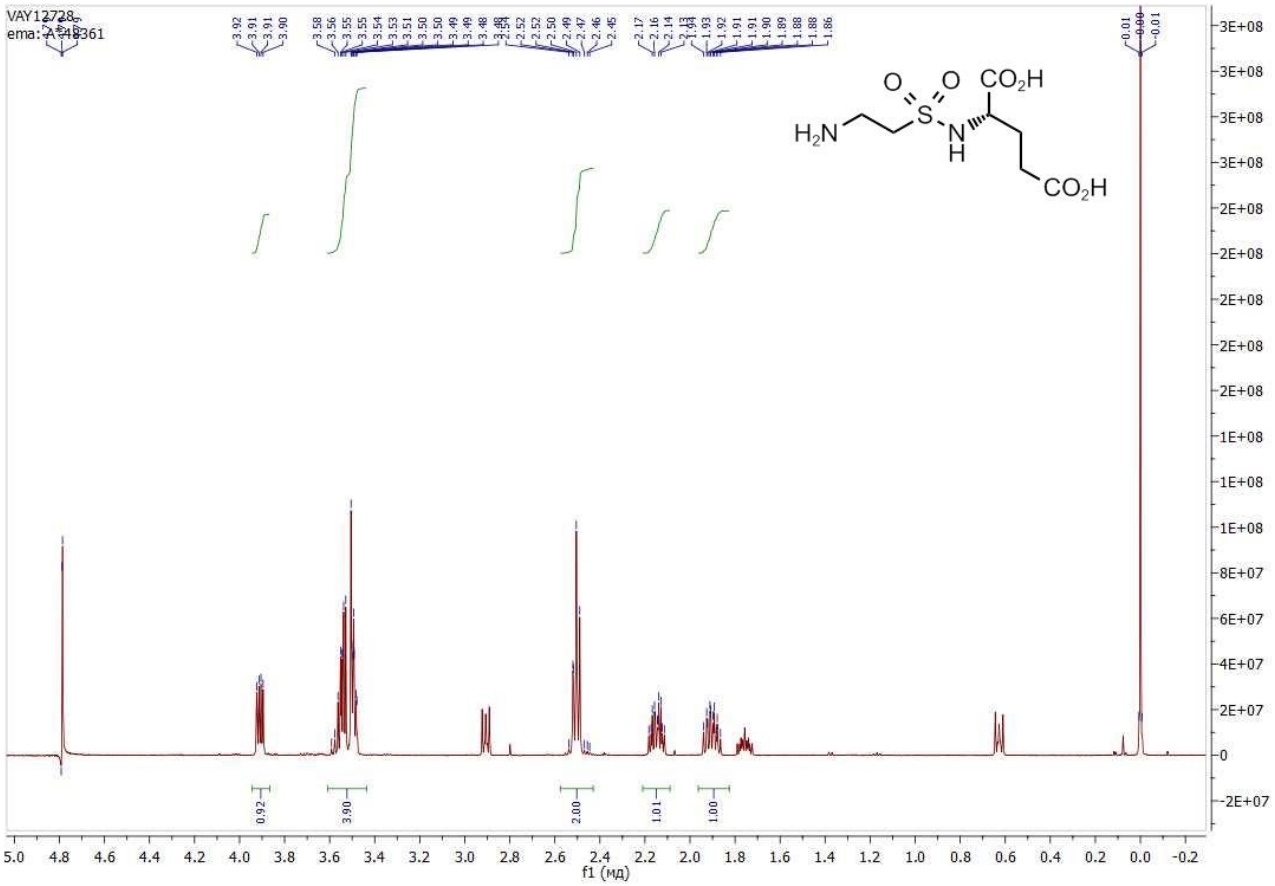


Figure S14. ^{1}H NMR spectrum of compound **17** (500 MHz, D_2O). Internal standard DSS.

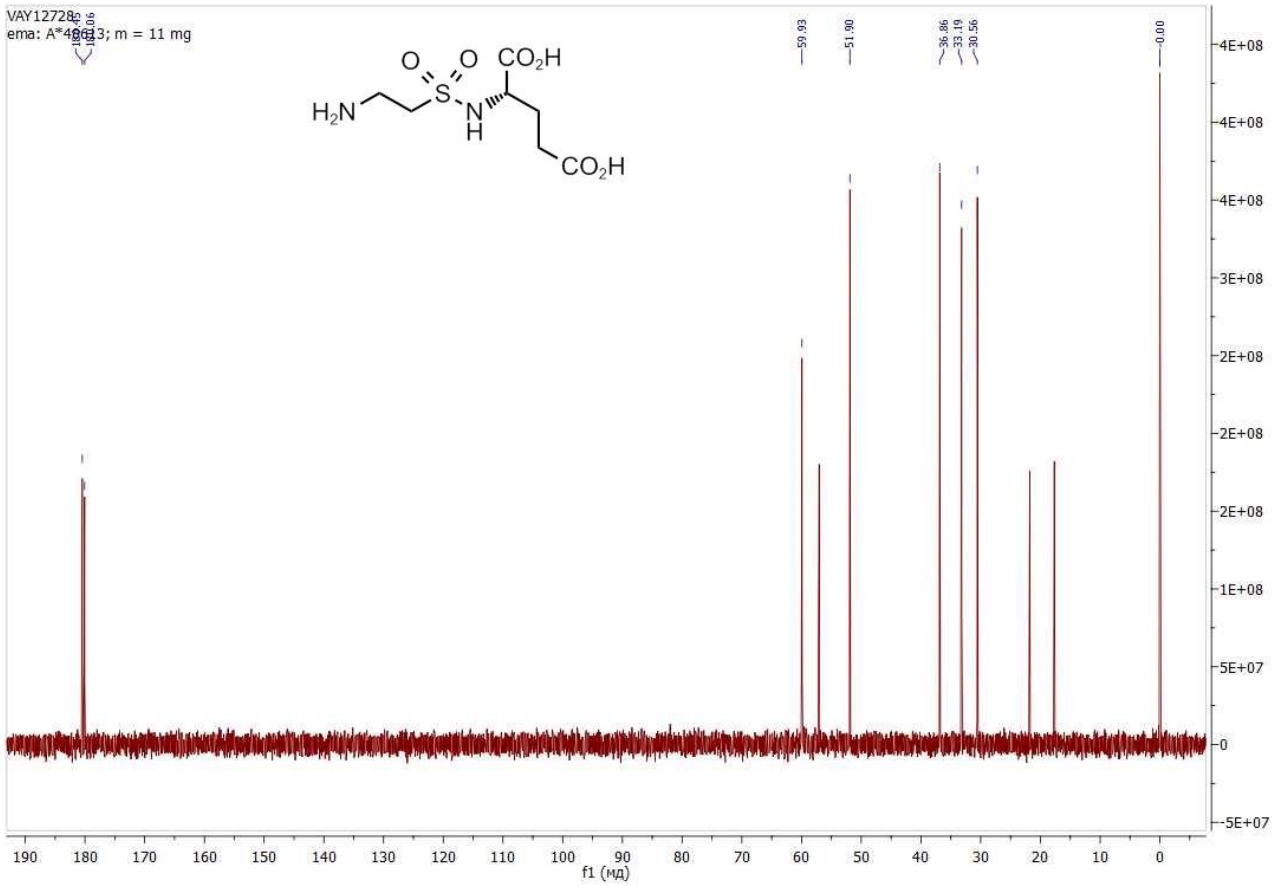


Figure S15. ^{13}C NMR spectrum of compound **17** (126 MHz, D_2O). Internal standard DSS.

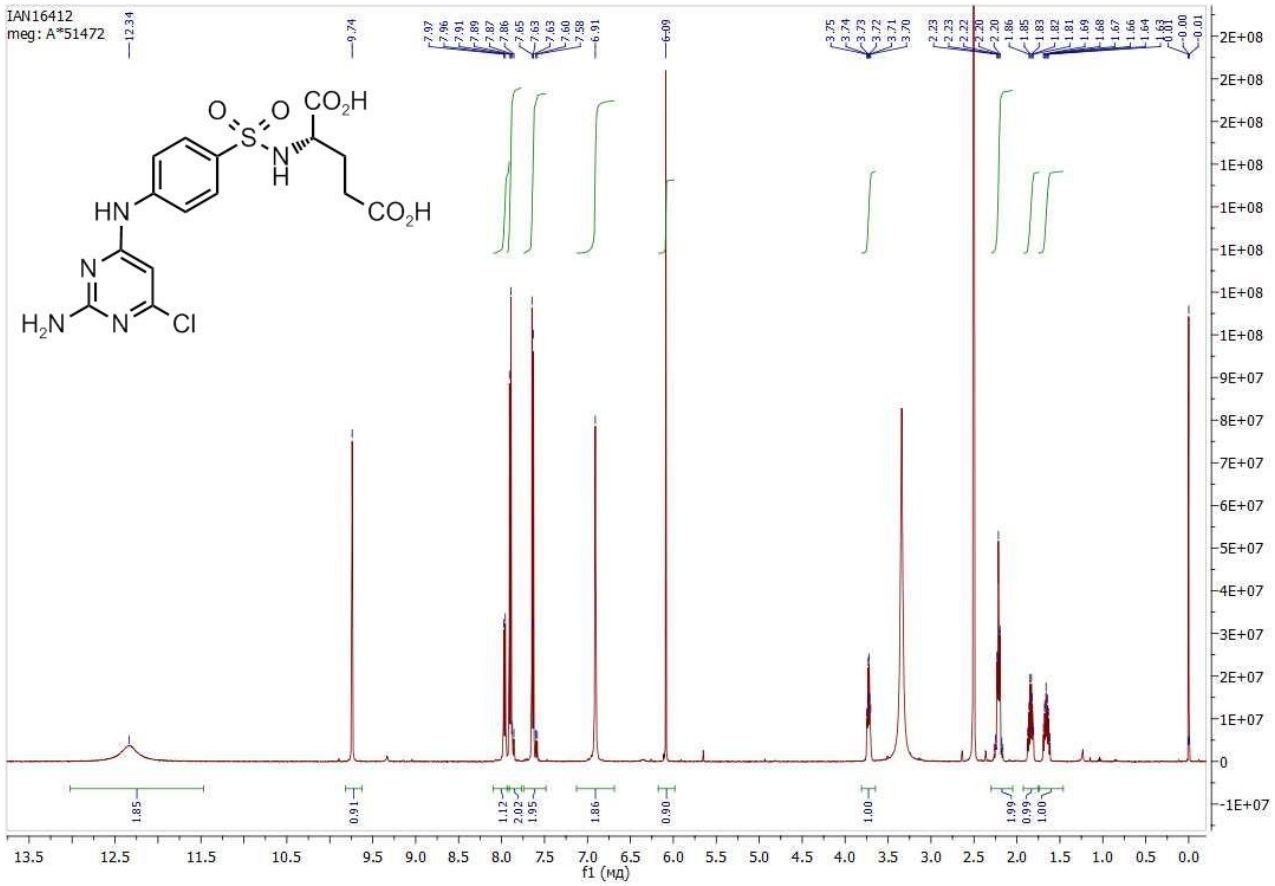


Figure S16. ^{1}H NMR spectrum of compound (*S*)-**19** (500 MHz, DMSO-d_6). Internal standard TMS.

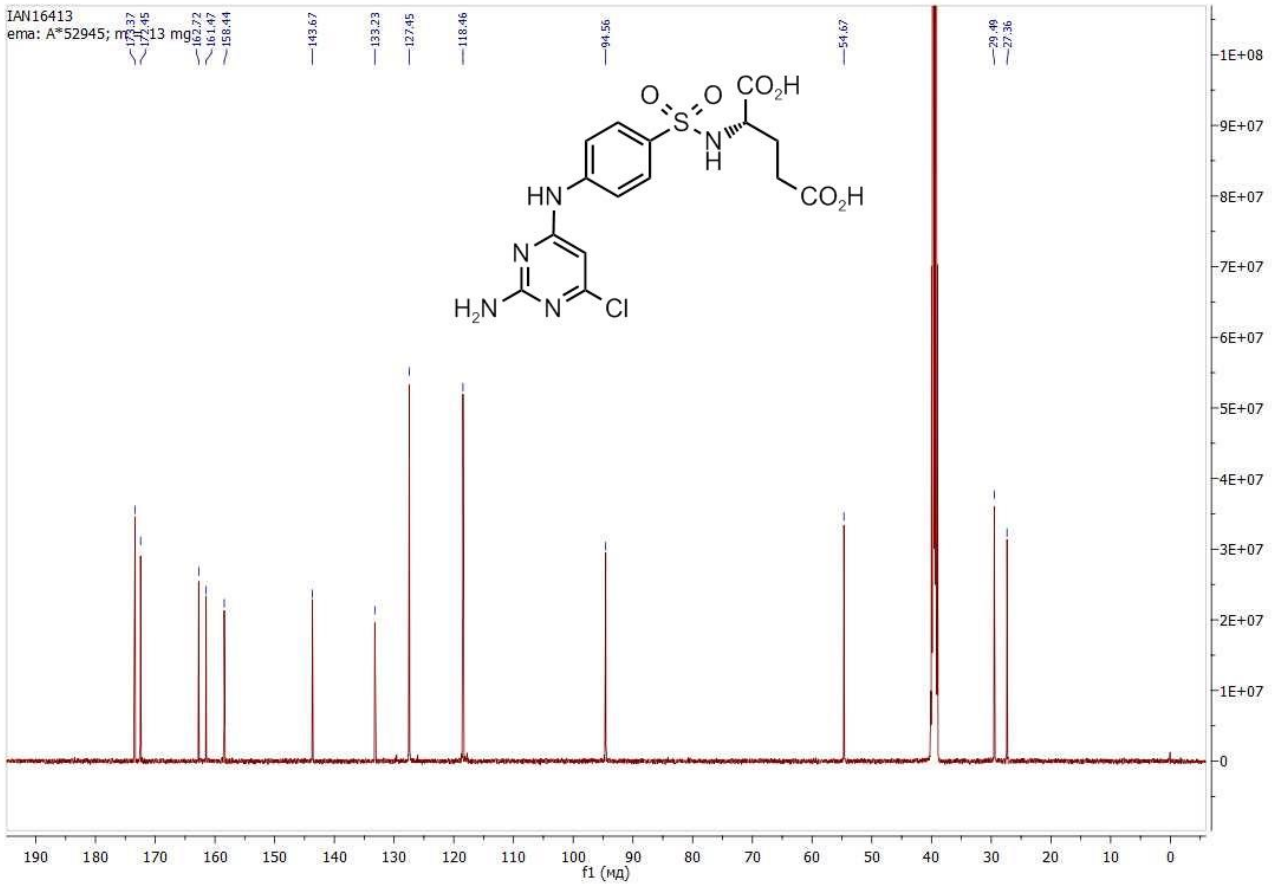


Figure S17. ^{13}C NMR spectrum of compound (*S*)-**19** (126 MHz, DMSO-d_6). Internal standard TMS.

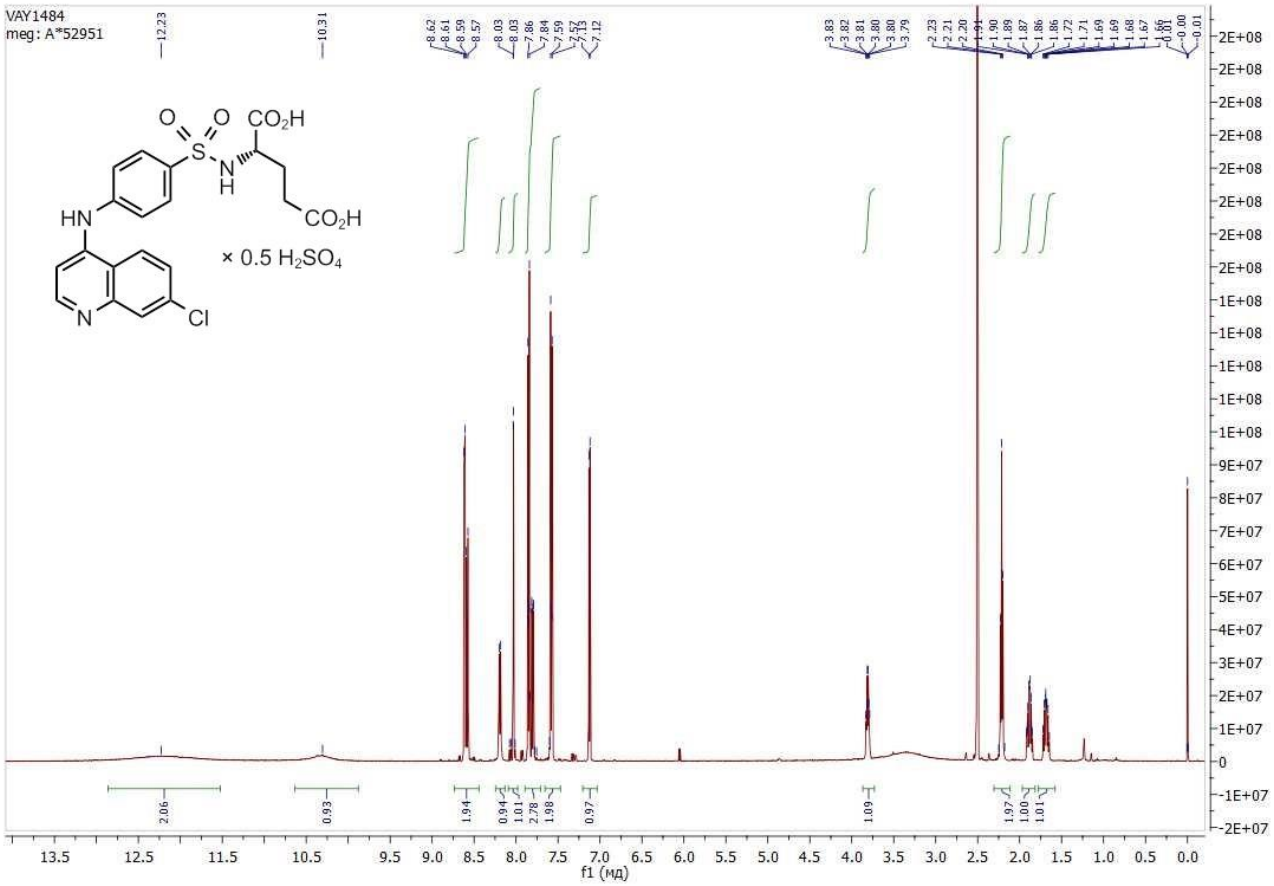


Figure S18. ^{1}H NMR spectrum of compound (*S*)-**20** (500 MHz, DMSO-d_6). Internal standard TMS.

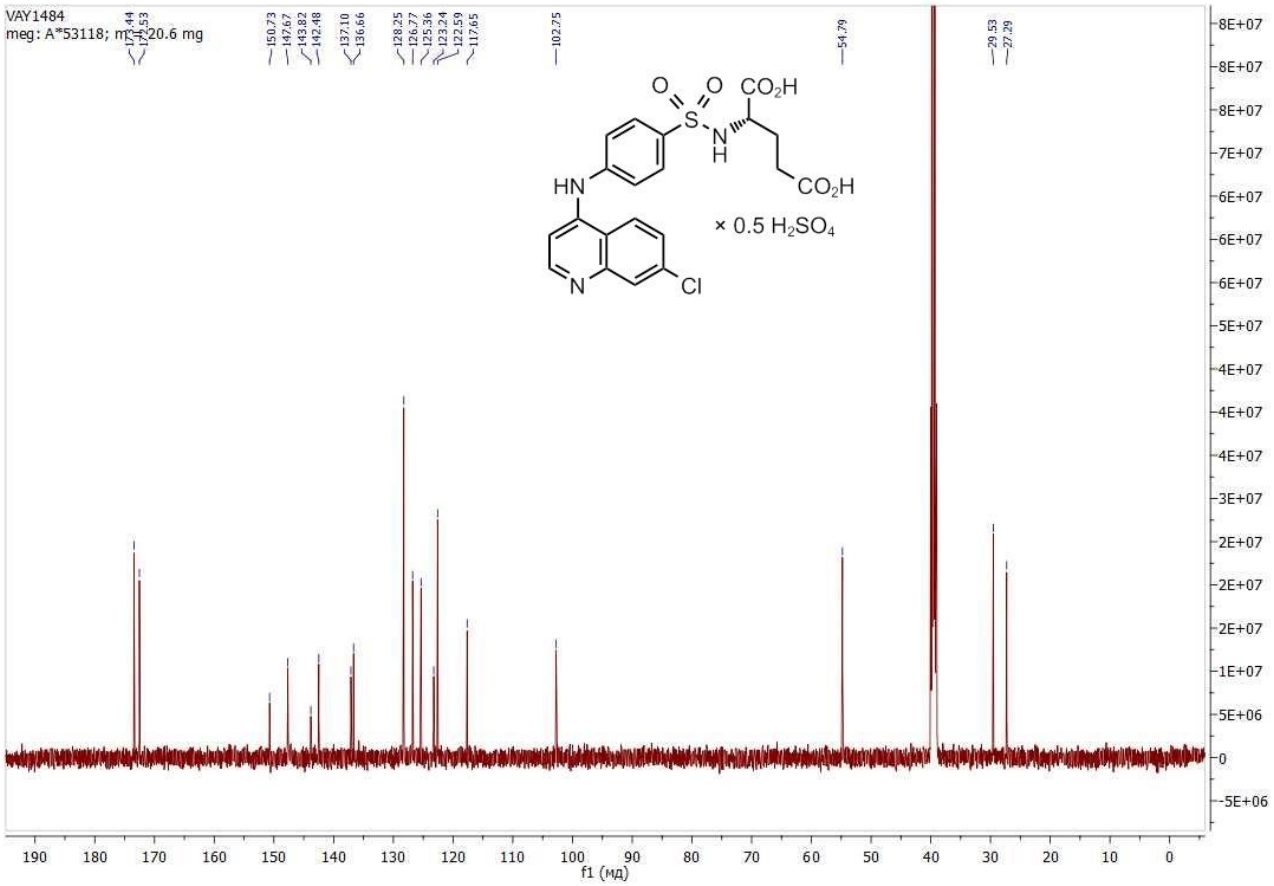


Figure S19. ^{13}C NMR spectrum of compound (*S*)-**20** (126 MHz, DMSO-d_6). Internal standard TMS.

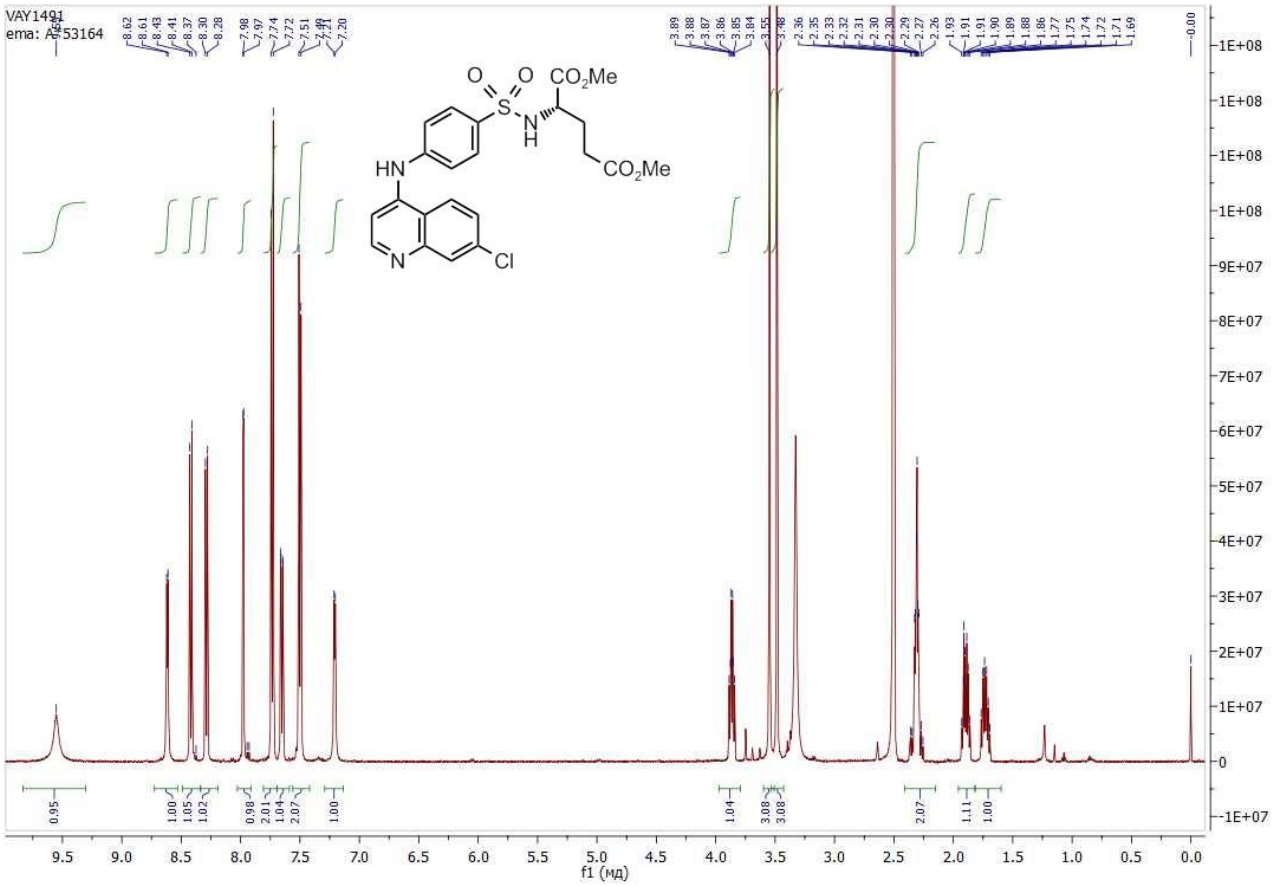


Figure S20. ^{1}H NMR spectrum of compound (*S*)-**21** (500 MHz, DMSO-d_6). Internal standard TMS.

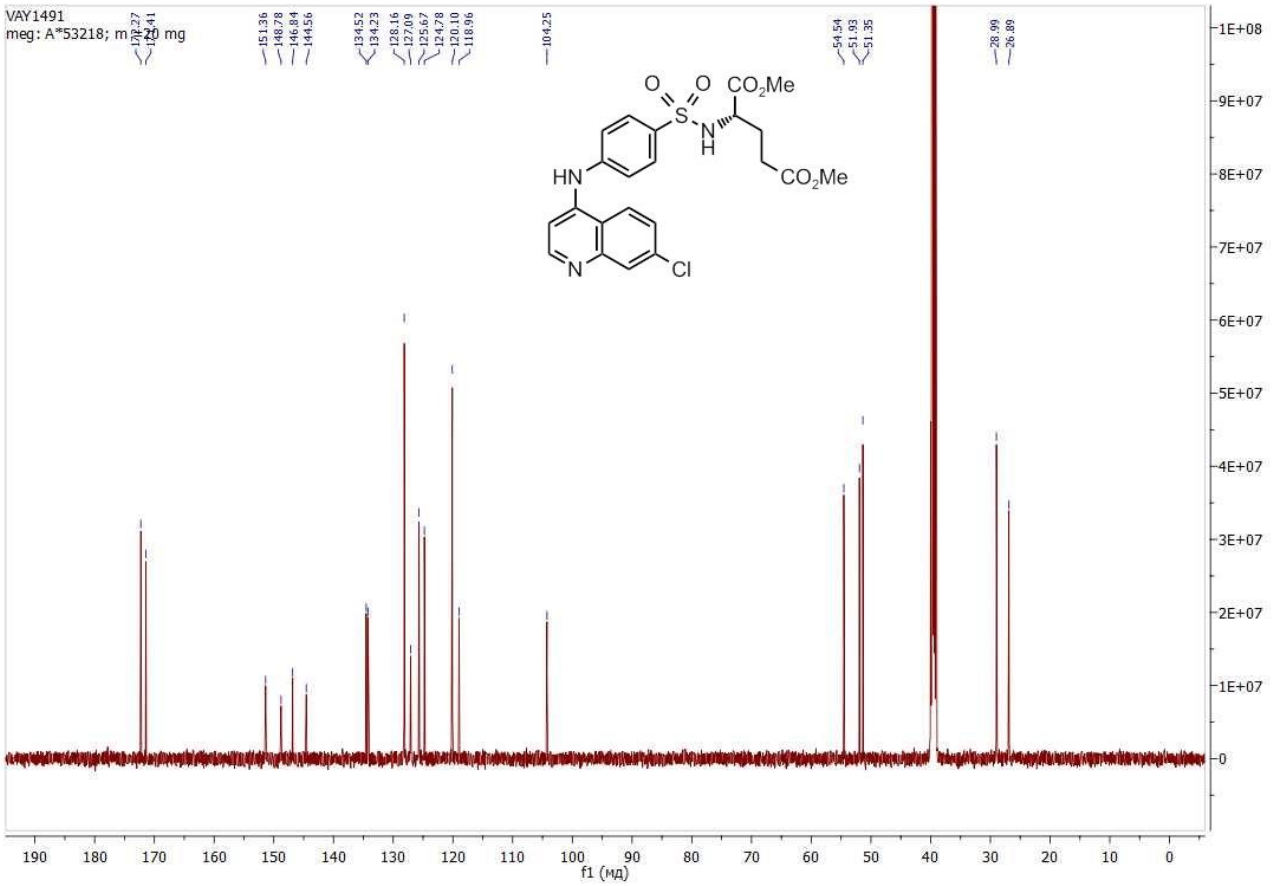


Figure S21. ^{13}C NMR spectrum of compound (*S*)-**21** (126 MHz, DMSO-d_6). Internal standard TMS.

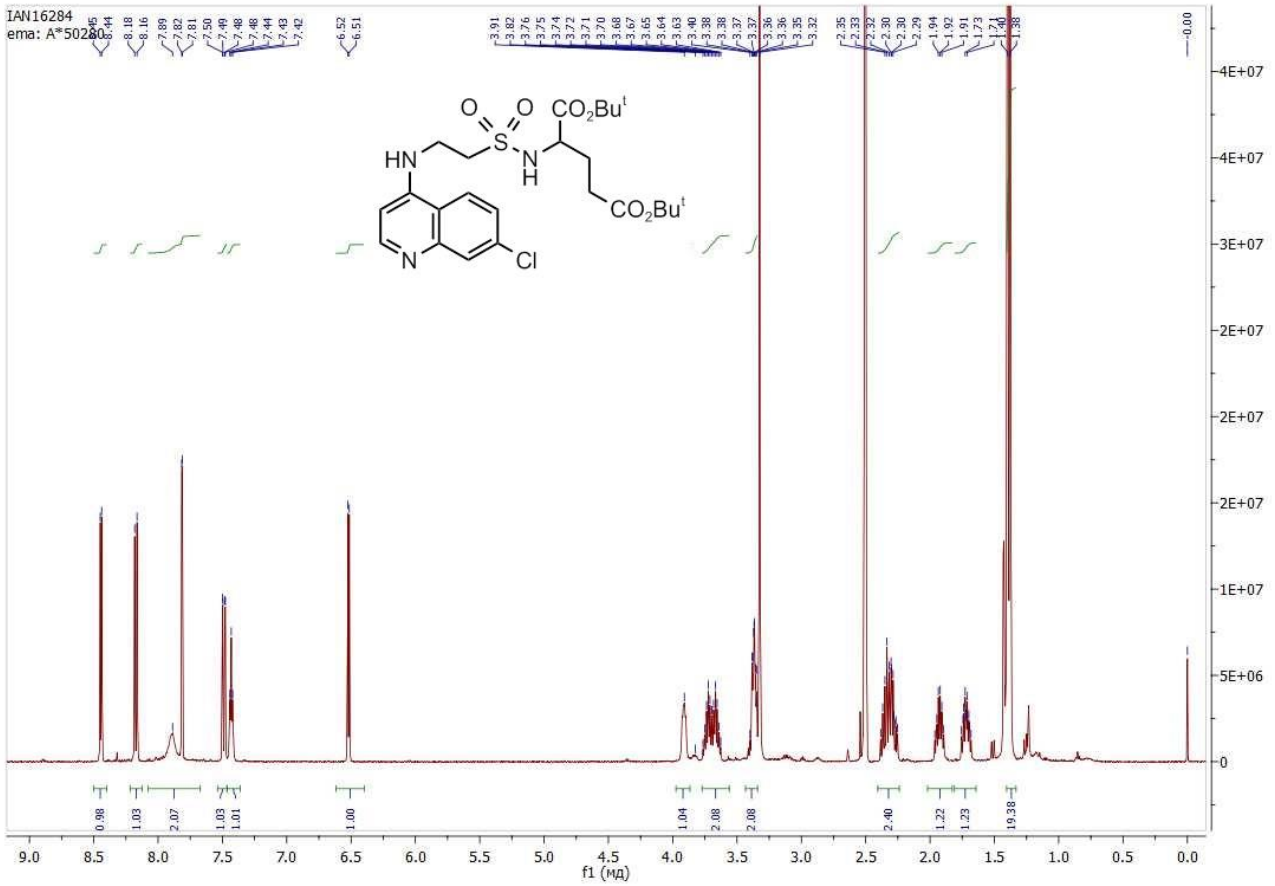


Figure S22. ^{1}H NMR spectrum of compound (*RS*)-**22** (500 MHz, DMSO-d_6). Internal standard TMS.

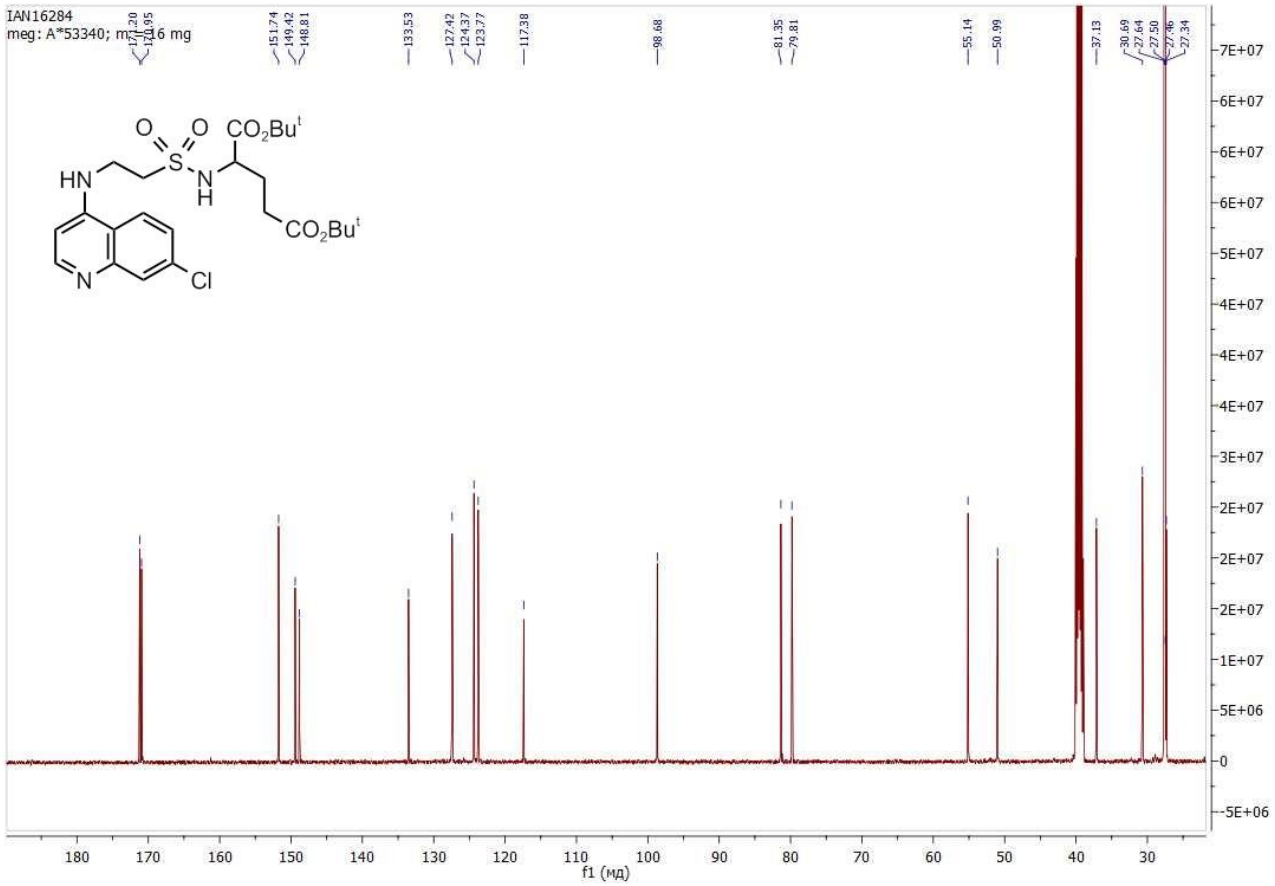


Figure S23. ^{13}C NMR spectrum of compound (*RS*)-**22** (126 MHz, DMSO-d_6). Internal standard TMS.

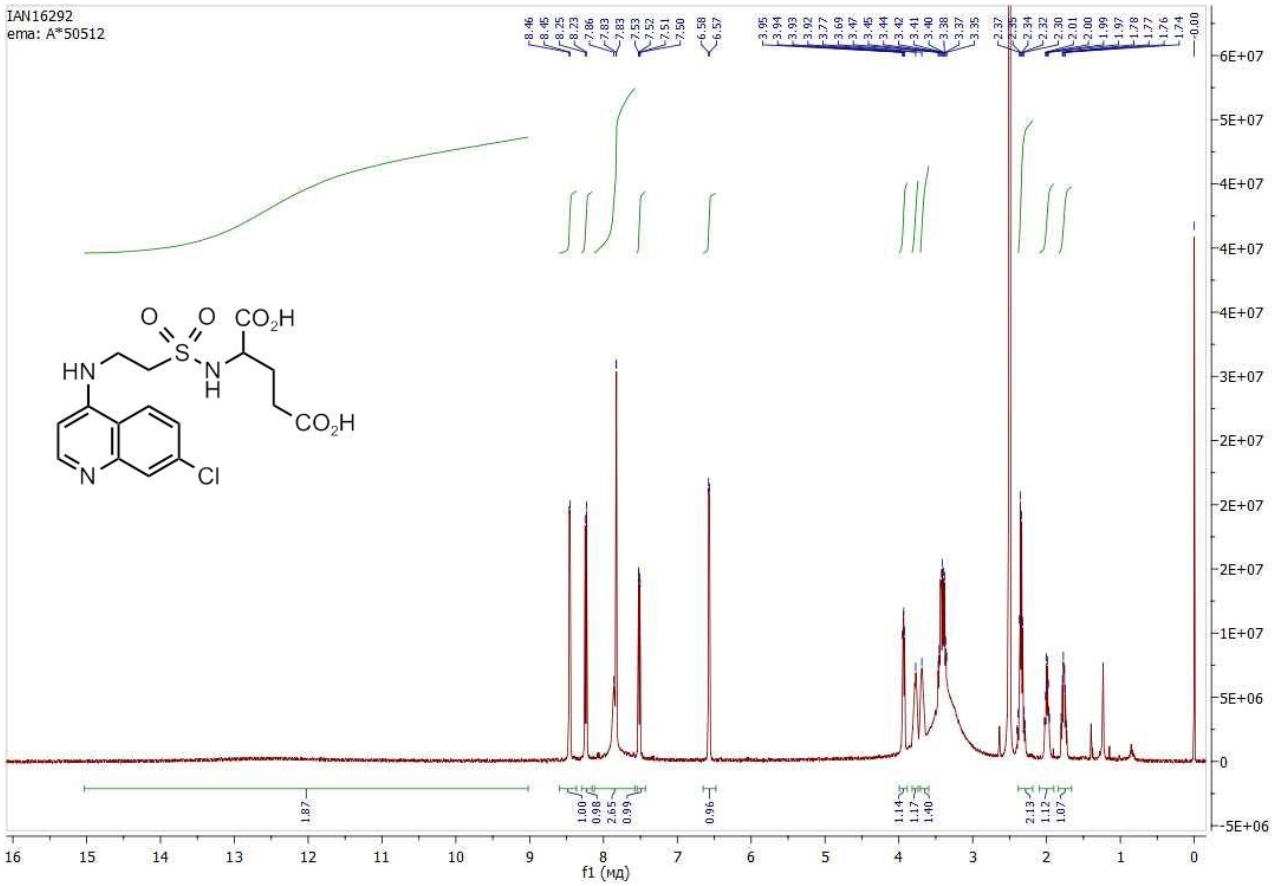


Figure S24. ^{1}H NMR spectrum of compound (*RS*)-**23** (500 MHz, DMSO-d_6). Internal standard TMS.

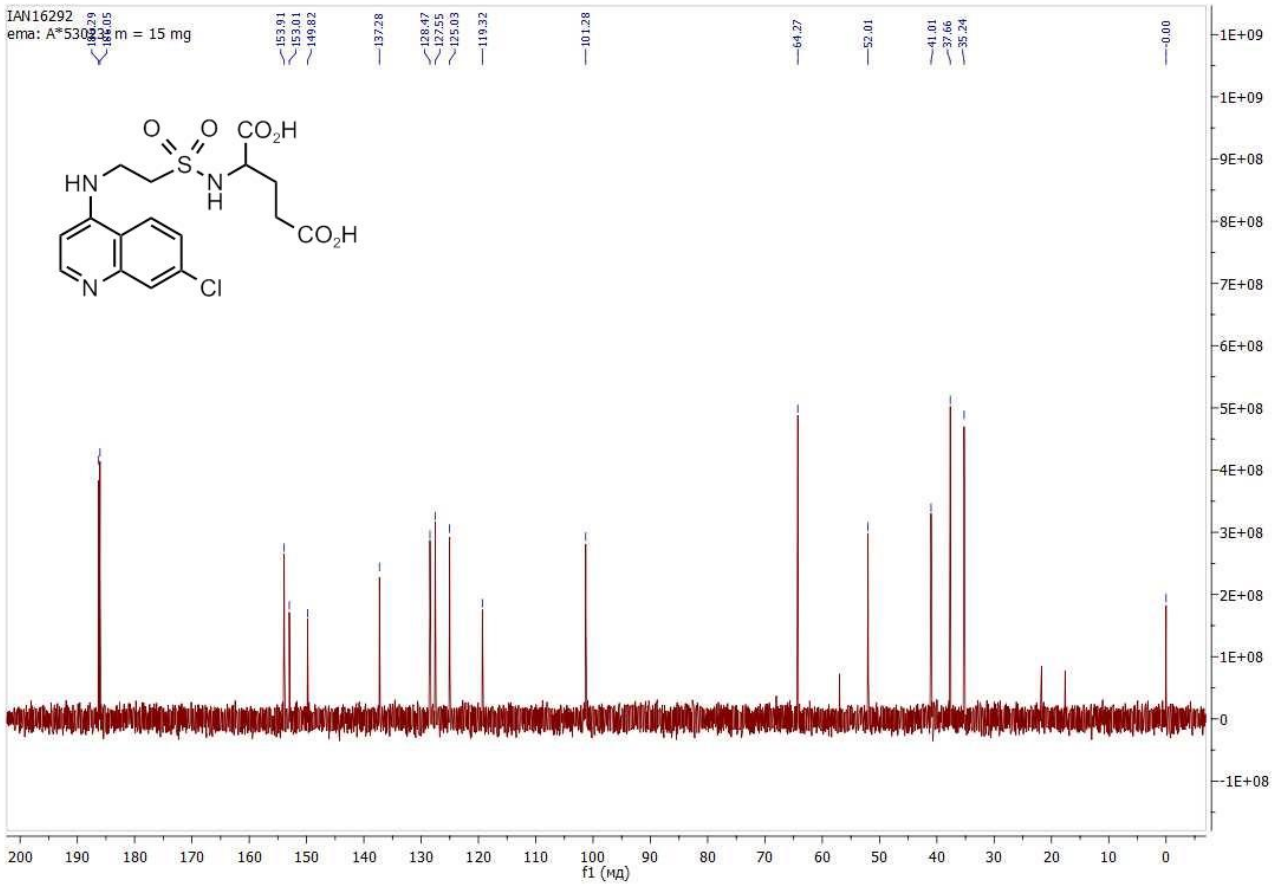


Figure S25. ^{13}C NMR spectrum of compound (*RS*)-**23** (126 MHz, D_2O+NaOD). Internal standard DSS.