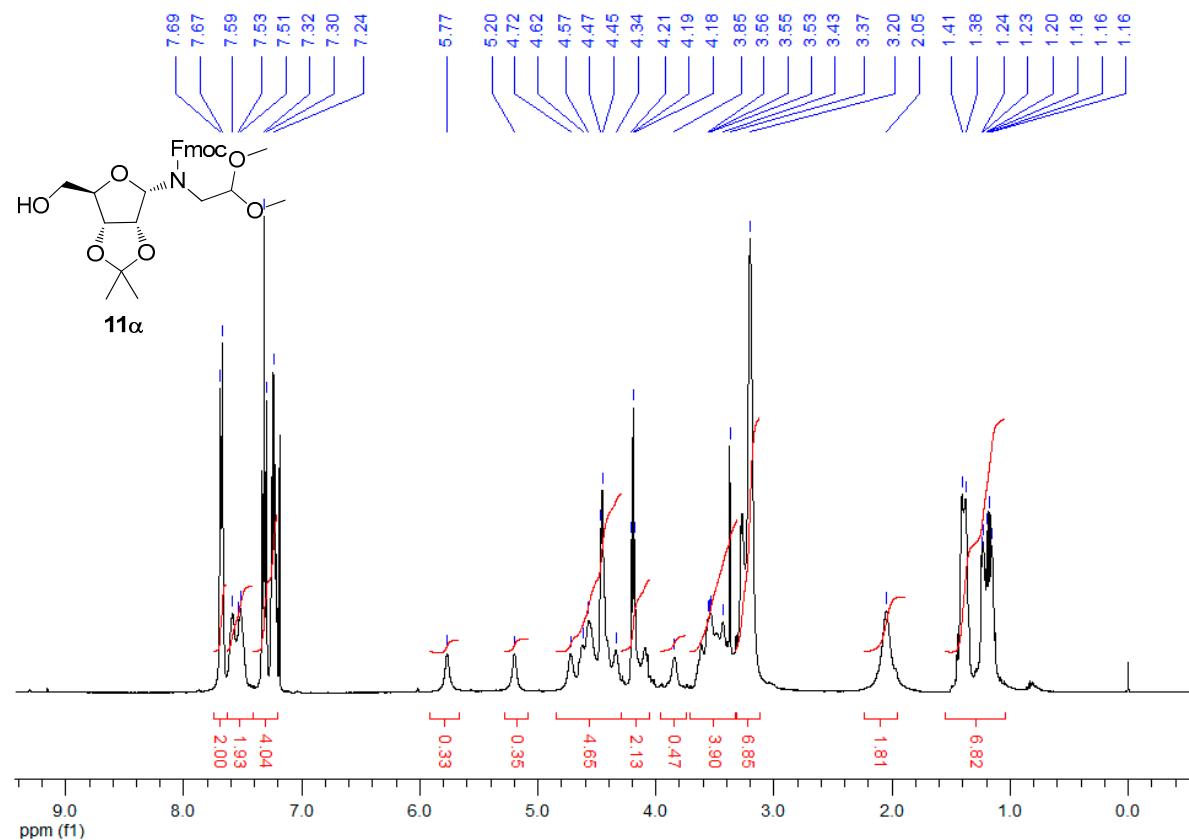
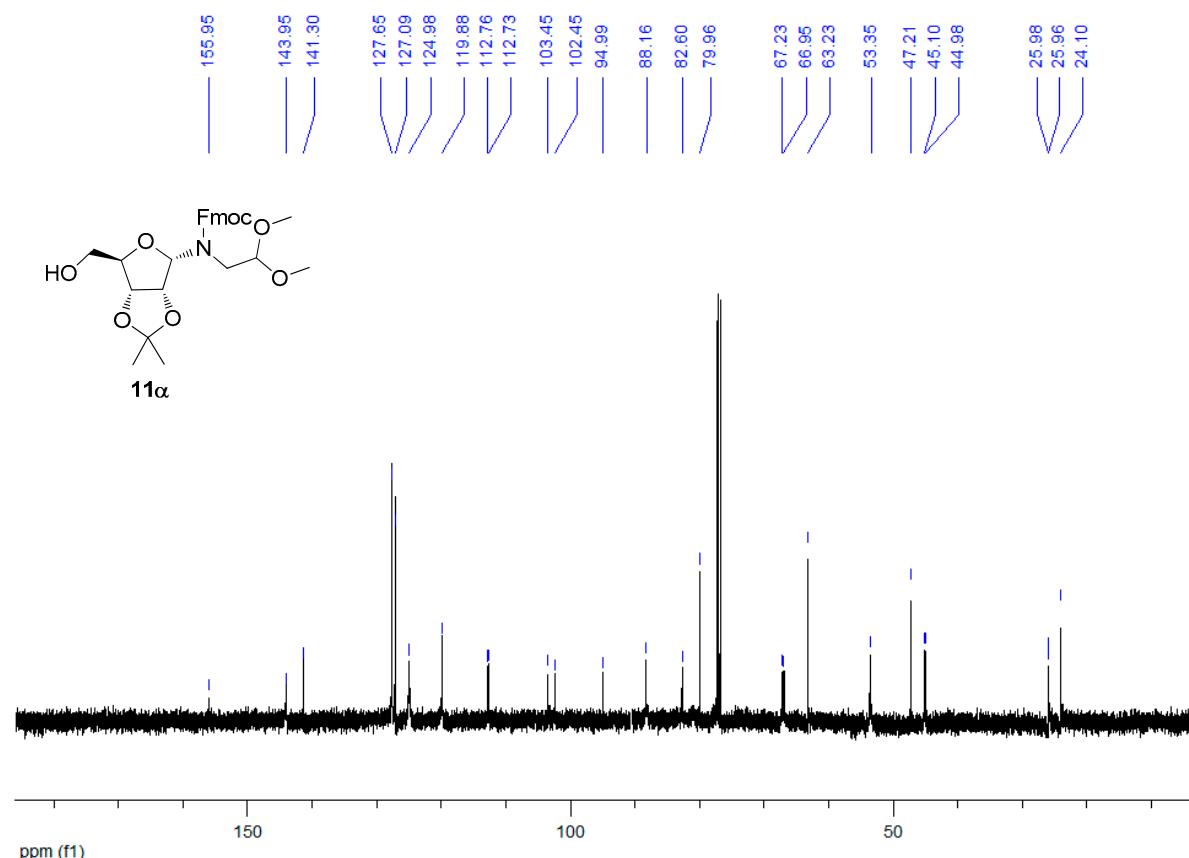


## Supplementary Materials: Identification of Novel Human Breast Carcinoma (MDA-MB-231) Cell Growth Modulators from a Carbohydrate-Based Diversity Oriented Synthesis Library

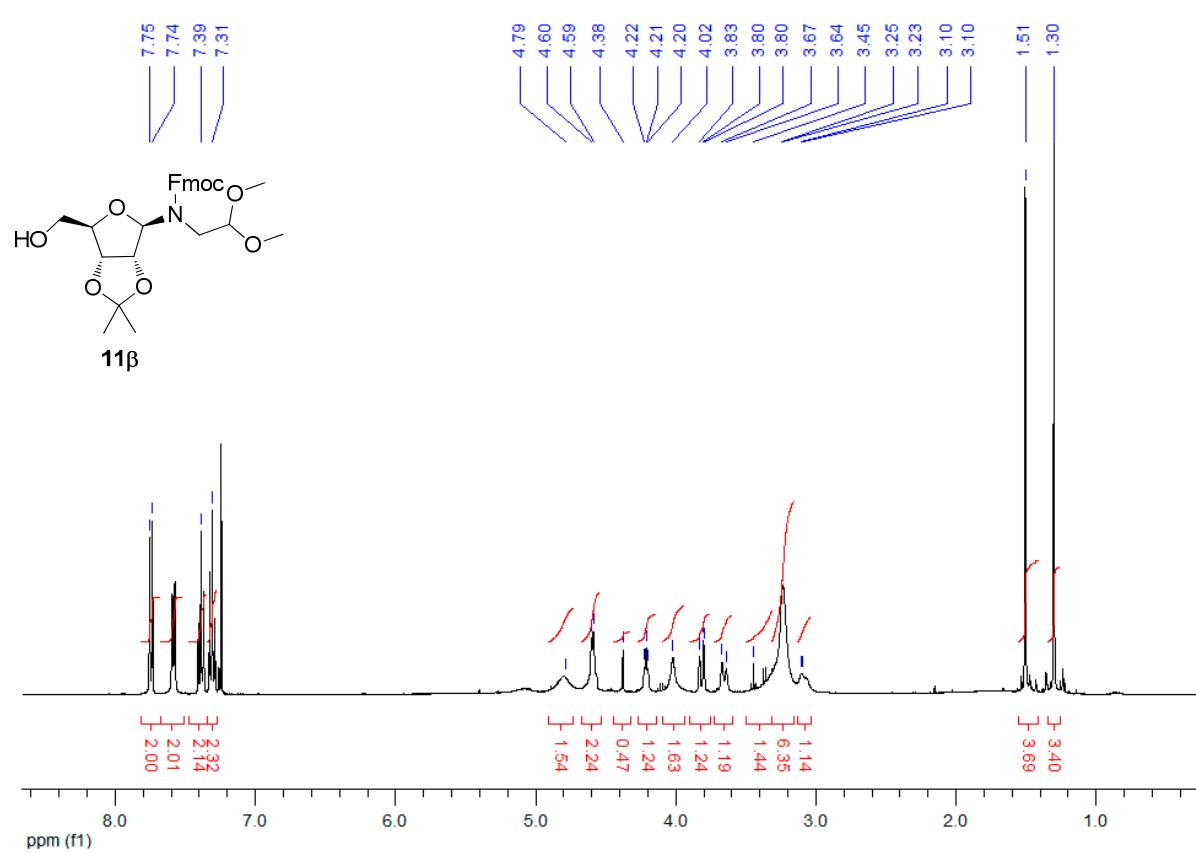
Elena Lenci, Riccardo Innocenti, Alessio Biagioni, Gloria Menchi, Francesca Bianchini and Andrea Trabocchi



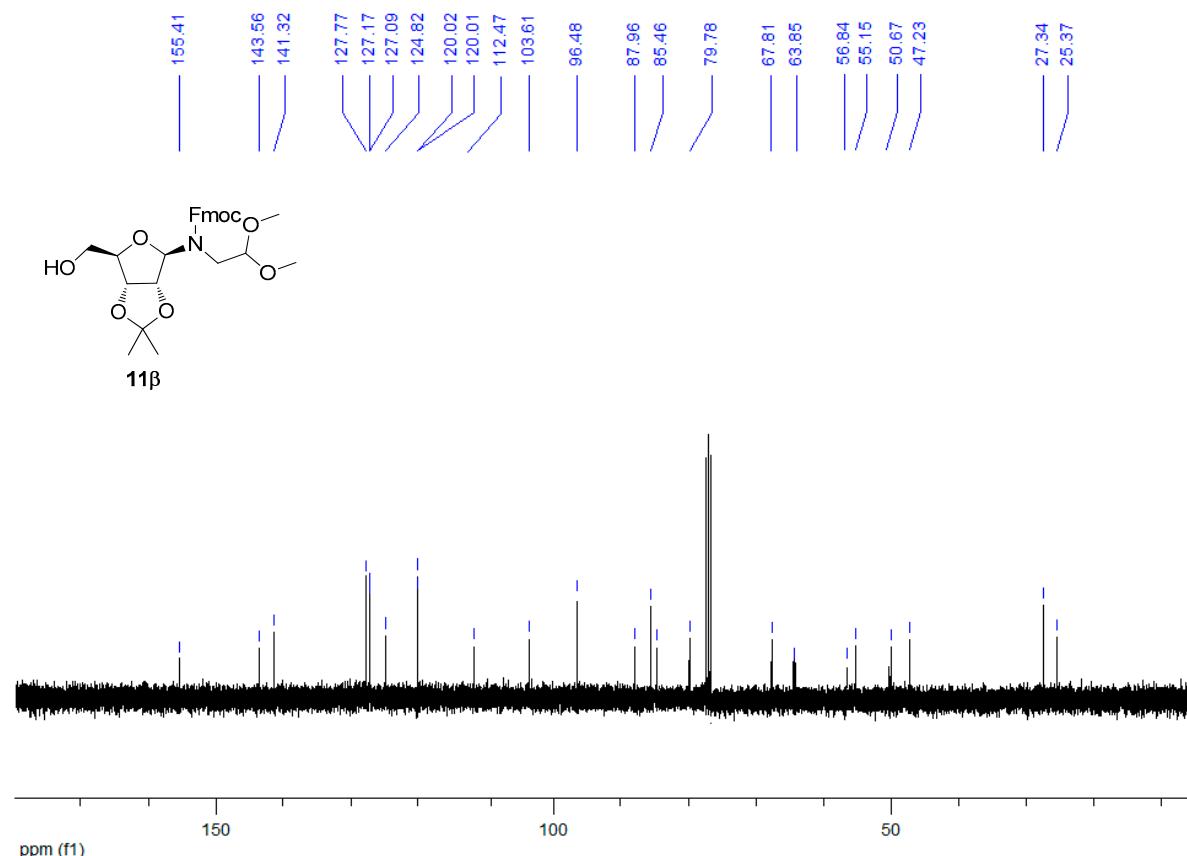
**Figure S1.** <sup>1</sup>H-NMR spectrum of compound **11α** (400 MHz, CDCl<sub>3</sub>).



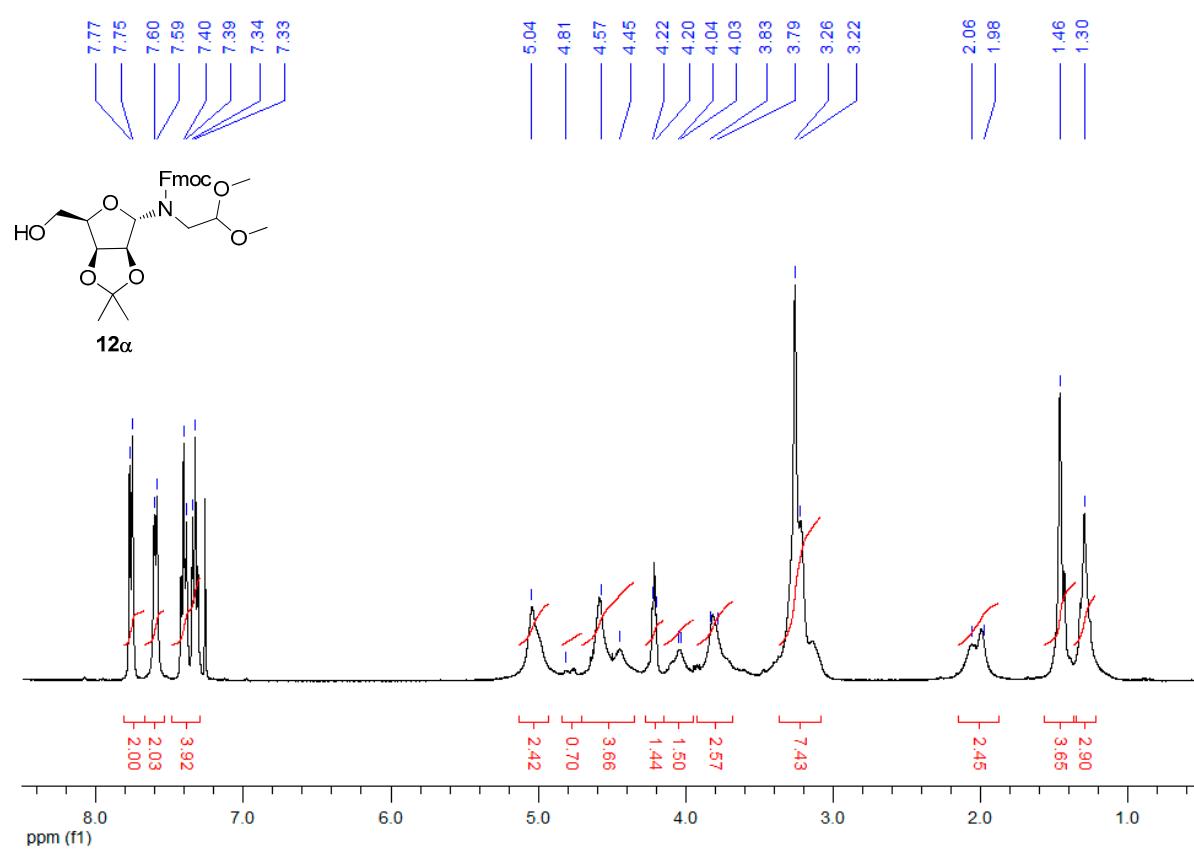
**Figure S2.**  $^{13}\text{C}$ -NMR spectrum of compound **11a** (50 MHz,  $\text{CDCl}_3$ ).



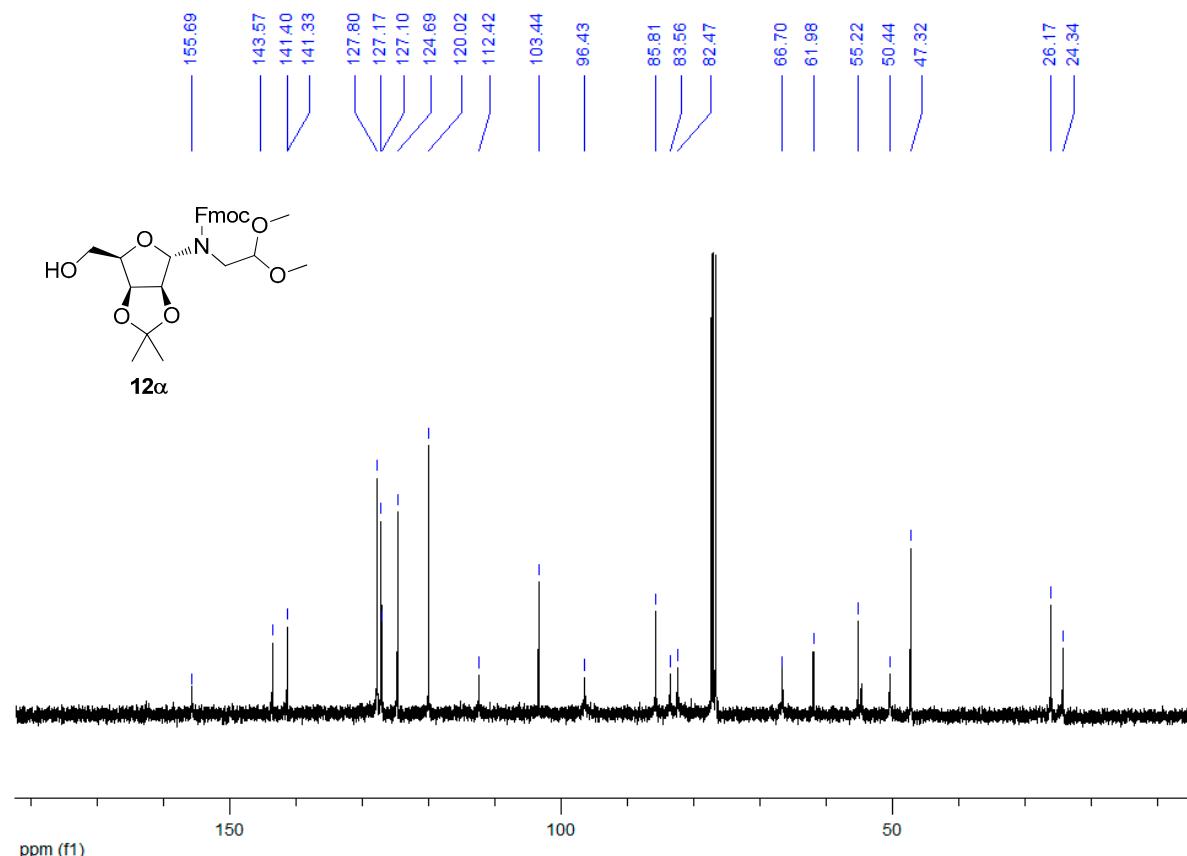
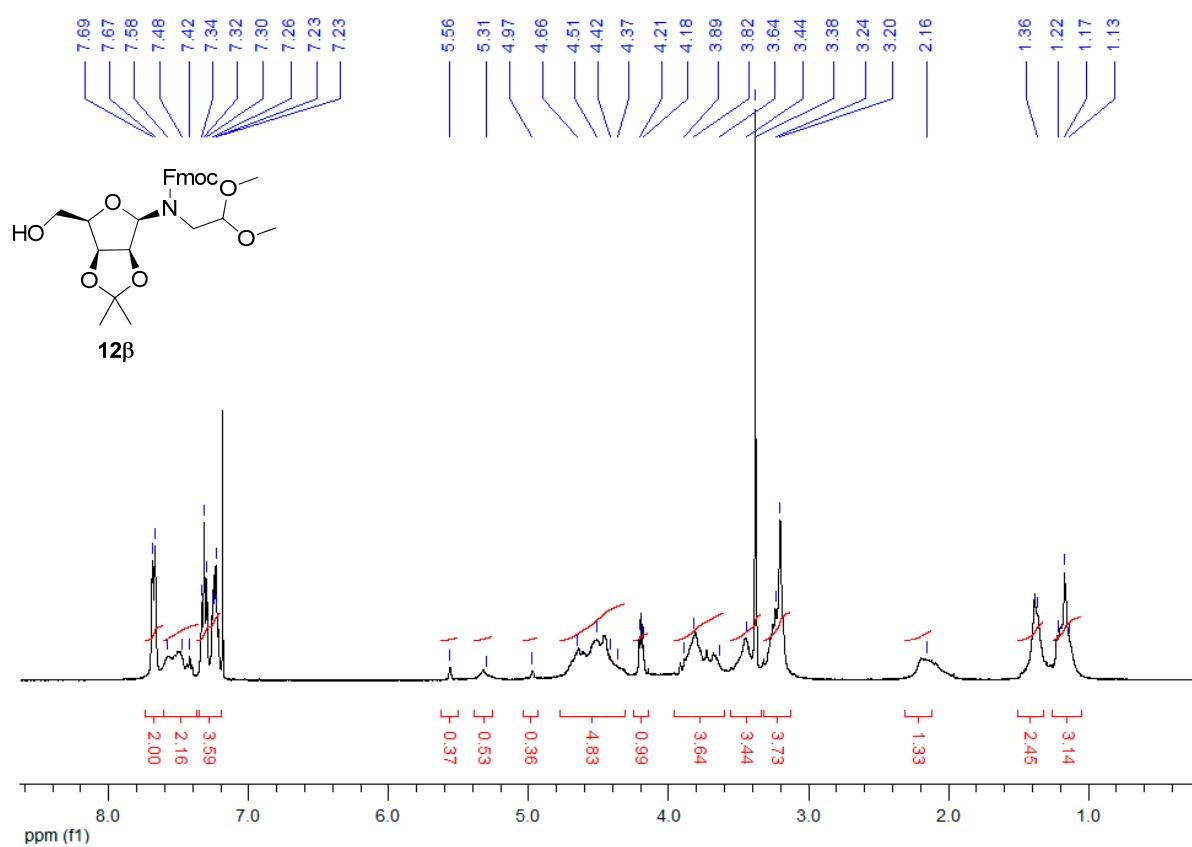
**Figure S3.**  $^1\text{H}$ -NMR spectrum of compound **11 $\beta$**  (400 MHz,  $\text{CDCl}_3$ ).

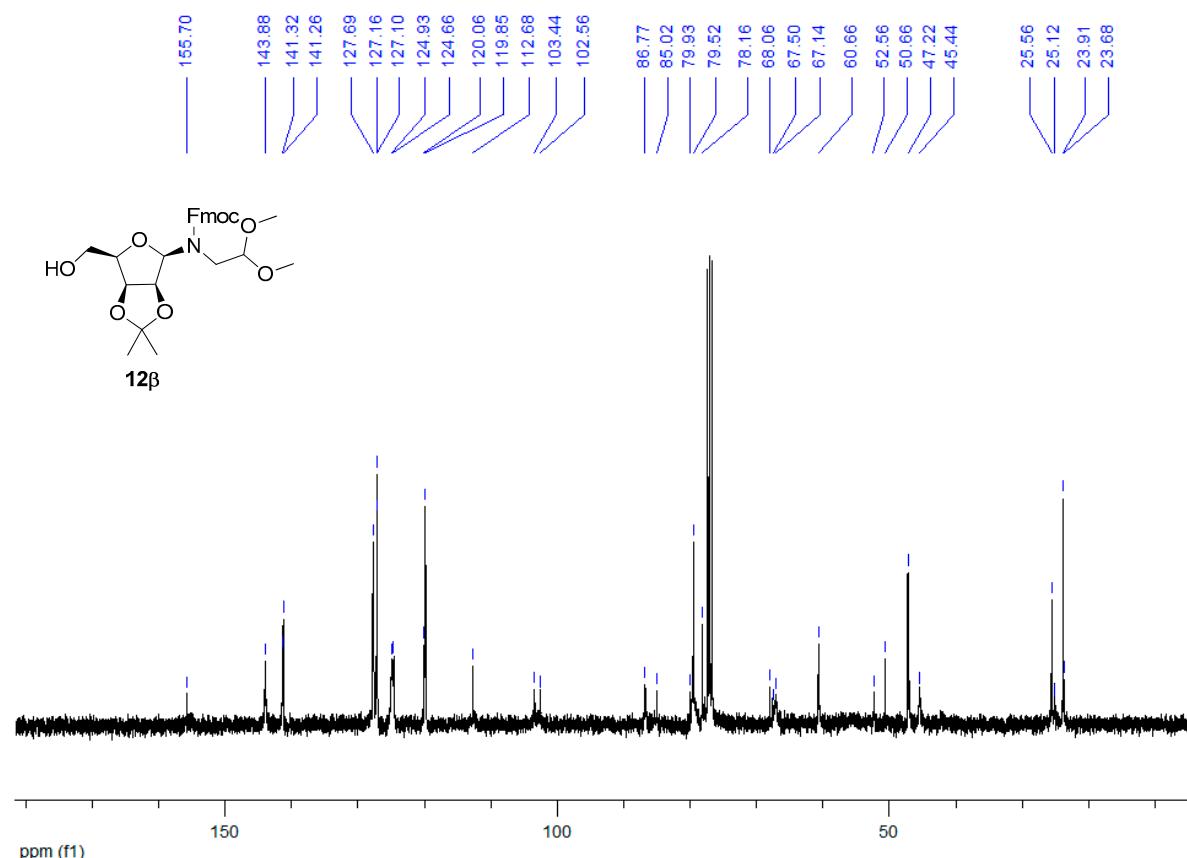


**Figure S4.** <sup>13</sup>C-NMR spectrum of compound **11 $\beta$**  (100 MHz, CDCl<sub>3</sub>).

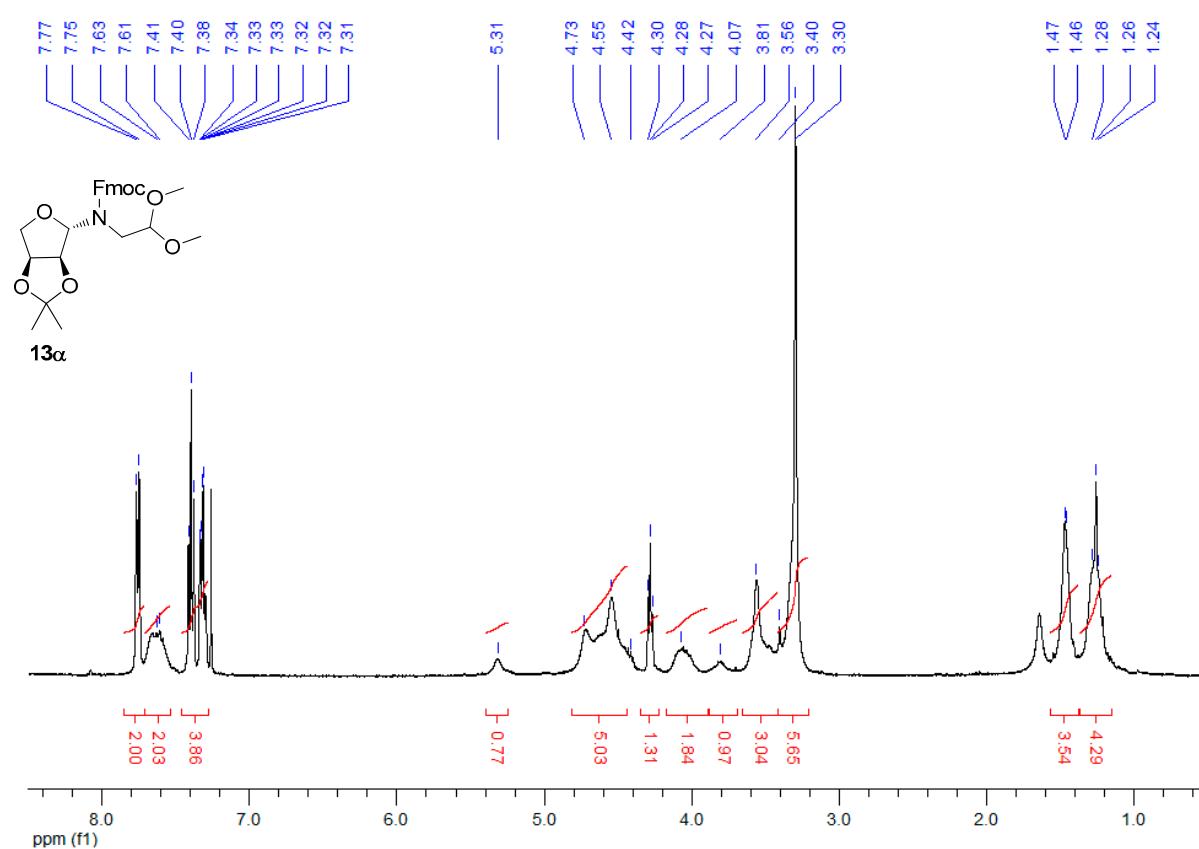


**Figure S5.** <sup>1</sup>H-NMR spectrum of compound **12 $\alpha$**  (400 MHz, CDCl<sub>3</sub>).

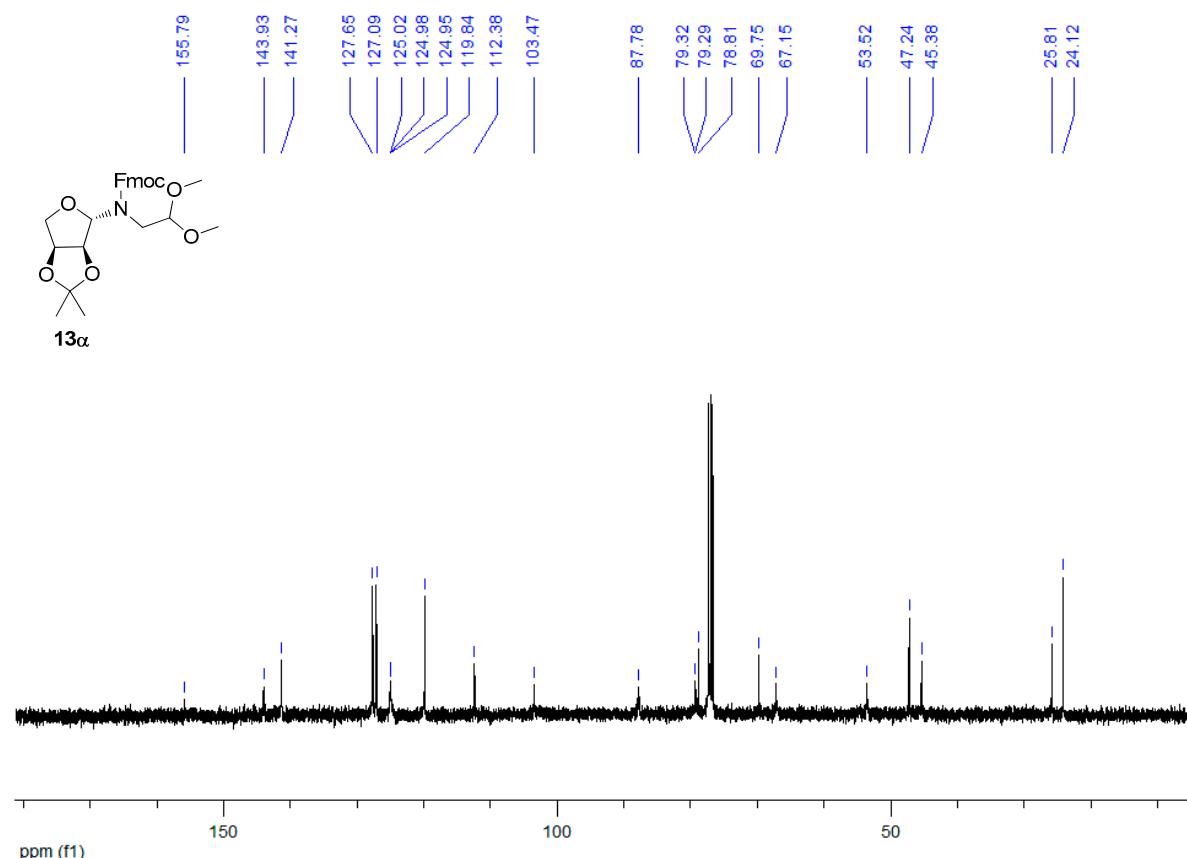
**Figure S6.** <sup>13</sup>C-NMR spectrum of compound **12α** (50 MHz, CDCl<sub>3</sub>).**Figure S7.** <sup>1</sup>H-NMR spectrum of compound **12β** (400 MHz, CDCl<sub>3</sub>).



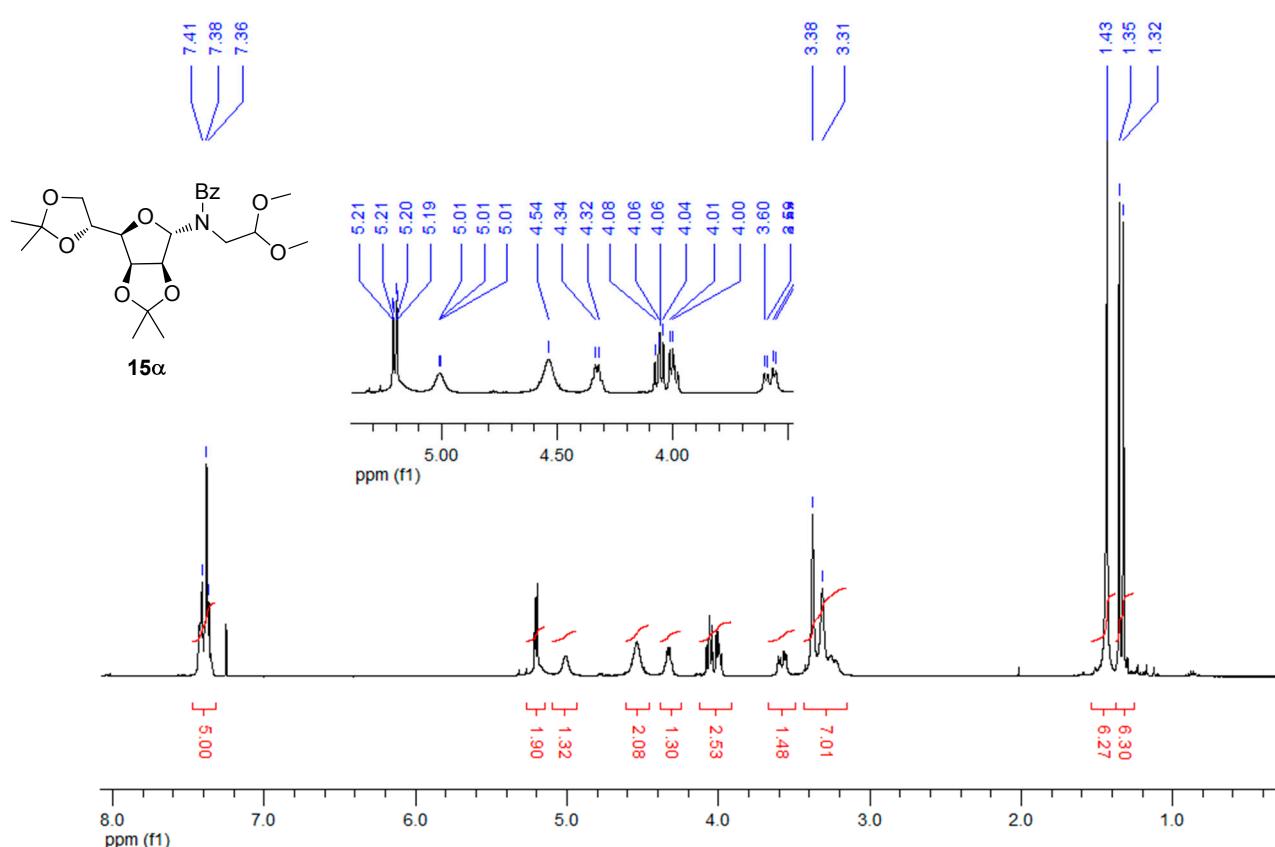
**Figure S8.** <sup>13</sup>C-NMR spectrum of compound **12β** (100 MHz, CDCl<sub>3</sub>).



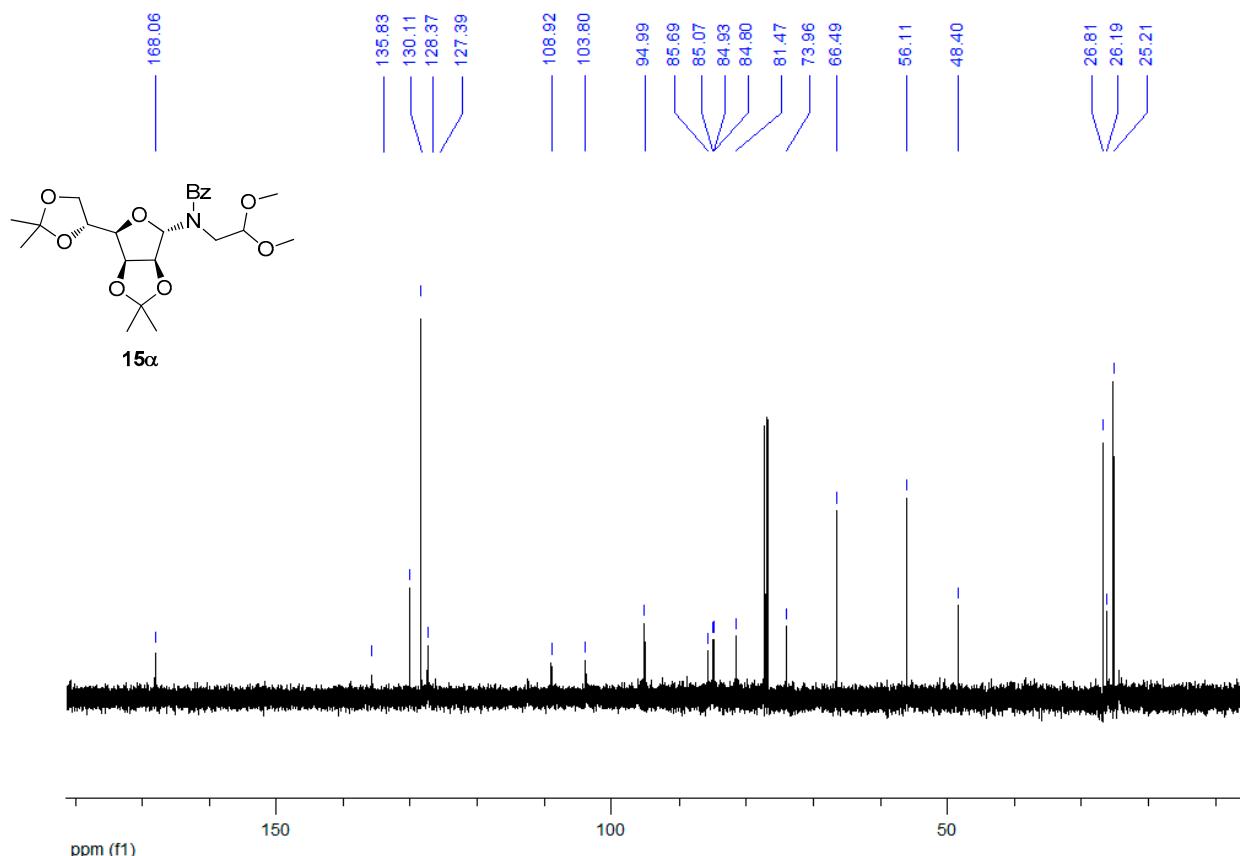
**Figure S9.** <sup>1</sup>H-NMR spectrum of compound **13α** (400 MHz, CDCl<sub>3</sub>).



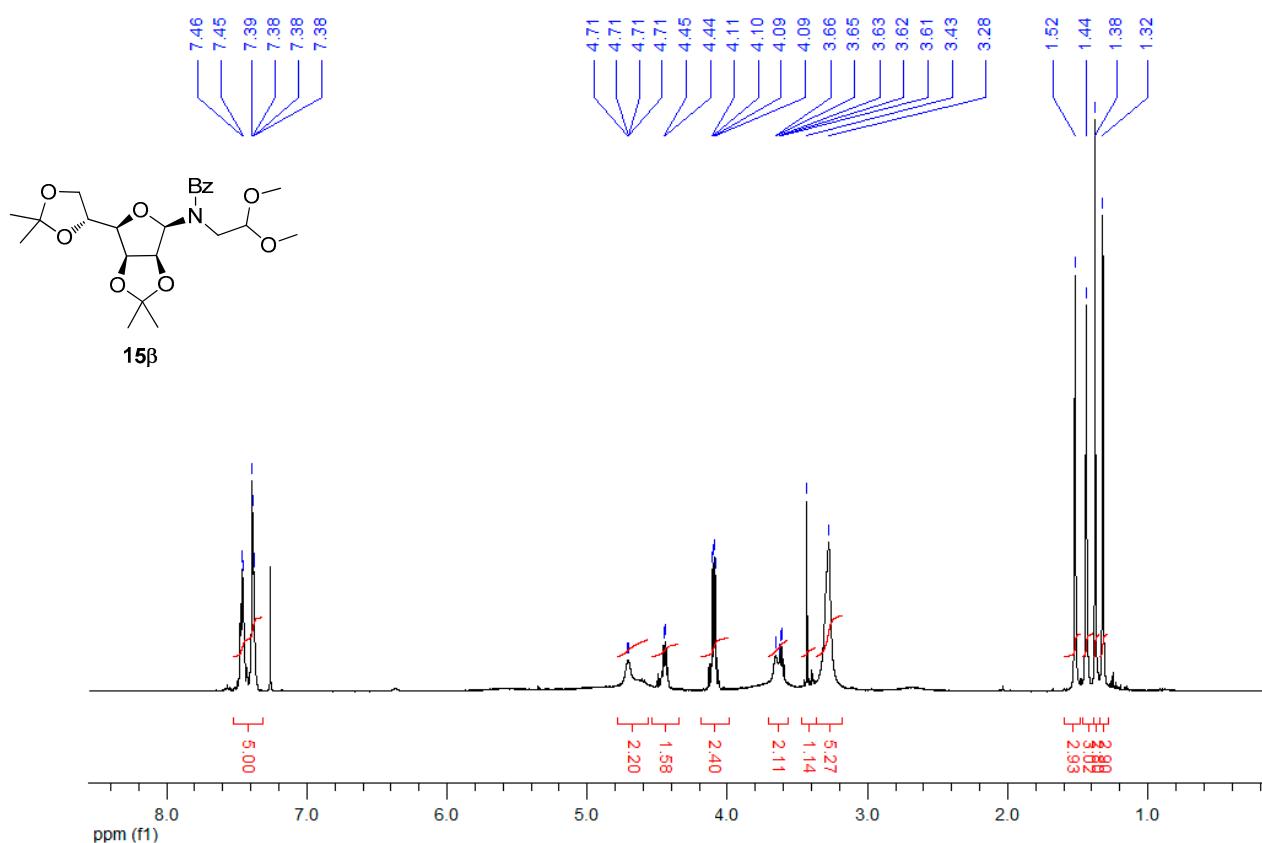
**Figure S10.**  $^{13}\text{C}$ -NMR spectrum of compound **13a** (100 MHz,  $\text{CDCl}_3$ ).

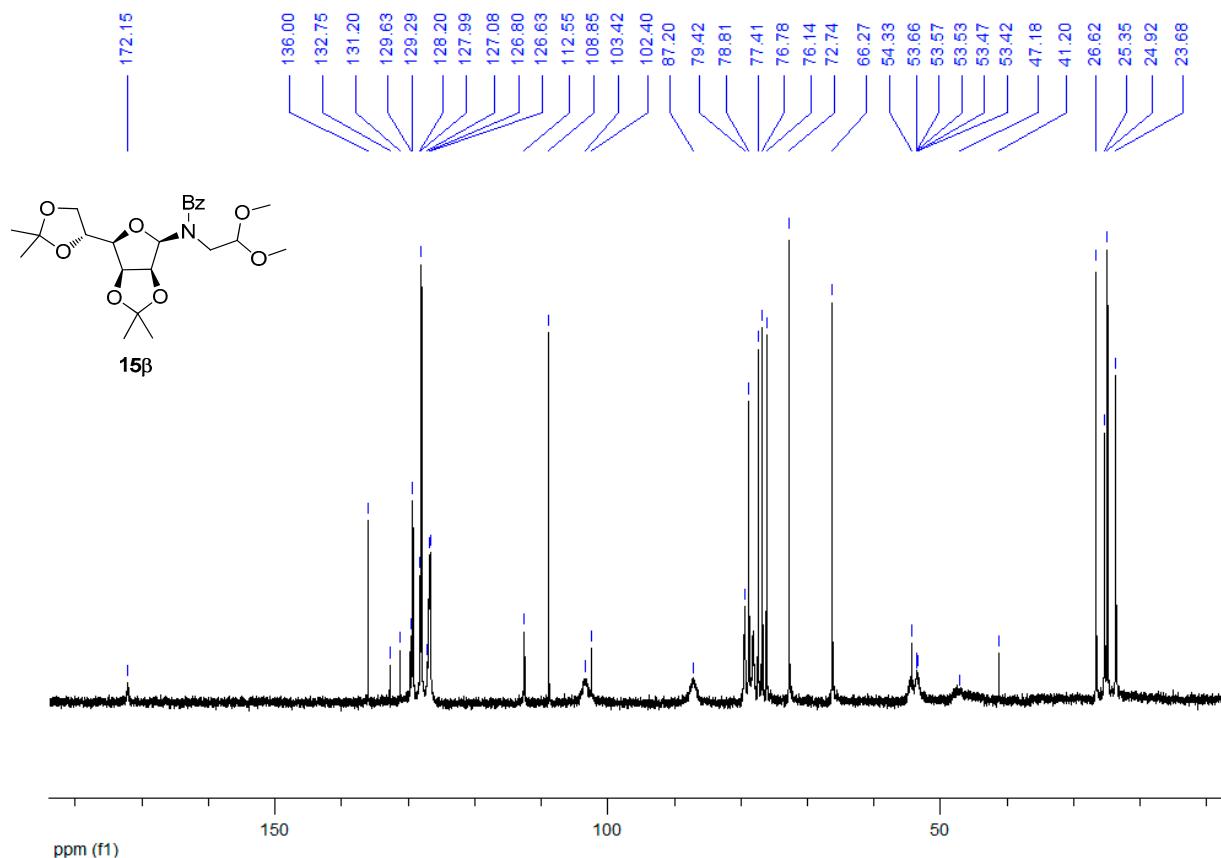


**Figure S11.**  $^1\text{H}$ -NMR spectrum of compound **15a** (400 MHz,  $\text{CDCl}_3$ ).

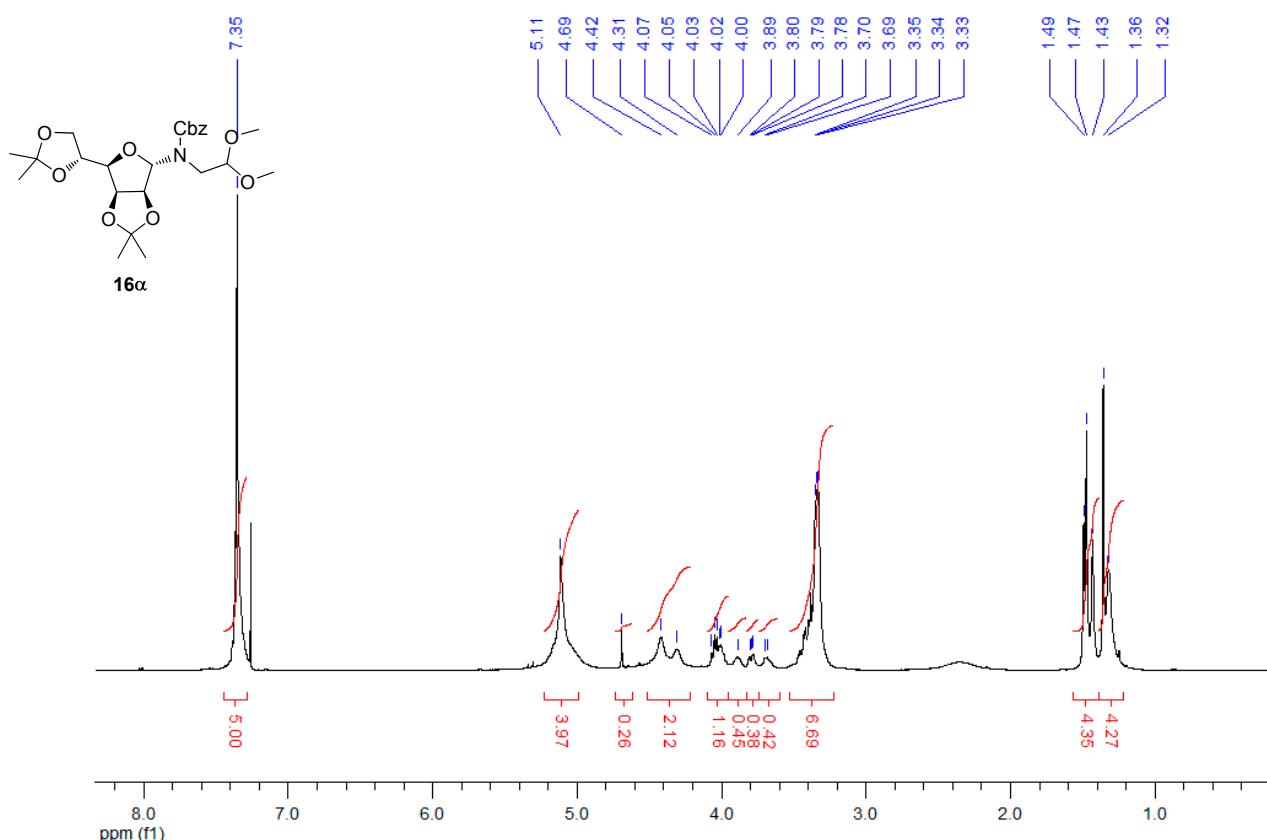


**Figure S12.** <sup>13</sup>C-NMR spectrum of compound **15α** (100 MHz, CDCl<sub>3</sub>).

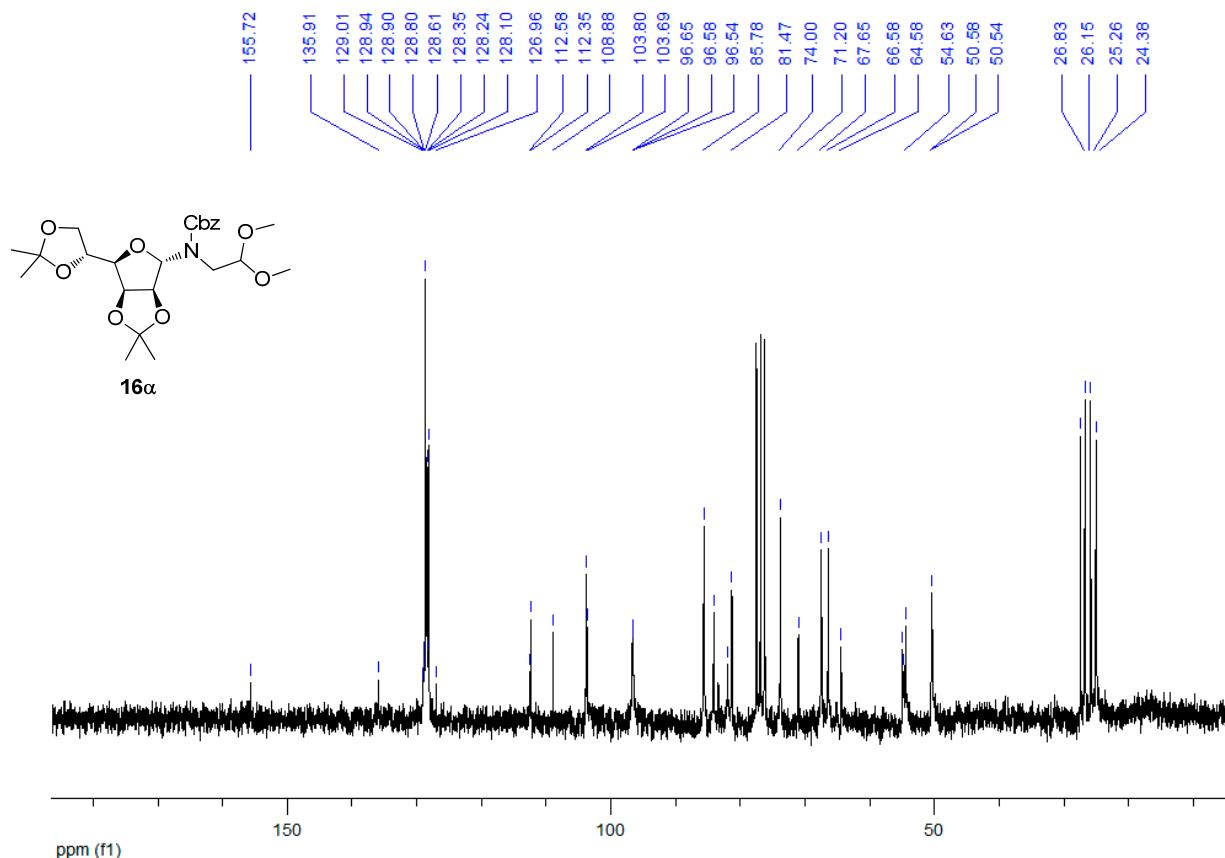




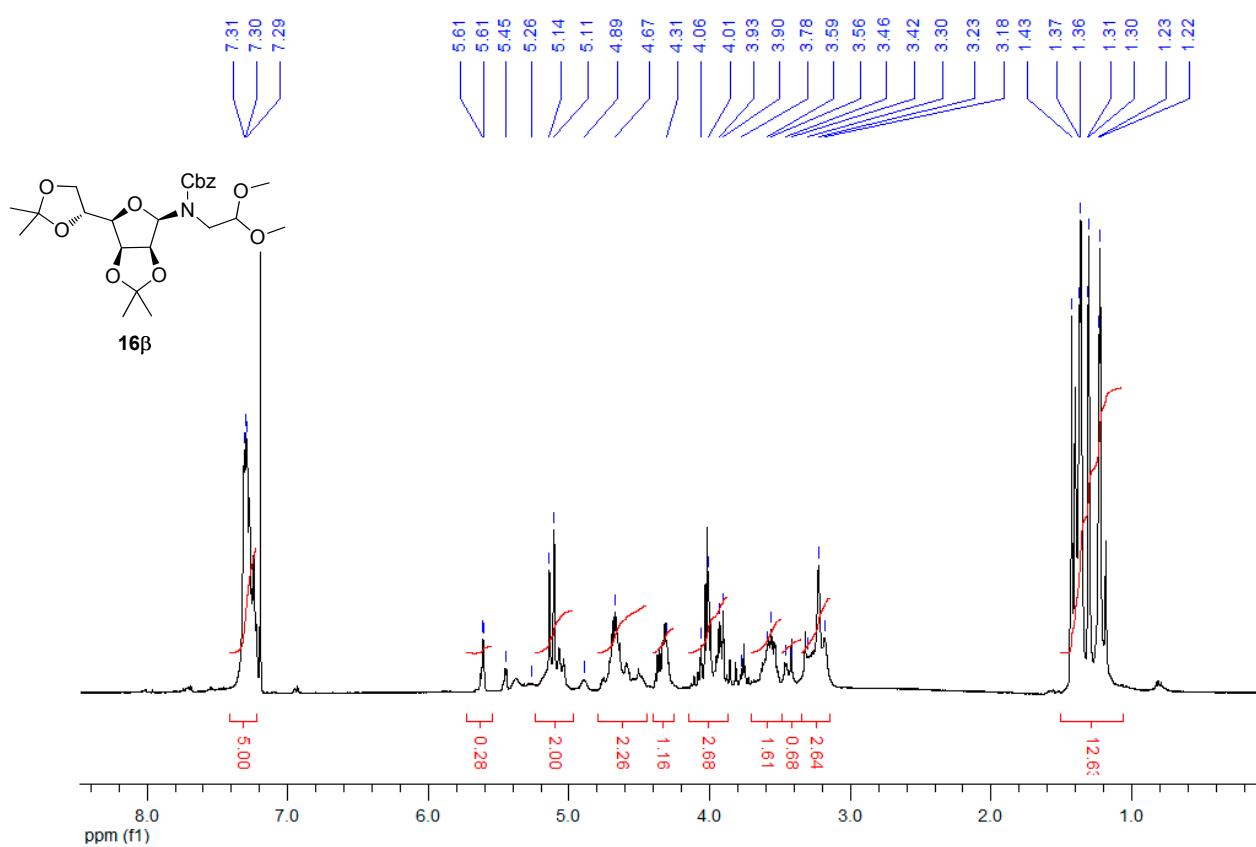
**Figure S14.**  $^{13}\text{C}$ -NMR spectrum of compound  $15\beta$  (100 MHz,  $\text{CDCl}_3$ ).



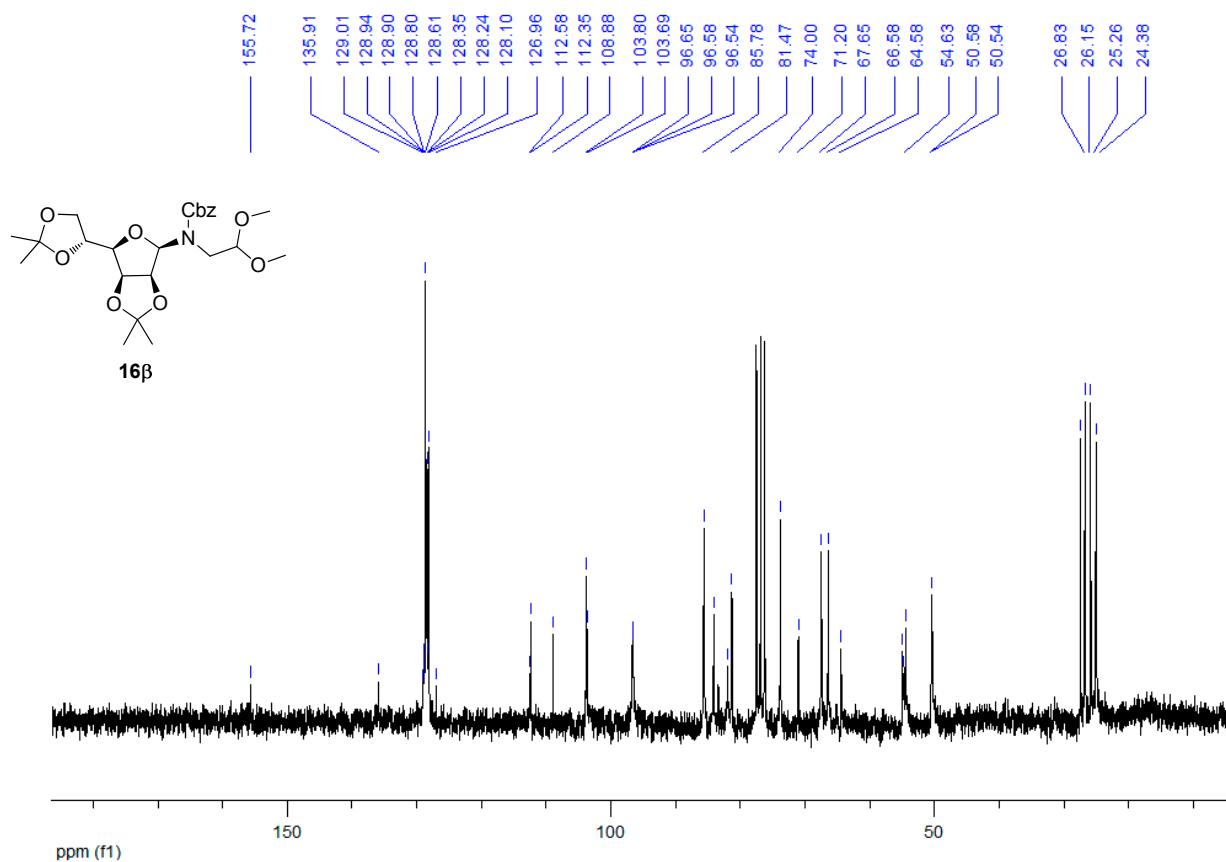
**Figure S15.**  $^1\text{H}$ -NMR spectrum of compound  $16\alpha$  (400 MHz,  $\text{CDCl}_3$ ).



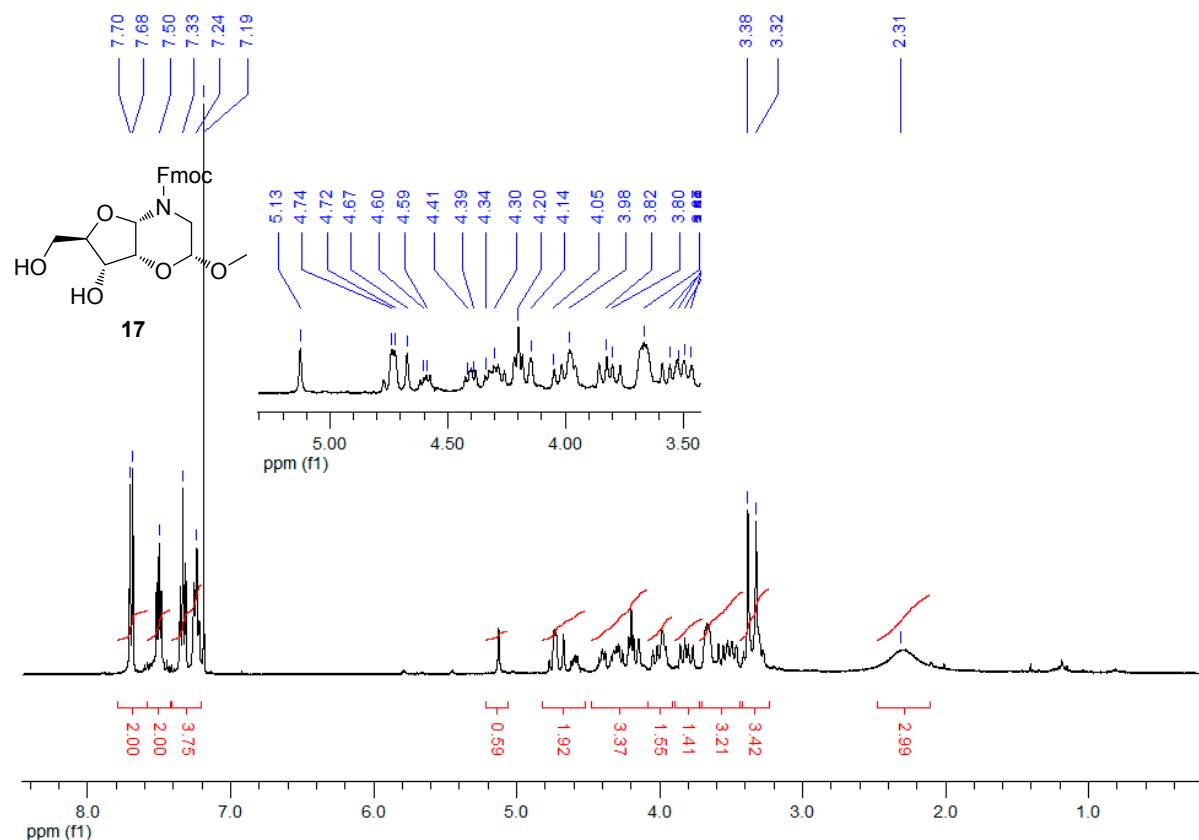
**Figure S16.**  $^{13}\text{C}$ -NMR spectrum of compound  $16\alpha$  (50 MHz,  $\text{CDCl}_3$ ).



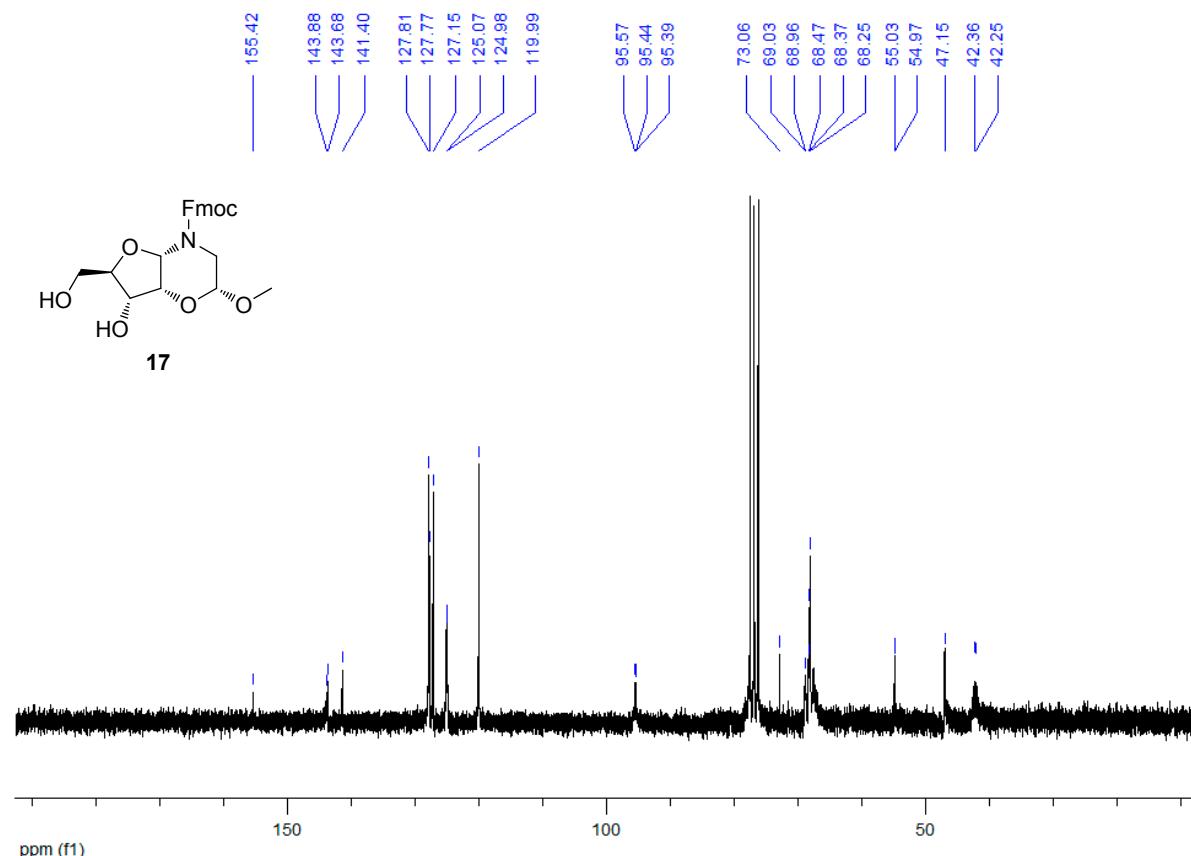
**Figure S17.**  $^1\text{H}$ -NMR spectrum of compound  $16\beta$  (400 MHz,  $\text{CDCl}_3$ ).



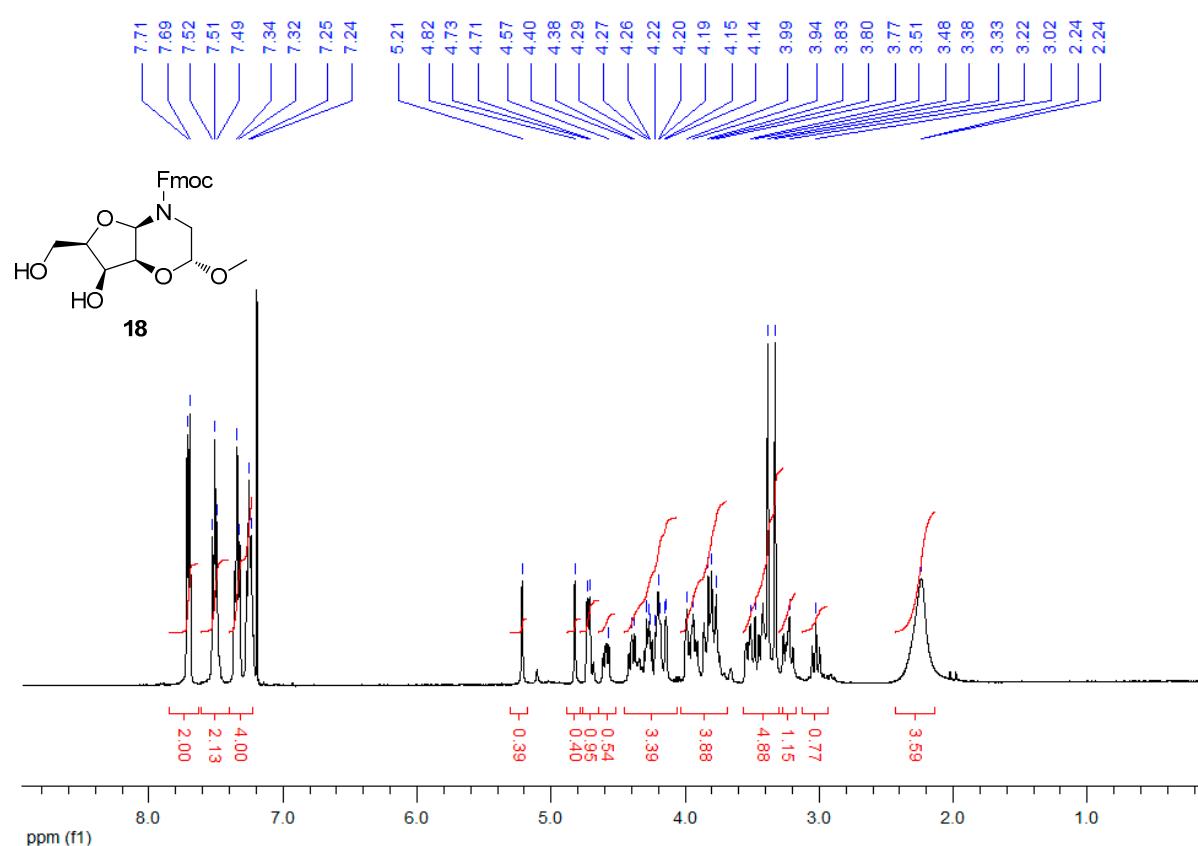
**Figure S18.**  $^{13}\text{C}$ -NMR spectrum of compound  $16\beta$  (50 MHz,  $\text{CDCl}_3$ ).



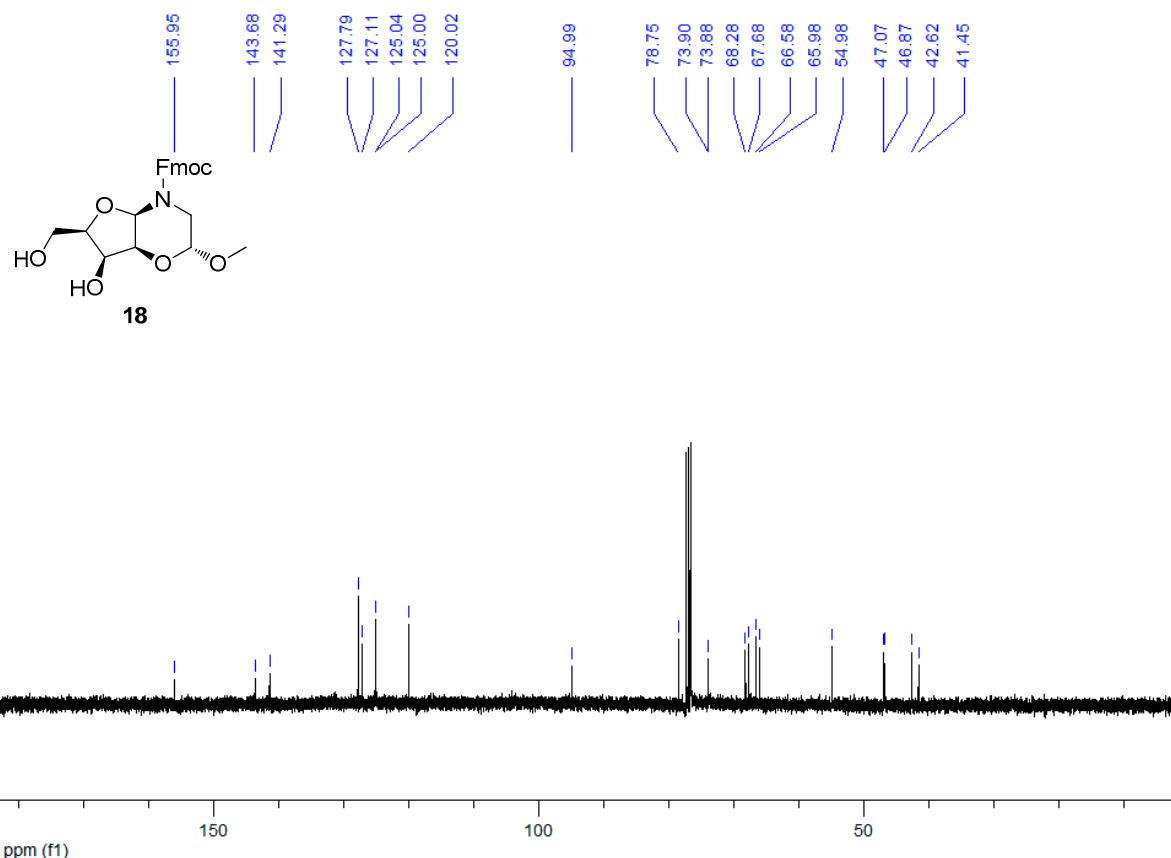
**Figure S19.**  $^1\text{H}$ -NMR spectrum of compound  $17$  (400 MHz,  $\text{CDCl}_3$ ).



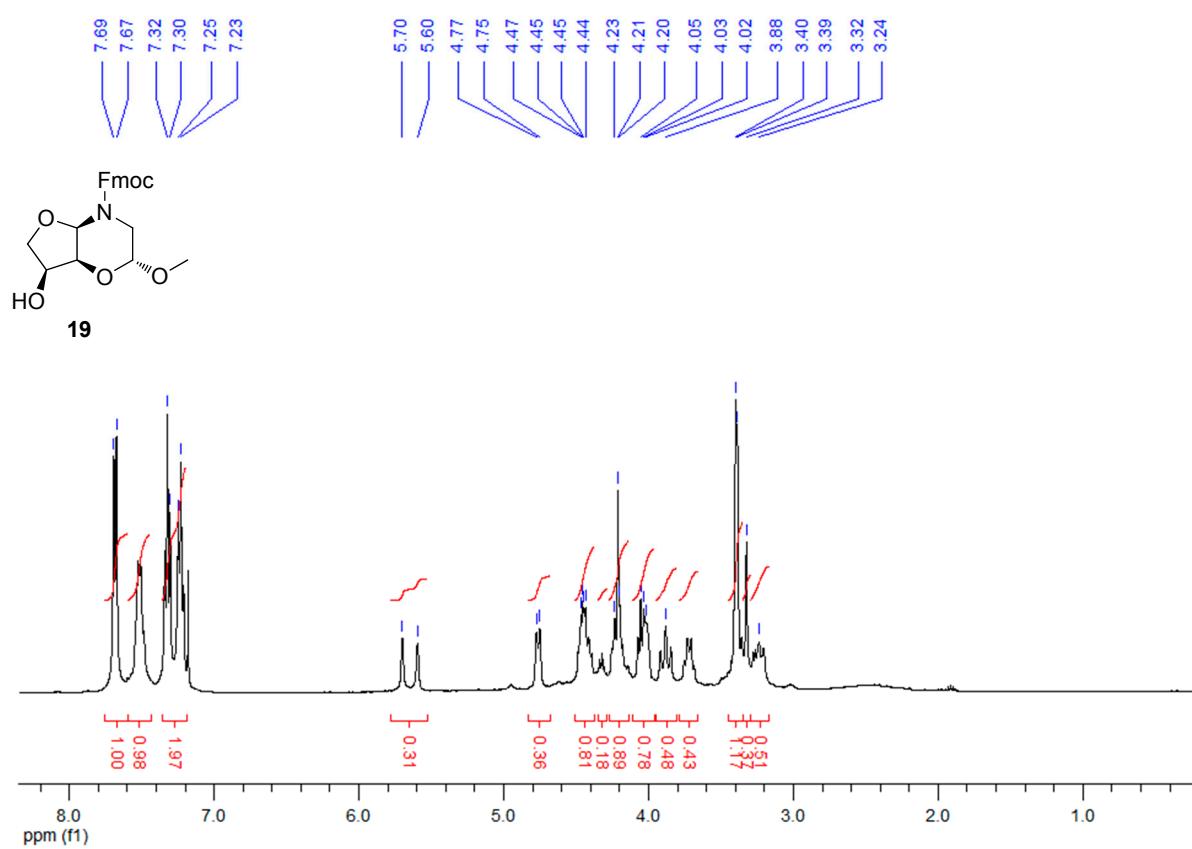
**Figure S20.**  $^{13}\text{C}$ -NMR spectrum of compound **17** (100 MHz,  $\text{CDCl}_3$ ).



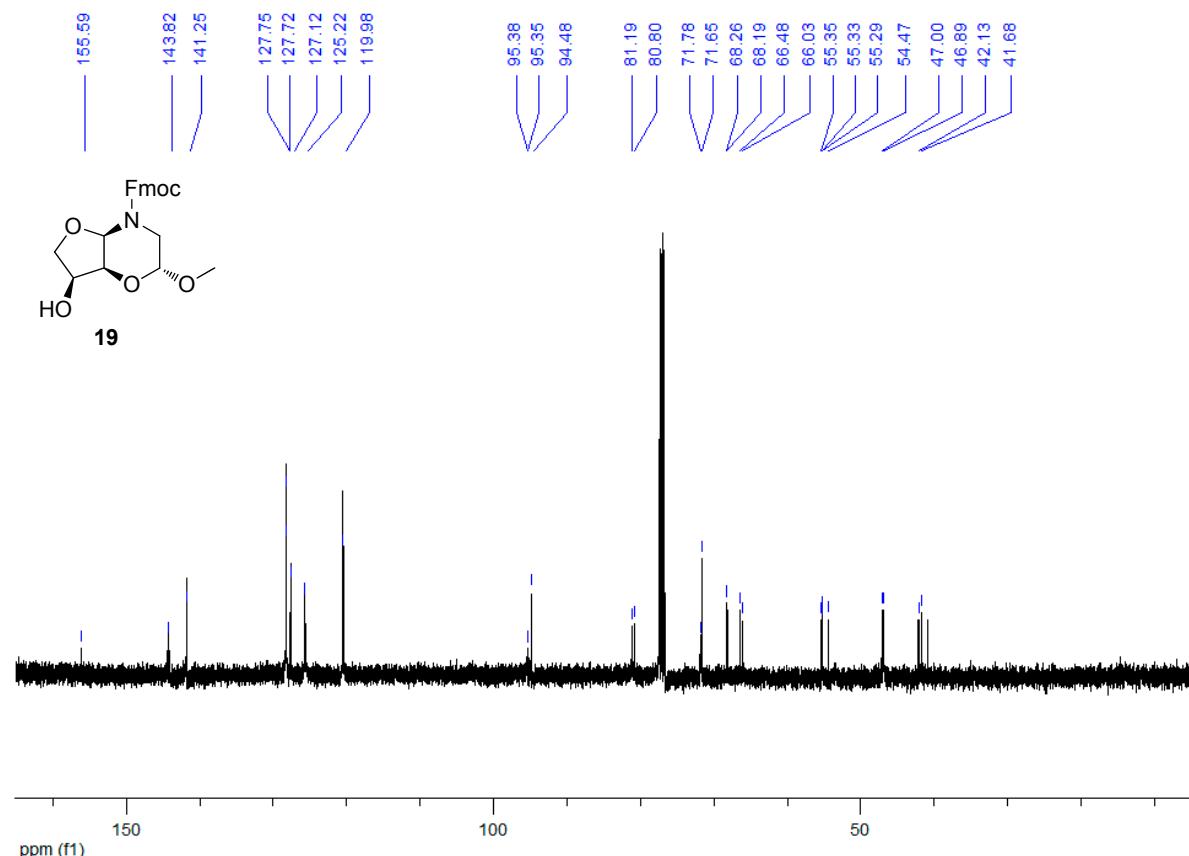
**Figure S21.**  $^1\text{H}$ -NMR spectrum of compound **18** (400 MHz,  $\text{CDCl}_3$ ).



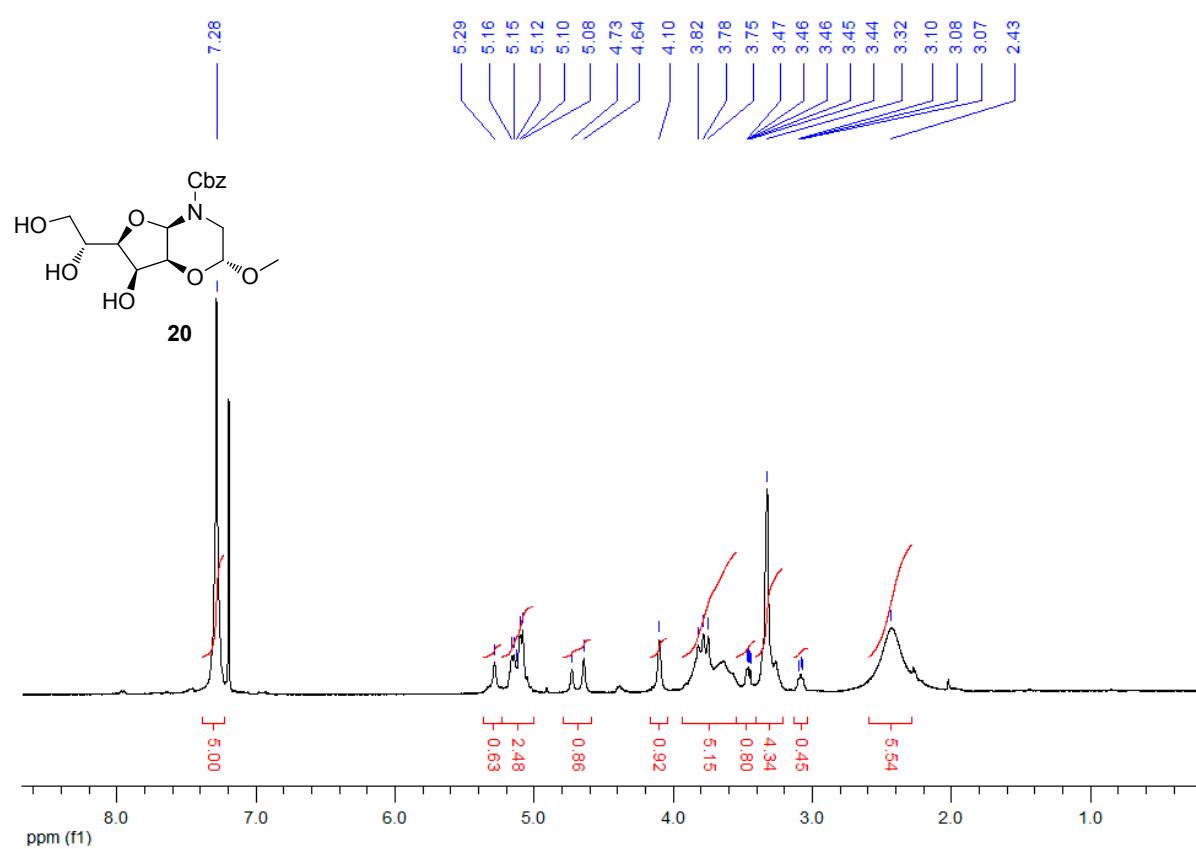
**Figure S22.**  $^{13}\text{C}$ -NMR spectrum of compound **18** (100 MHz,  $\text{CDCl}_3$ ).



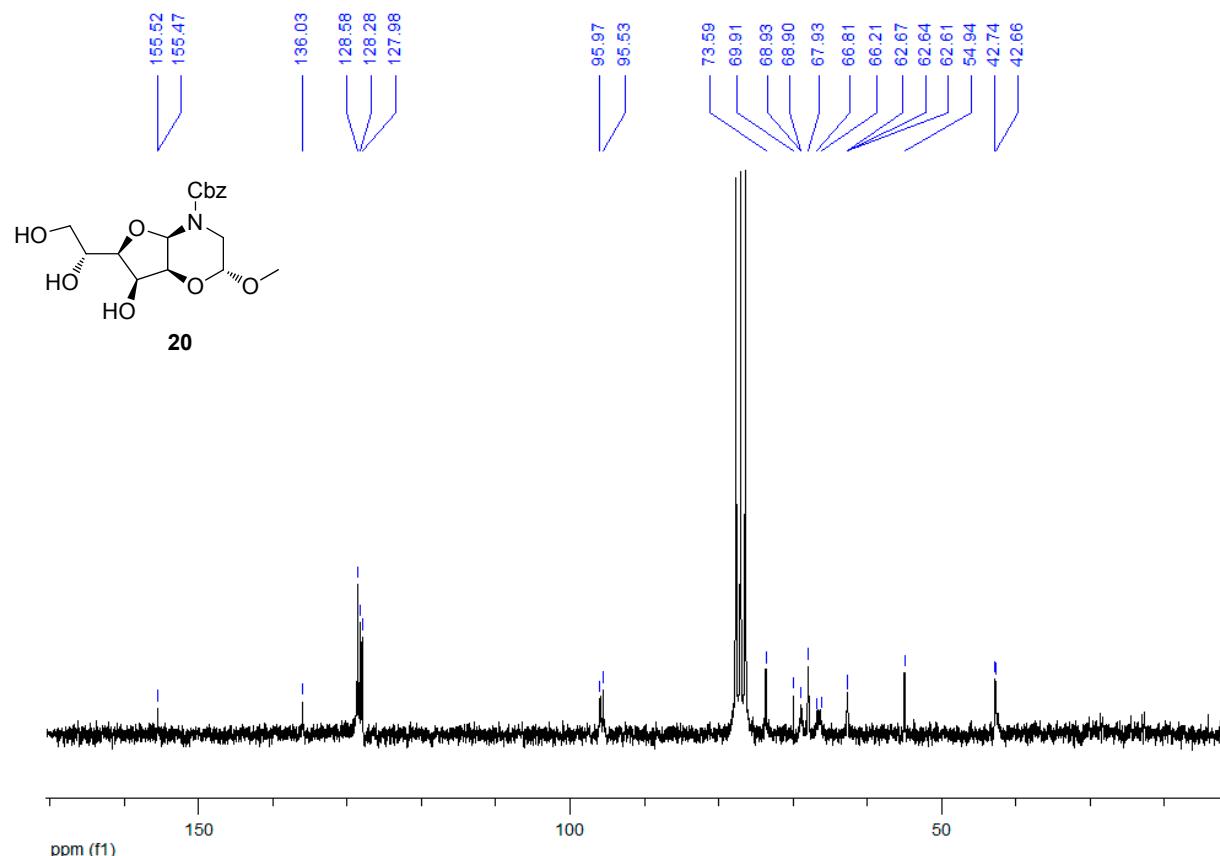
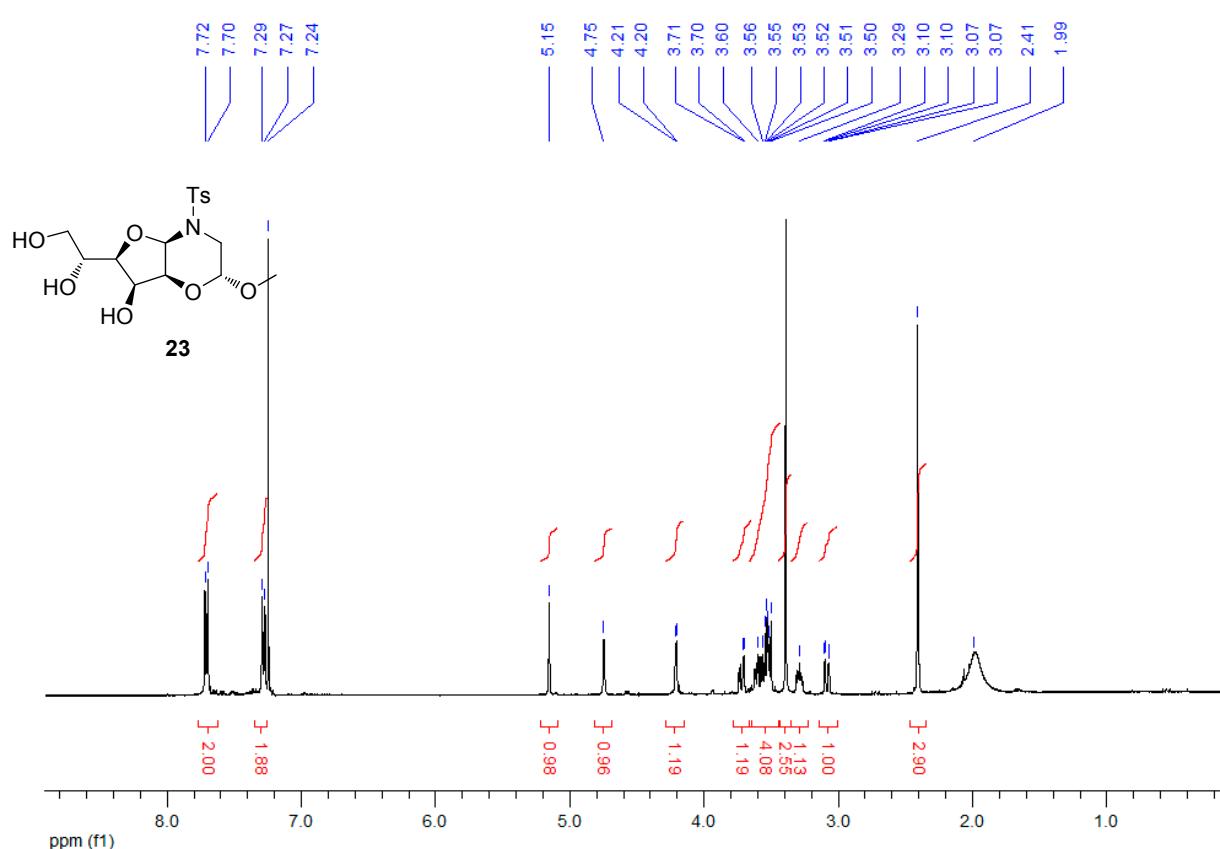
**Figure S23.**  $^1\text{H}$ -NMR spectrum of compound **19** (400 MHz,  $\text{CDCl}_3$ ).

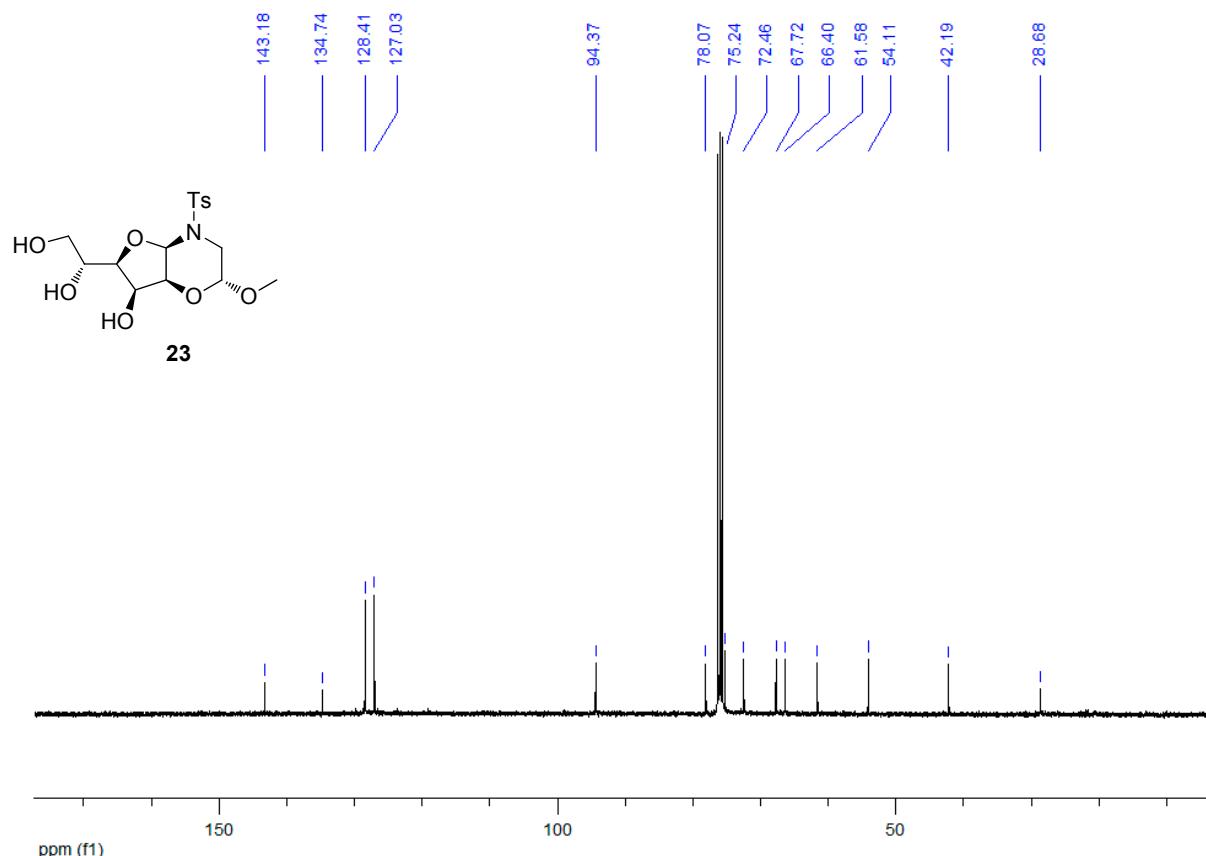


**Figure S24.**  $^{13}\text{C}$ -NMR spectrum of compound **19** (100 MHz,  $\text{CDCl}_3$ ).

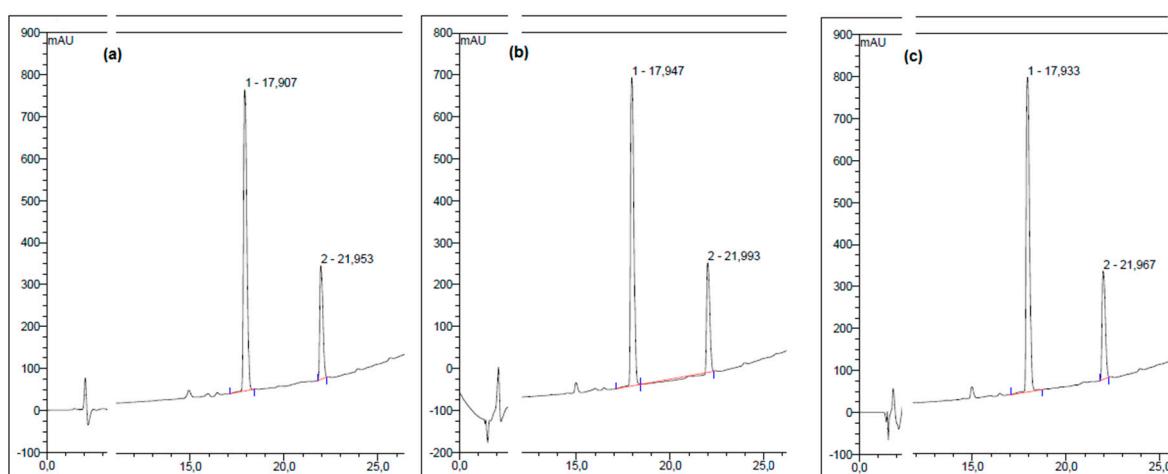


**Figure S25.**  $^1\text{H}$ -NMR spectrum of compound **20** (400 MHz,  $\text{CDCl}_3$ ).

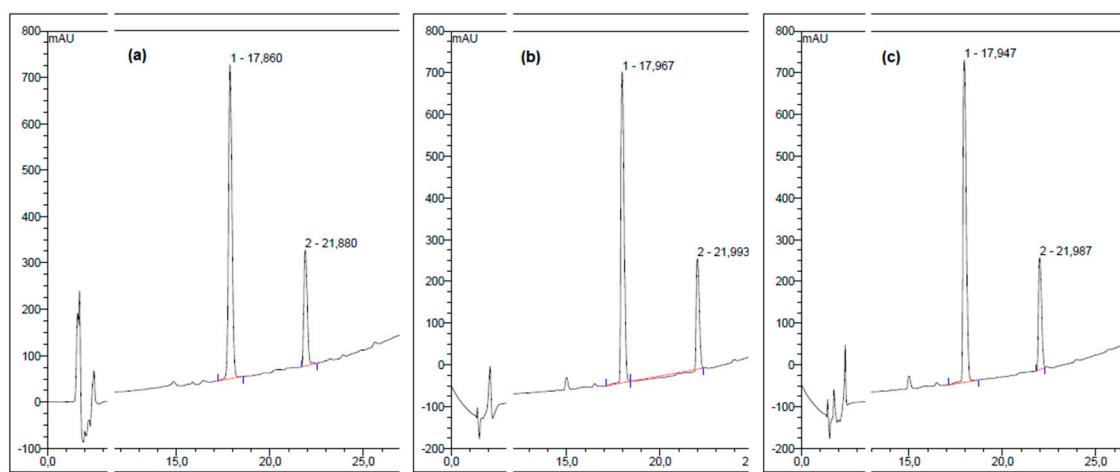
**Figure S26.**  $^{13}\text{C}$ -NMR spectrum of compound **20** (50 MHz,  $\text{CDCl}_3$ ).**Figure S27.**  $^1\text{H}$ -NMR spectrum of compound **23** (400 MHz,  $\text{CDCl}_3$ ).



**Figure S28.**  $^{13}\text{C}$ -NMR spectrum of compound 23 (100 MHz,  $\text{CDCl}_3$ ).



**Figure S29.** HPLC runs of compound 18 (0.5 mg/mL, final conc.) after 1h incubation in (a)  $\text{CH}_3\text{CN}$ ; (b) 1:1 mixture of  $\text{CH}_3\text{CN}$  and  $\text{HCl}$  1M; (c) 1:1 mixture of  $\text{MeOH}$  and  $\text{HCl}$  1M. A 0.1 mg/mL quantity (final conc.) of benzophenone ( $\text{rt} = 22$  min) was used as an internal standard.



**Figure S30.** HPLC runs of compound **18** (0.5 mg/mL, final conc.) after 24h incubation in (a) CH<sub>3</sub>CN; (b) 1:1 mixture of CH<sub>3</sub>CN and HCl 1M; (c) 1:1 mixture of MeOH and HCl 1M. A 0.1 mg/mL quantity (final conc.) of benzophenone (rt = 22 min) was used as an internal standard.