

Supplementary Materials

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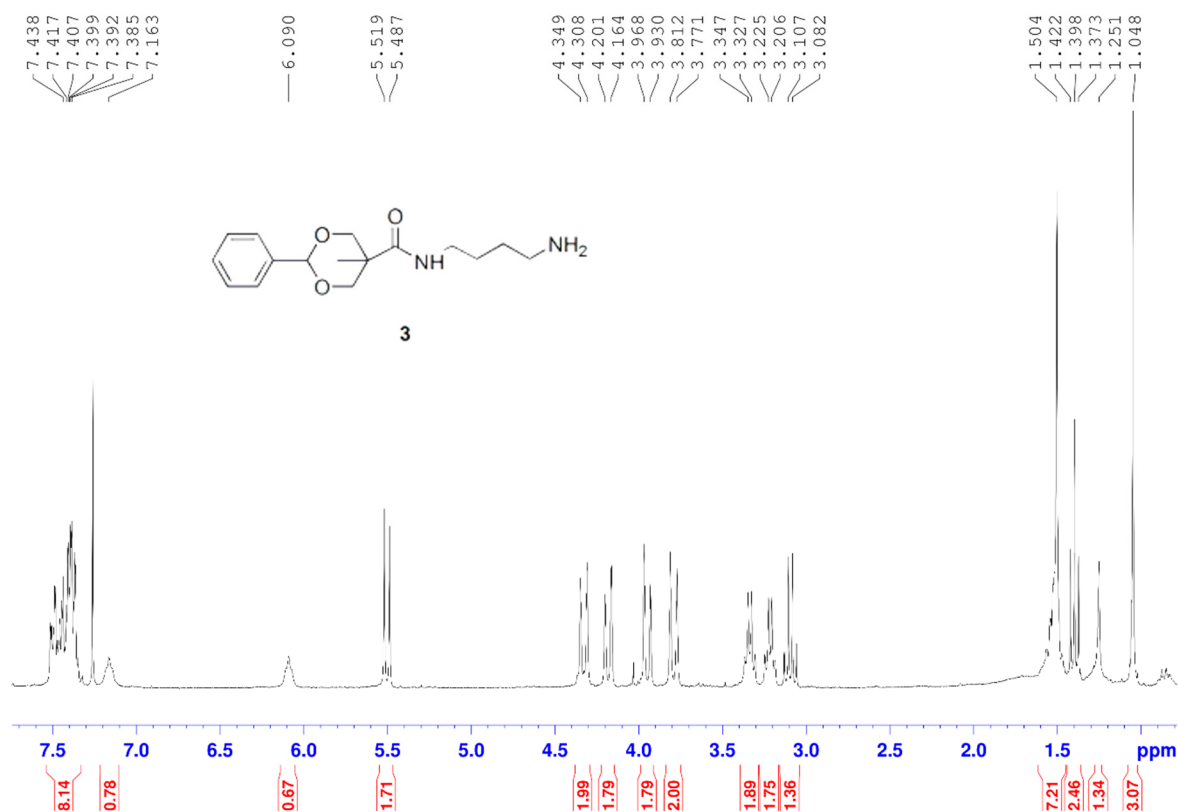


Figure S1. *N*-(4-Aminobutyl)-5-methyl-2-phenyl-1,3-dioxane-5-carboxamide.

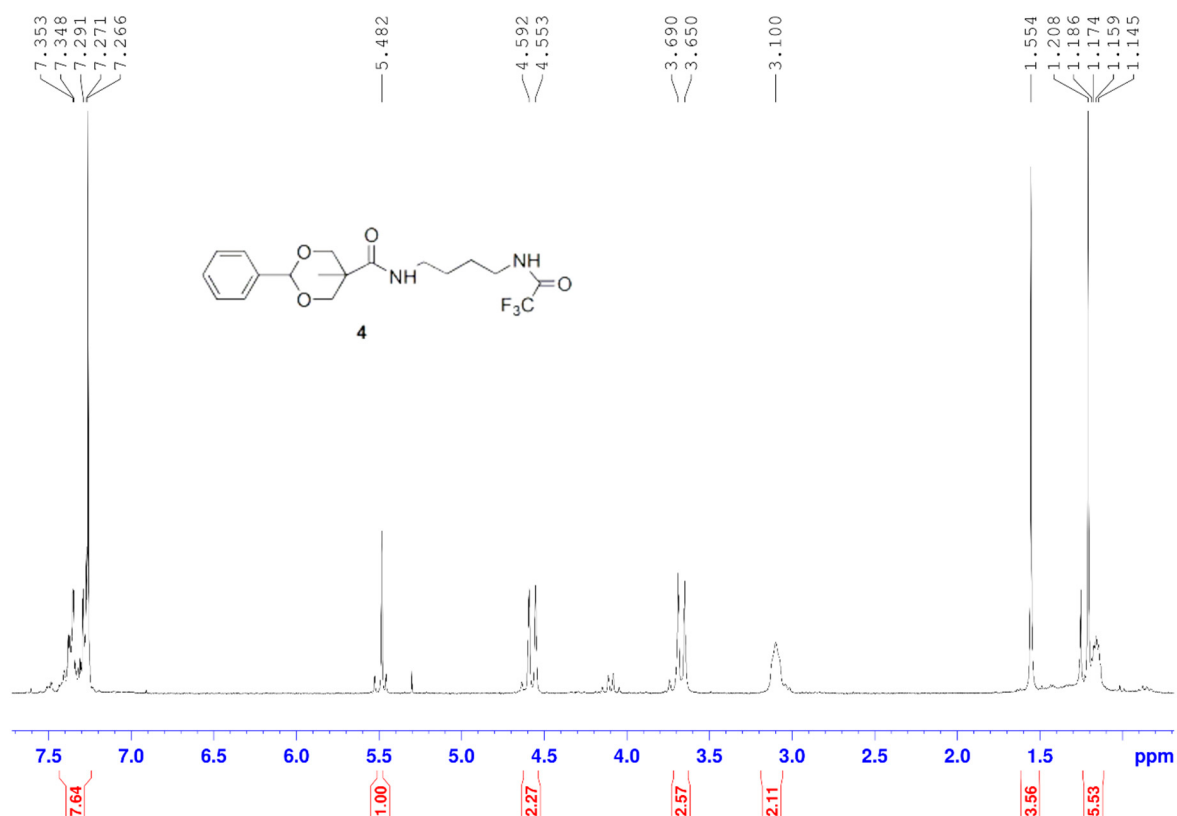


Figure S2. 5-Methyl-2-phenyl-*N*-(4-(2,2,2-trifluoroacetamid)butyl)-1,3-dioxane-5-carboxamide.

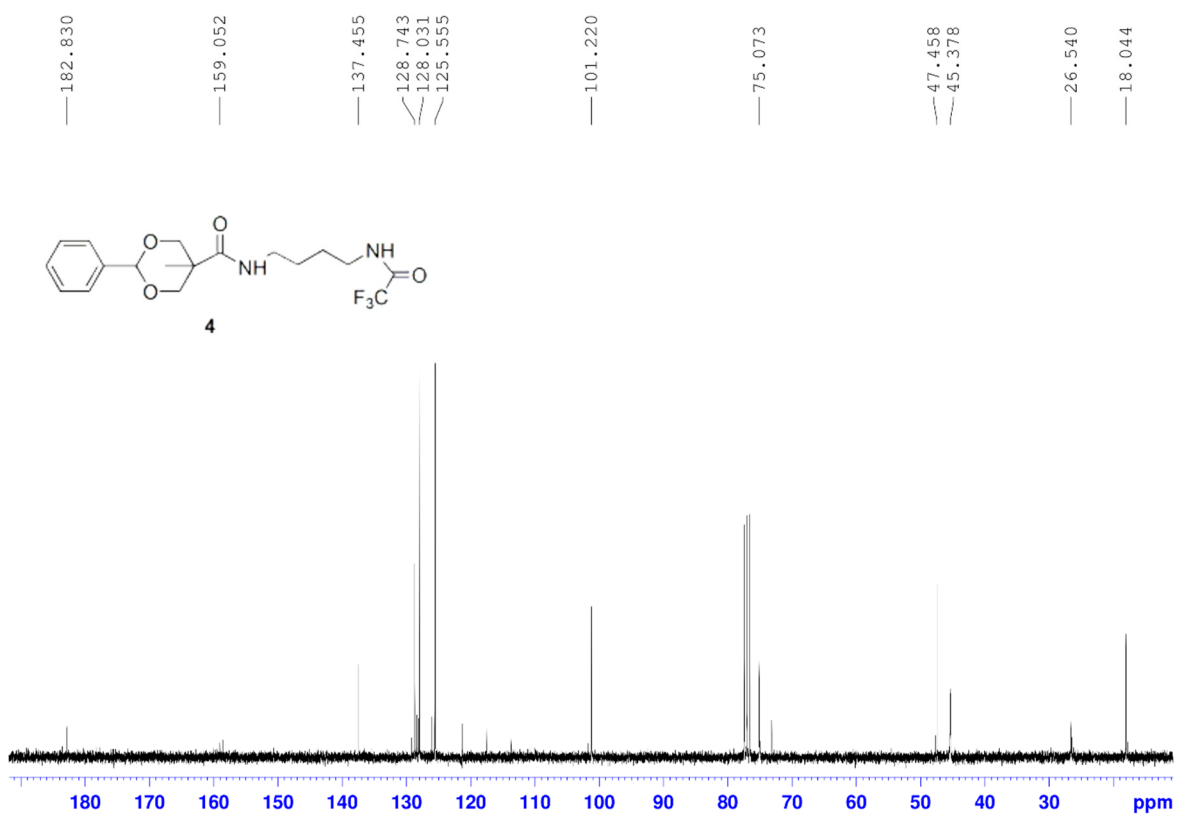


Figure S3. 5-Methyl-2-phenyl-*N*-(4-(2,2,2-trifluoroacetamid)butyl)-1,3-dioxane-5-carboxamide.

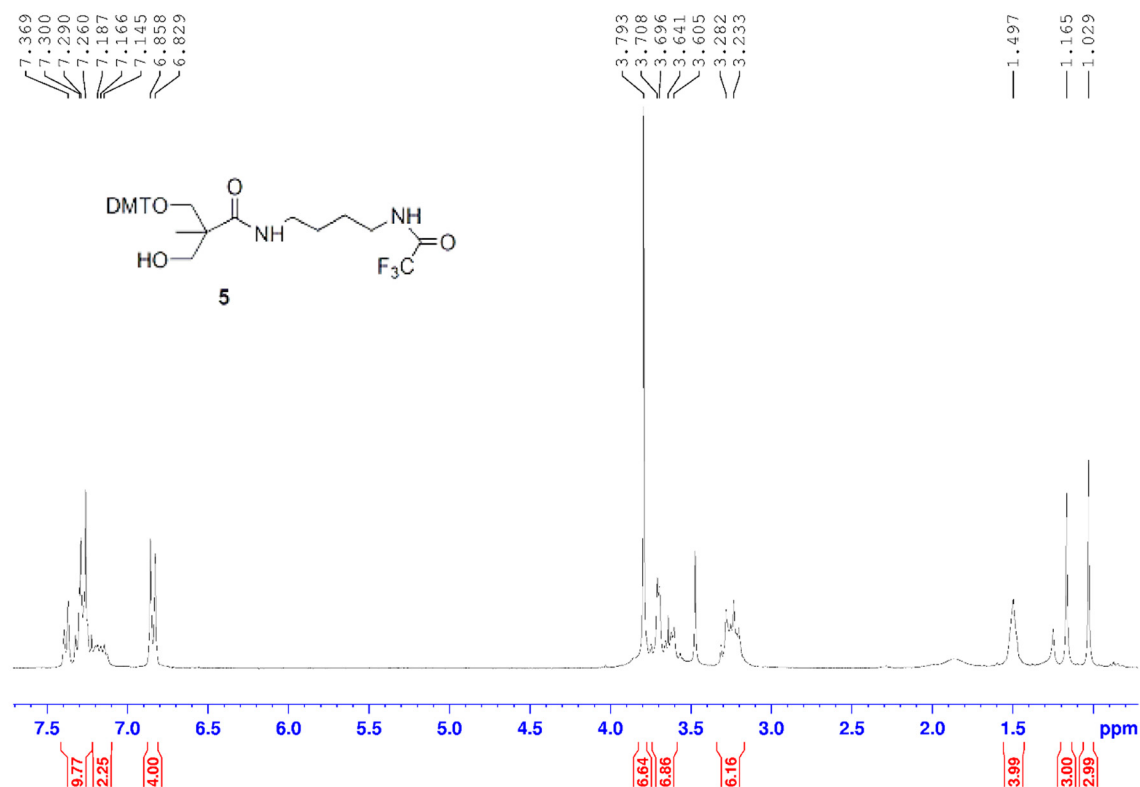


Figure S4. ¹H NMR spectrum of 3-(4,4'-Dimethoxytrityl)-2-(hydroxymethyl)-2-methyl-N-(4-(2,2,2-trifluoroacetamido)butyl)propanamide.

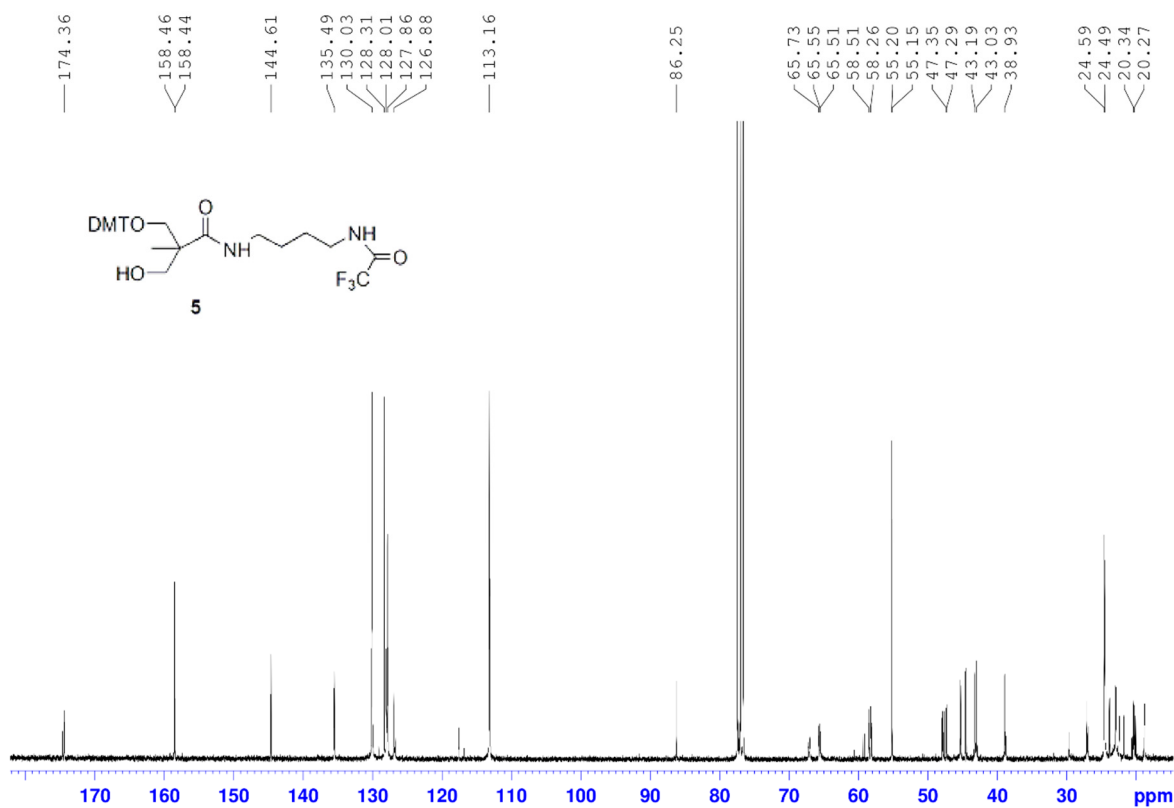


Figure S5. ¹³C NMR spectrum of 3-(4,4'-Dimethoxytrityl)-2-(hydroxymethyl)-2-methyl-N-(4-(2,2,2-trifluoroacetamido)butyl)propanamide.

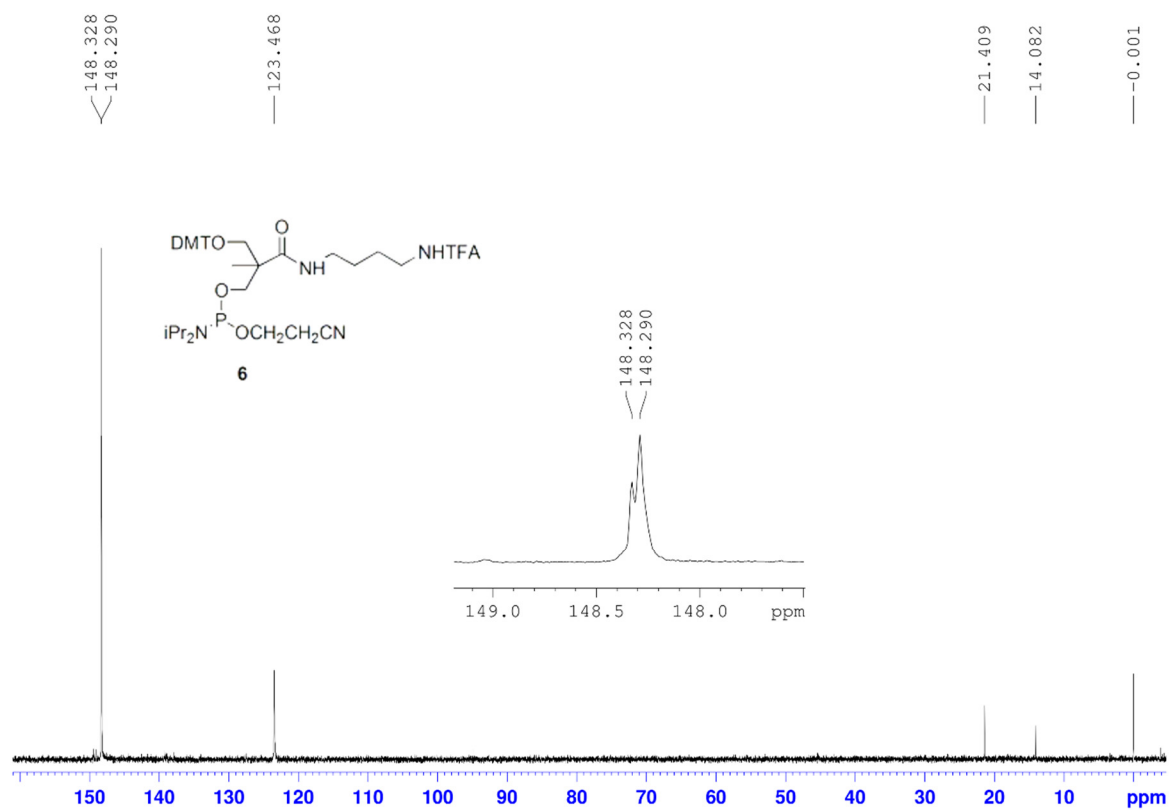


Figure S6. 3-[(4,4'-Dimethoxytrityl)-2-(hydroxymethyl)-2-methyl-N-(4-(2,2,2-trifluoroacetamido)butyl)propanamide]phosphoramidite.

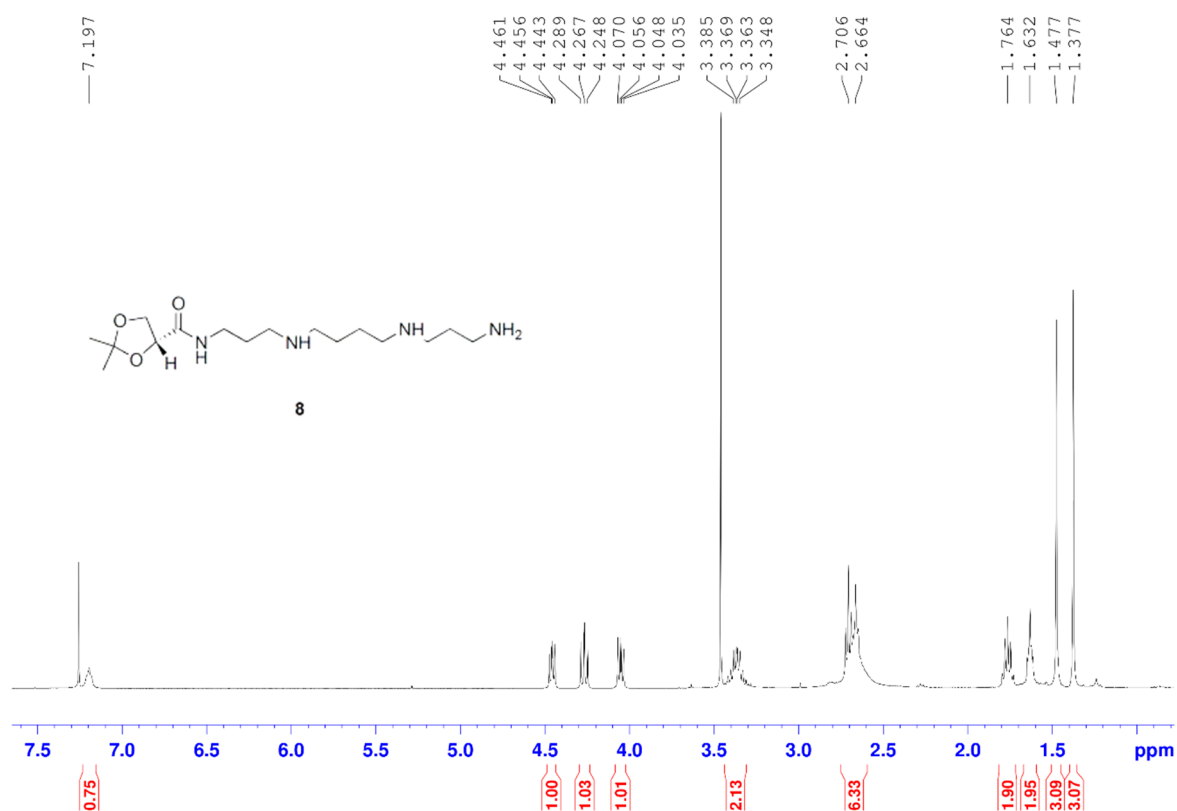


Figure S7. (S)-N-(4,9,13-triazatridecan-1-yl)-2,2-dimethyl-1,3-dioxolane-4-carboxamide.

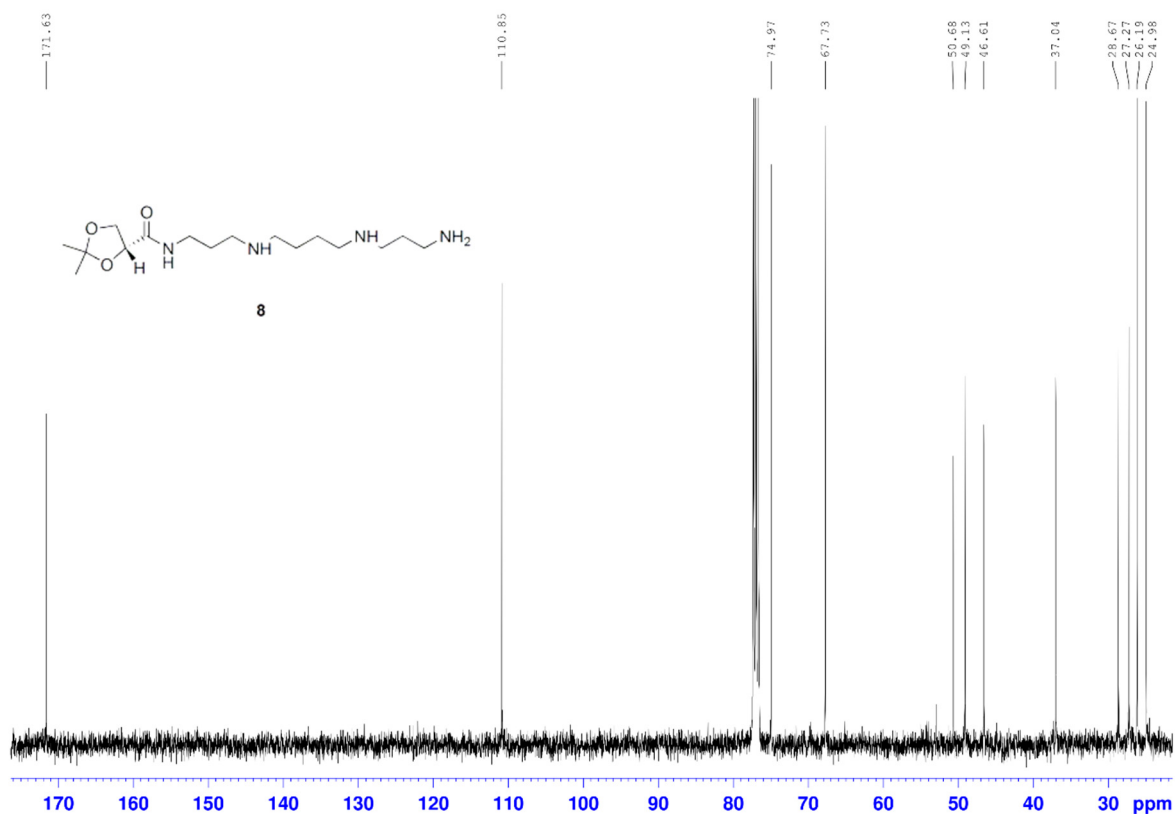


Figure S8. *(S)*-N-(4,9,13-triazatridecan-1-yl)-2,2-dimethyl-1,3-dioxolane-4-carboxamide.

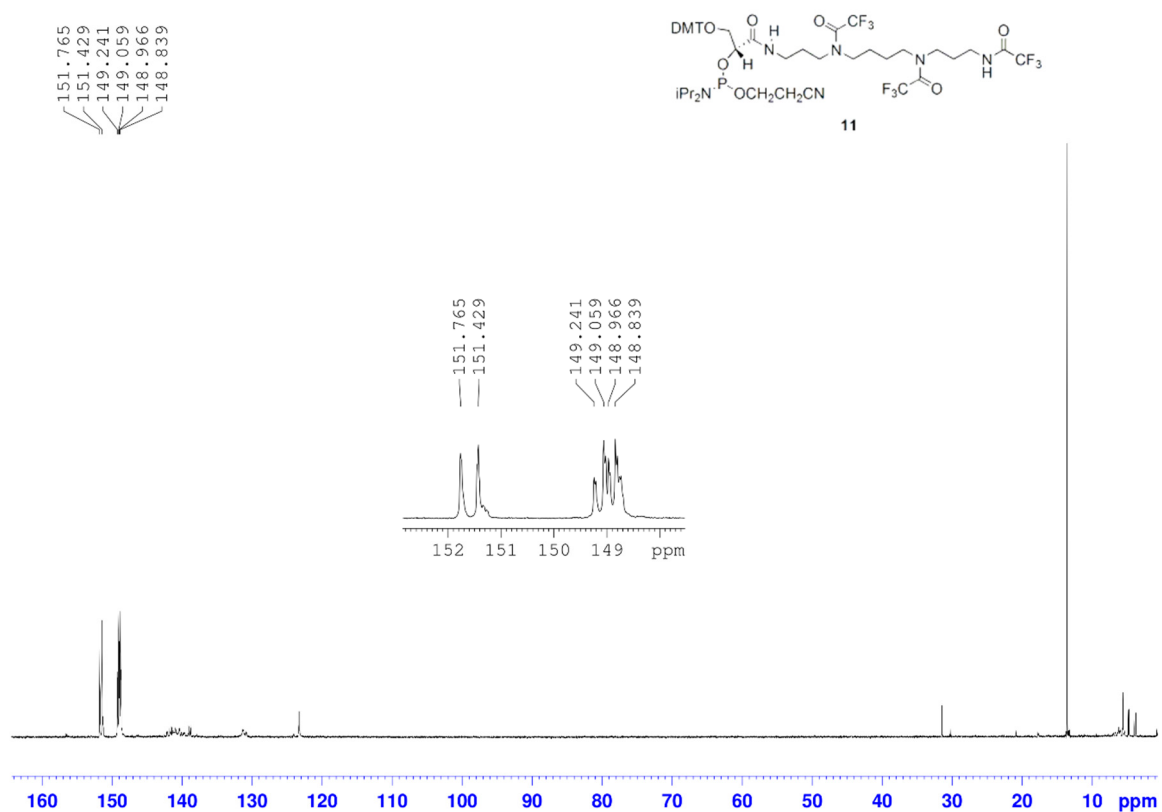


Figure S9. 2-(*S*)-[(4,4'-Dimethoxytrityl)-3-(hydroxymethyl)-*N*-((2,2,2-trifluoroacet-1-yl)-4,9,13-triazatridecane)propanamide]phosphoramidite.

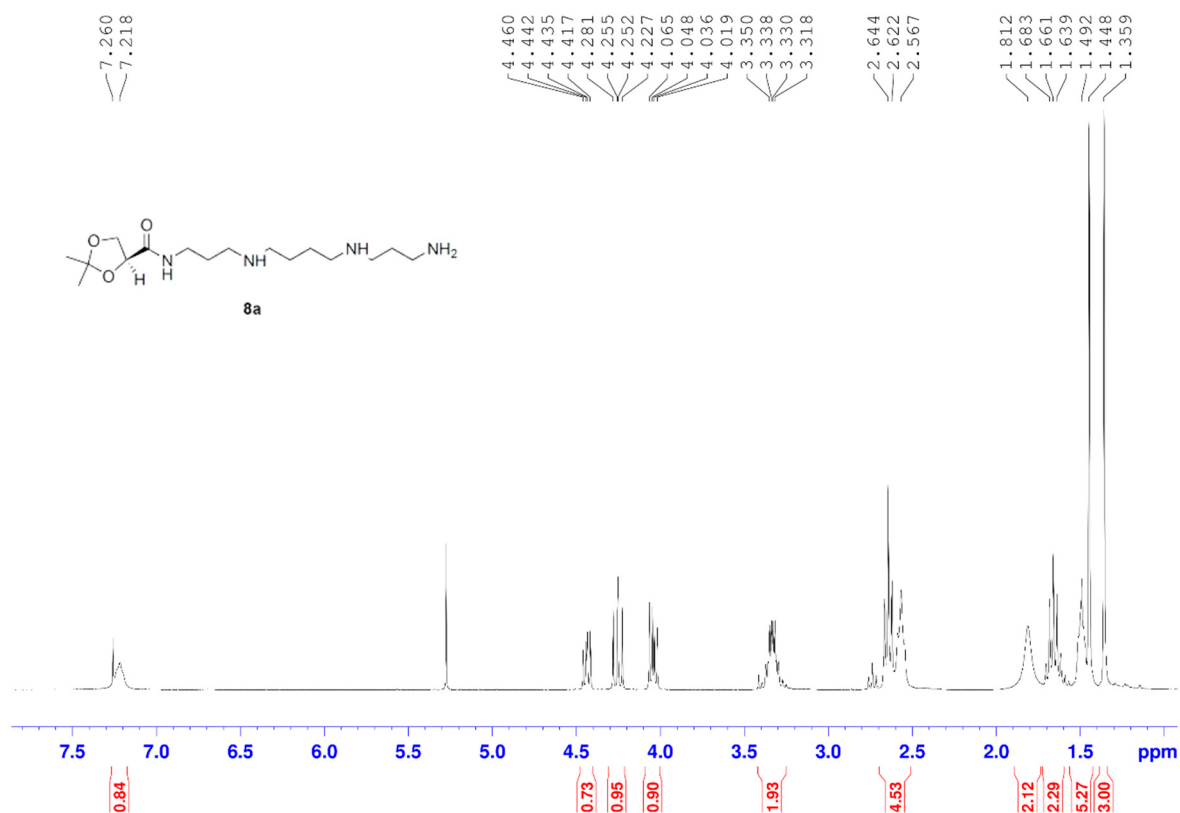


Figure S10. (*R*)-*N*-(4,9,13-triazatridecan-1-yl)-2,2-dimethyl-1,3-dioxolane-4-carboxamide.

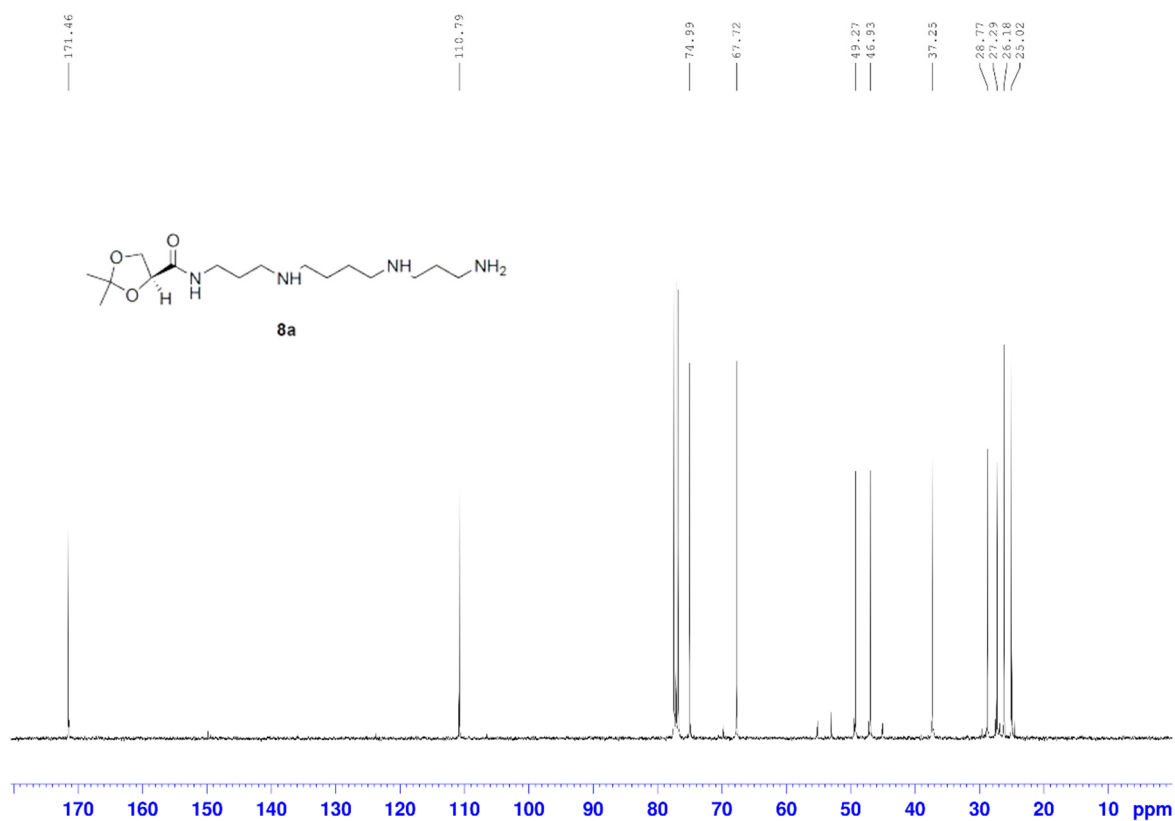


Figure S11. (*R*)-*N*-(4,9,13-triazatridecan-1-yl)-2,2-dimethyl-1,3-dioxolane-4-carboxamide.

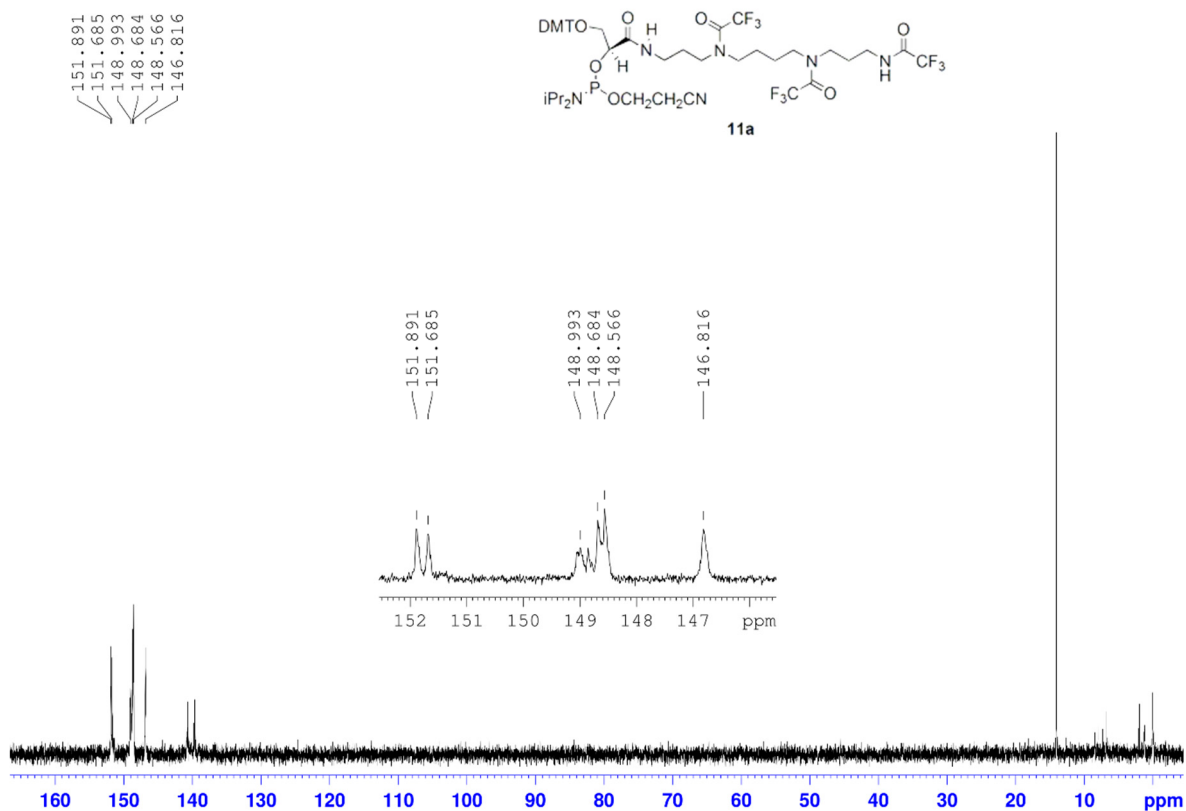


Figure S12. 2-(*R*)-[(4,4'-Dimethoxytrityl)-3-(hydroxymethyl)-*N*-((2,2,2-trifluoroacetyl)-4,9,13-triazatridecane)propanamide]phosphoramidite.

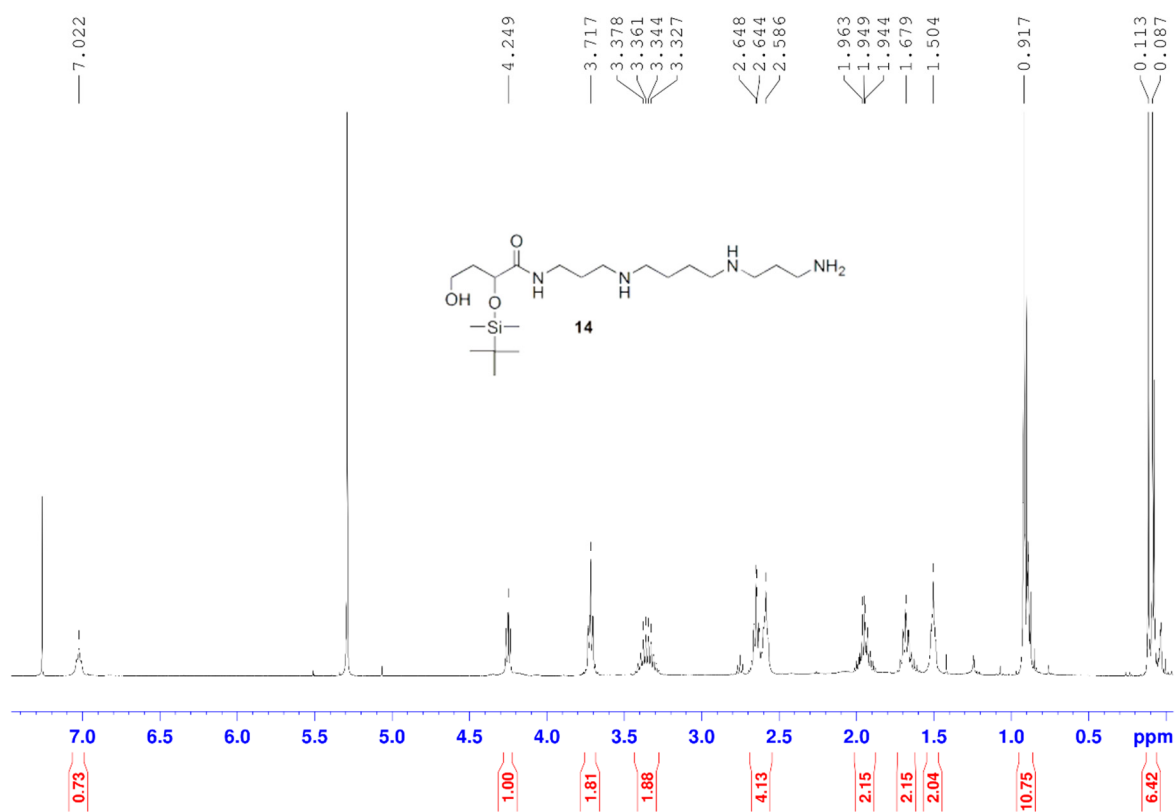


Figure S13. *N*-(4,9,13-Triazatridecan-1-yl)-2-(tert-butylodimethylsiloxy)-butyramide.

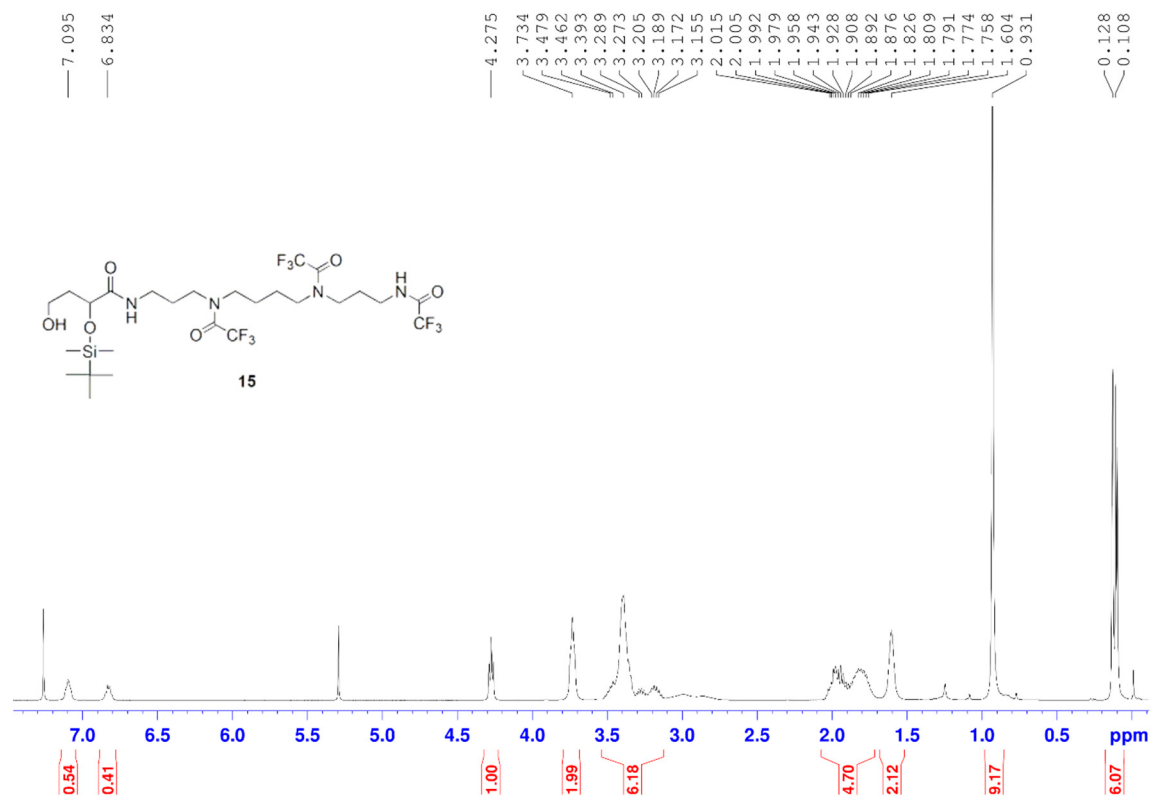


Figure S14. *N*-[Tris(2,2,2-trifluoroacet-1-yl)-4,9,13-triazatridecane]-2-(tert-butyl dimethylsiloxy)-butyramide.

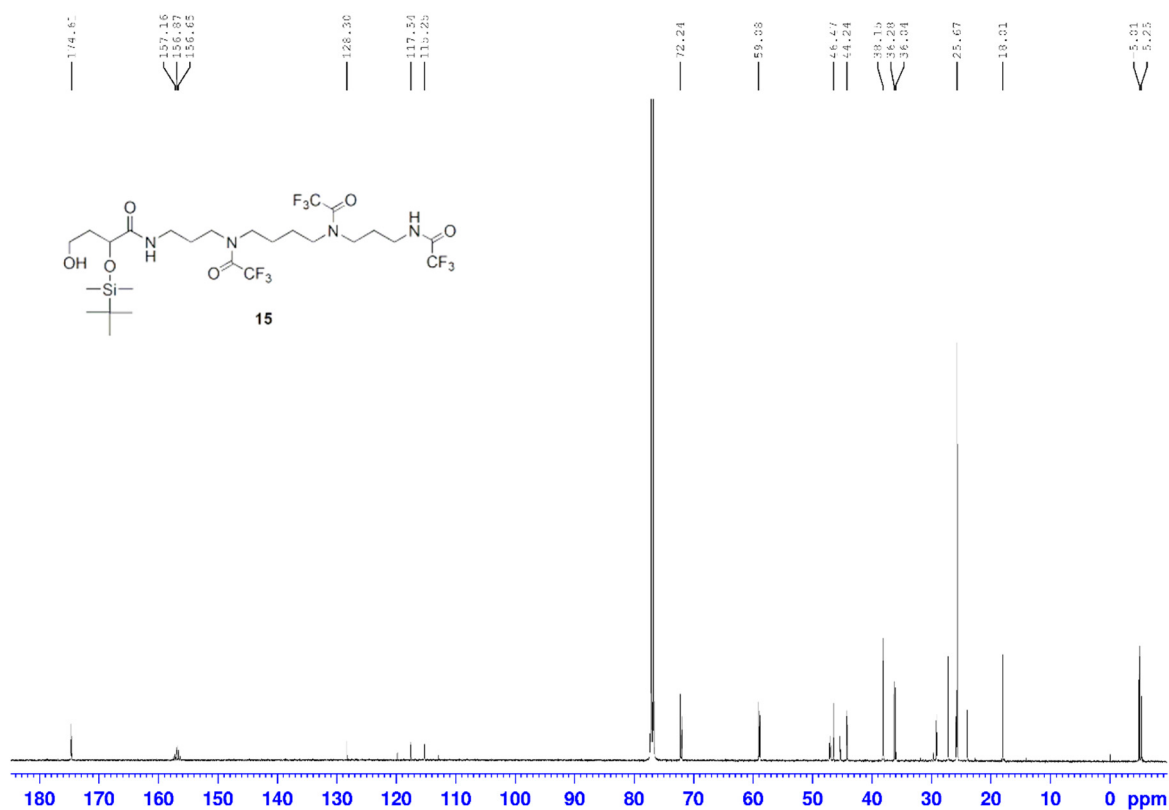


Figure S15. *N*-[Tris(2,2,2-trifluoroacet-1-yl)-4,9,13-triazatridecane]-2-(tert-butyl dimethylsiloxy)-butyramide.

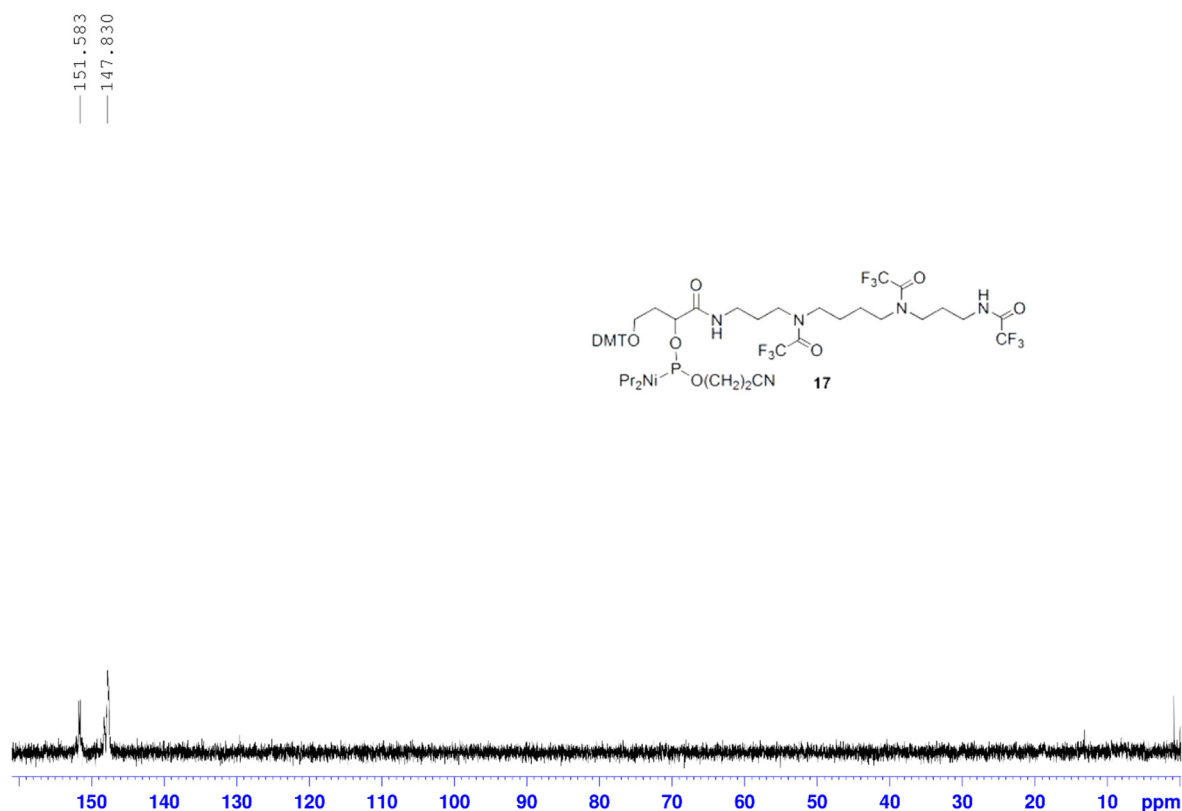


Figure S16. 2-(4,4'-Dimethoxytrityl)-4-(hydroxymethyl)-*N*-((2,2,2-trifluoroacet-1-yl)-4,9,13-triazatridecane)-butyramide]phosphoramidite.

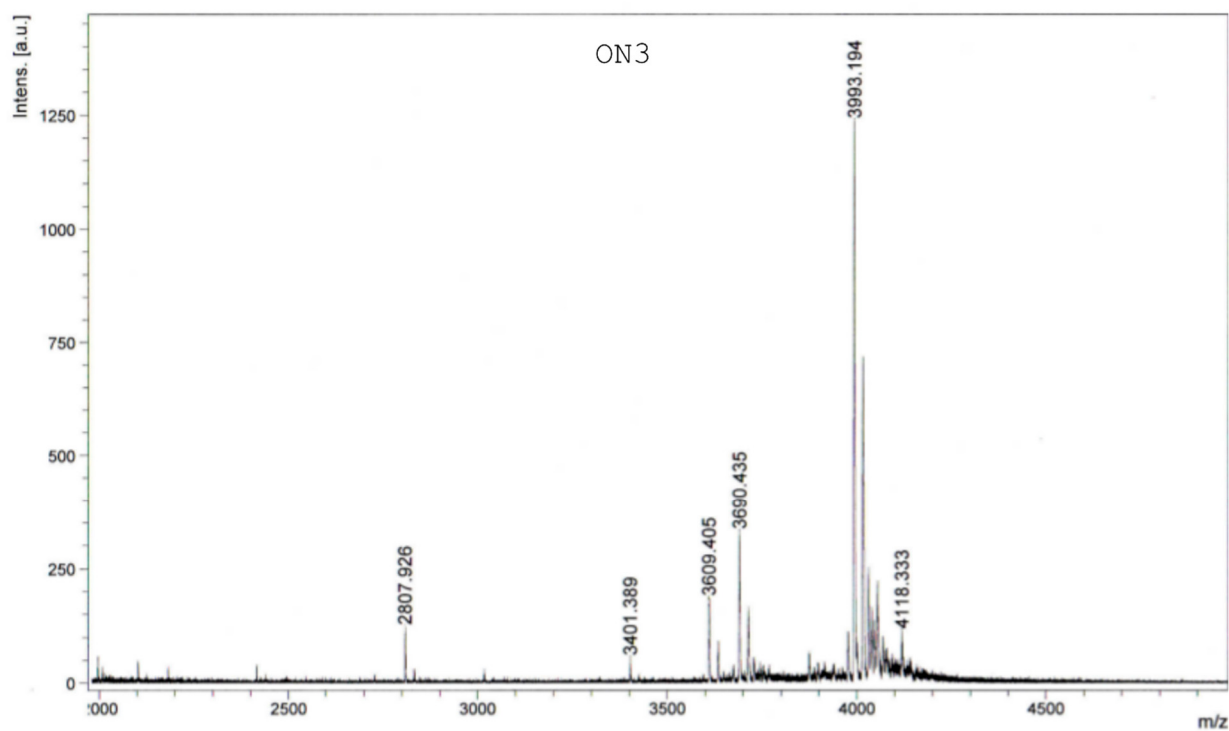


Figure S17. ON3 = X0 CTC AAG CAA GCT (X0 – putrescine analogue).

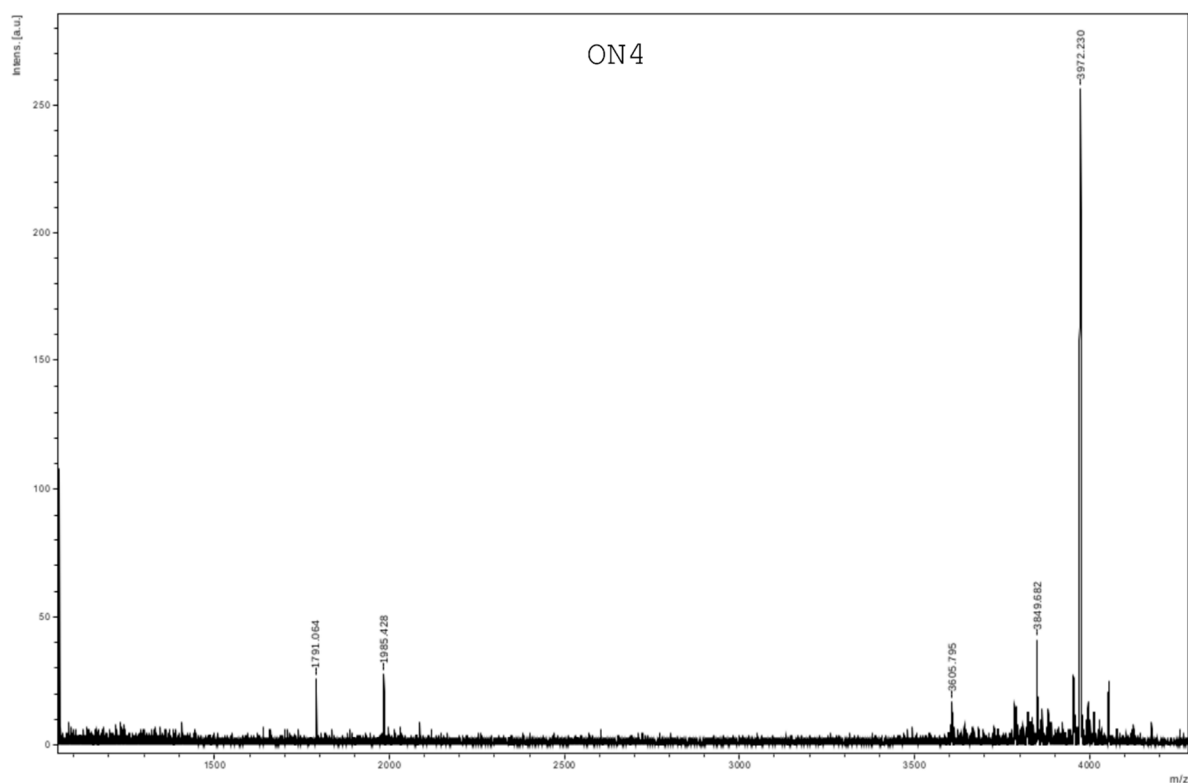


Figure S18. ON4 = X1 CTC ACA TGC GCG (X1 = spermine analogue).

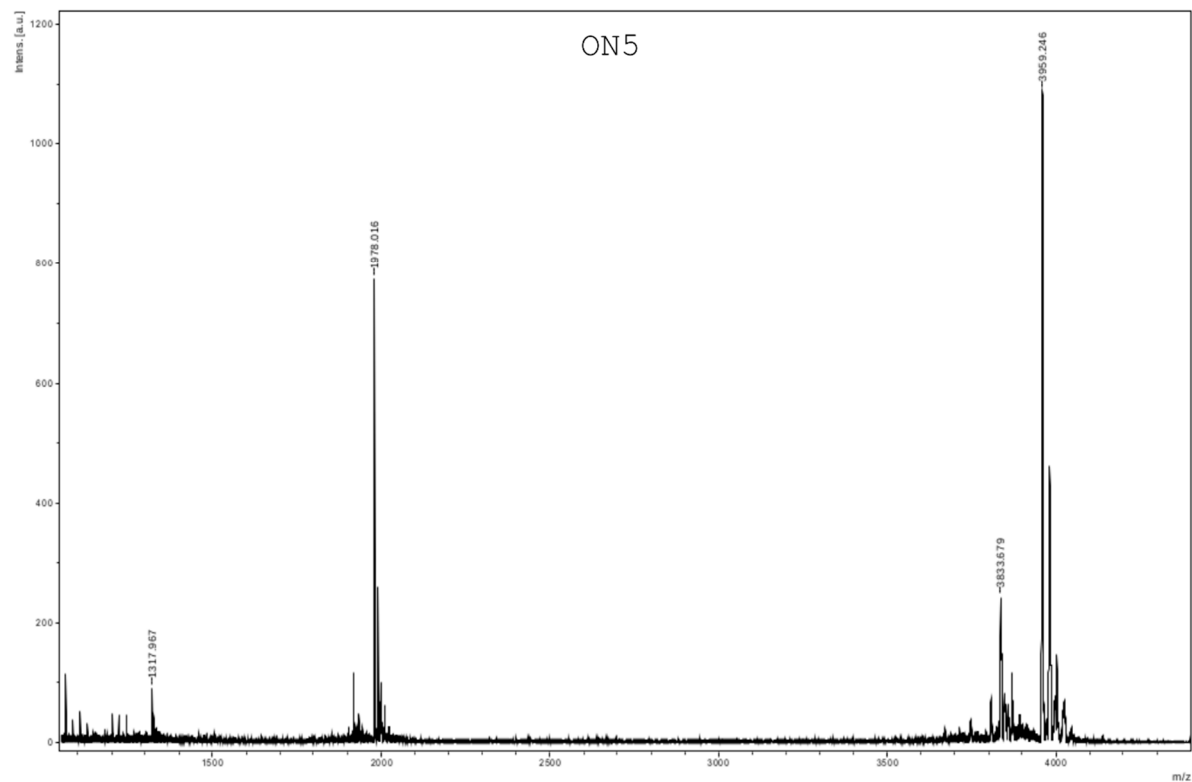


Figure S19. ON5 = X2 CTC ACA TGC GCG (X2 – spermine analogue).

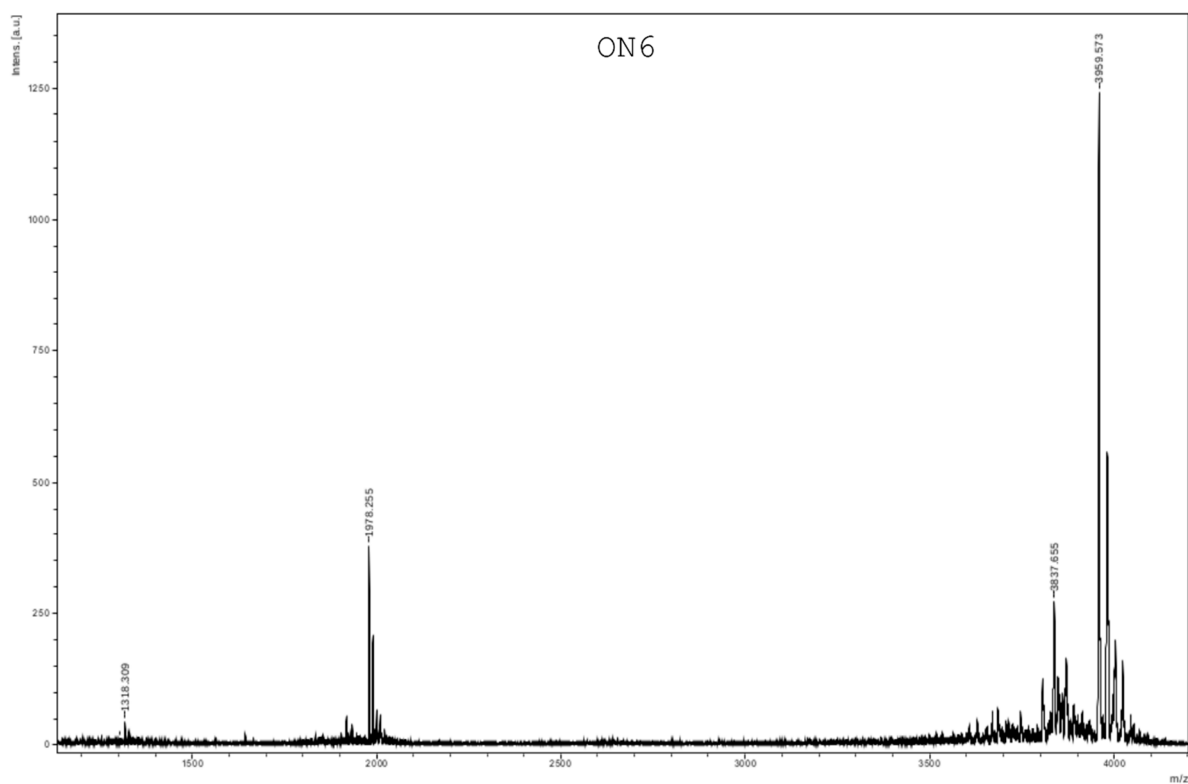


Figure S20. ON6 = X3 CTC ACA TGC GCG (X3 – spermine analogue).

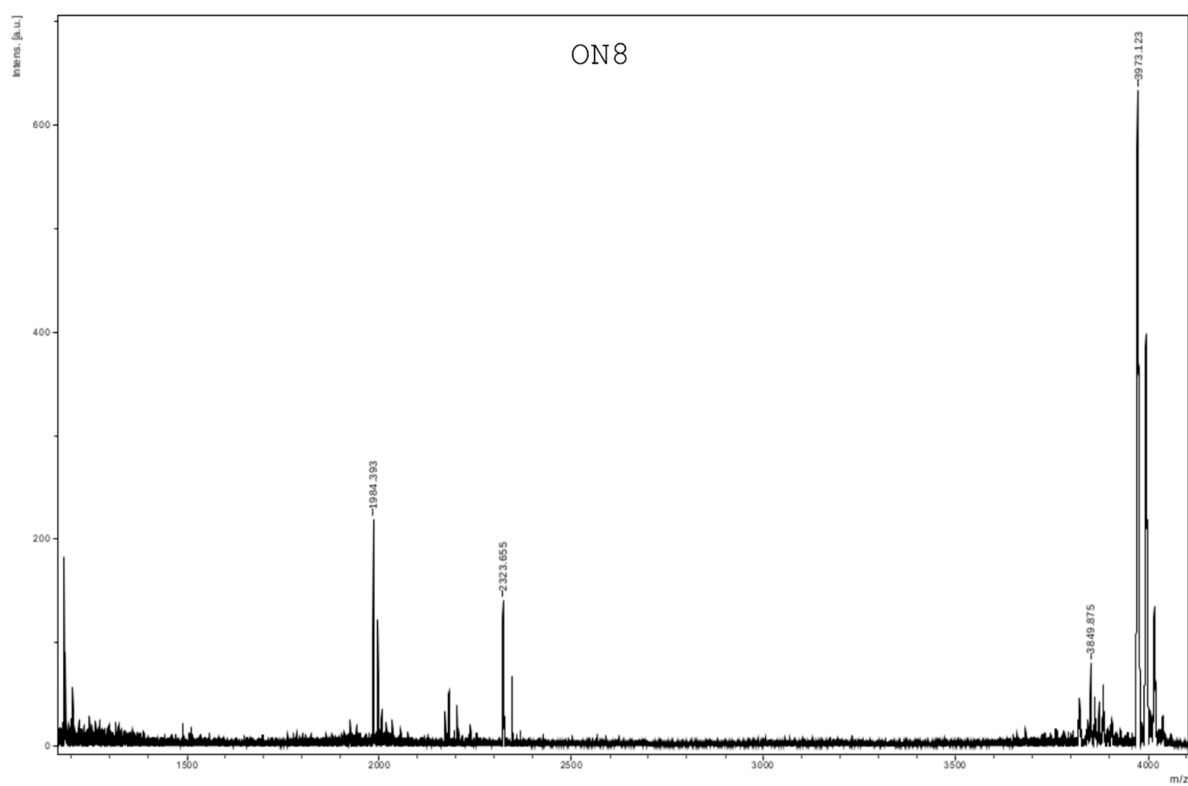


Figure S21. ON8 = CTC ACA X1 TGC GCG (X1 – spermine analogue).

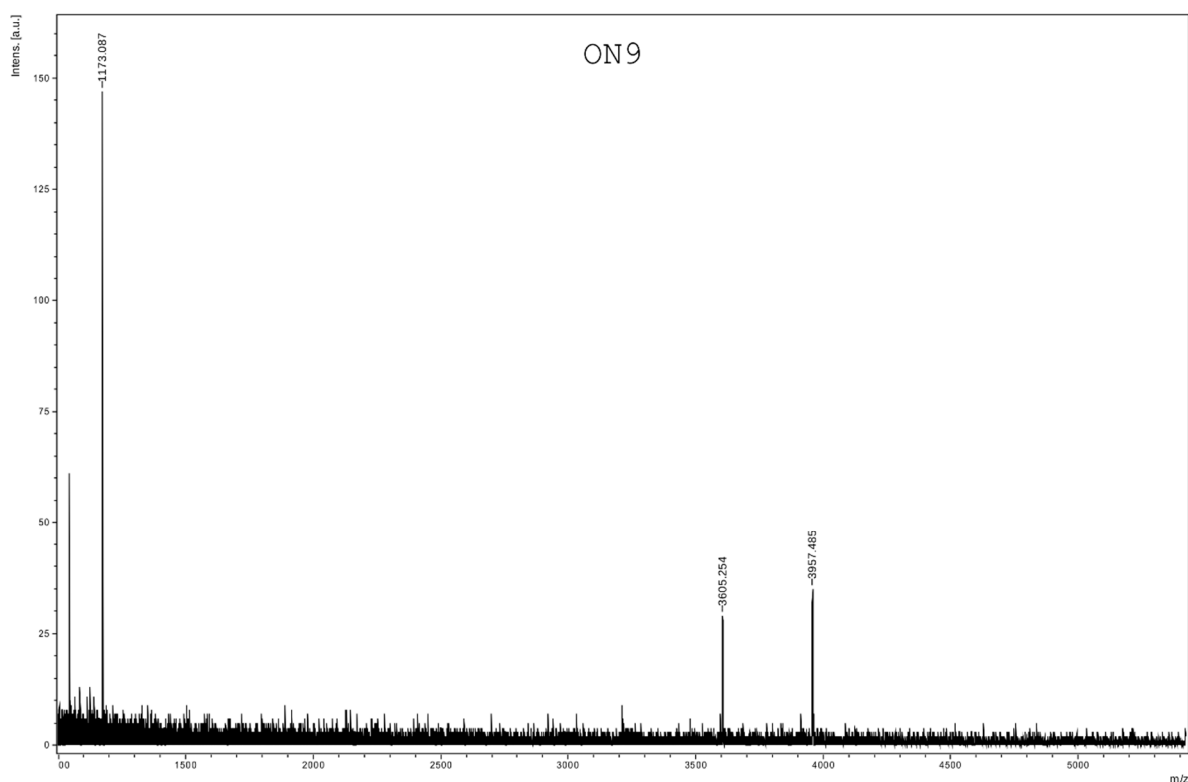


Figure S22. ON9 = CTC ACA **X2** TGC GCG (**X2** – spermine analogue).

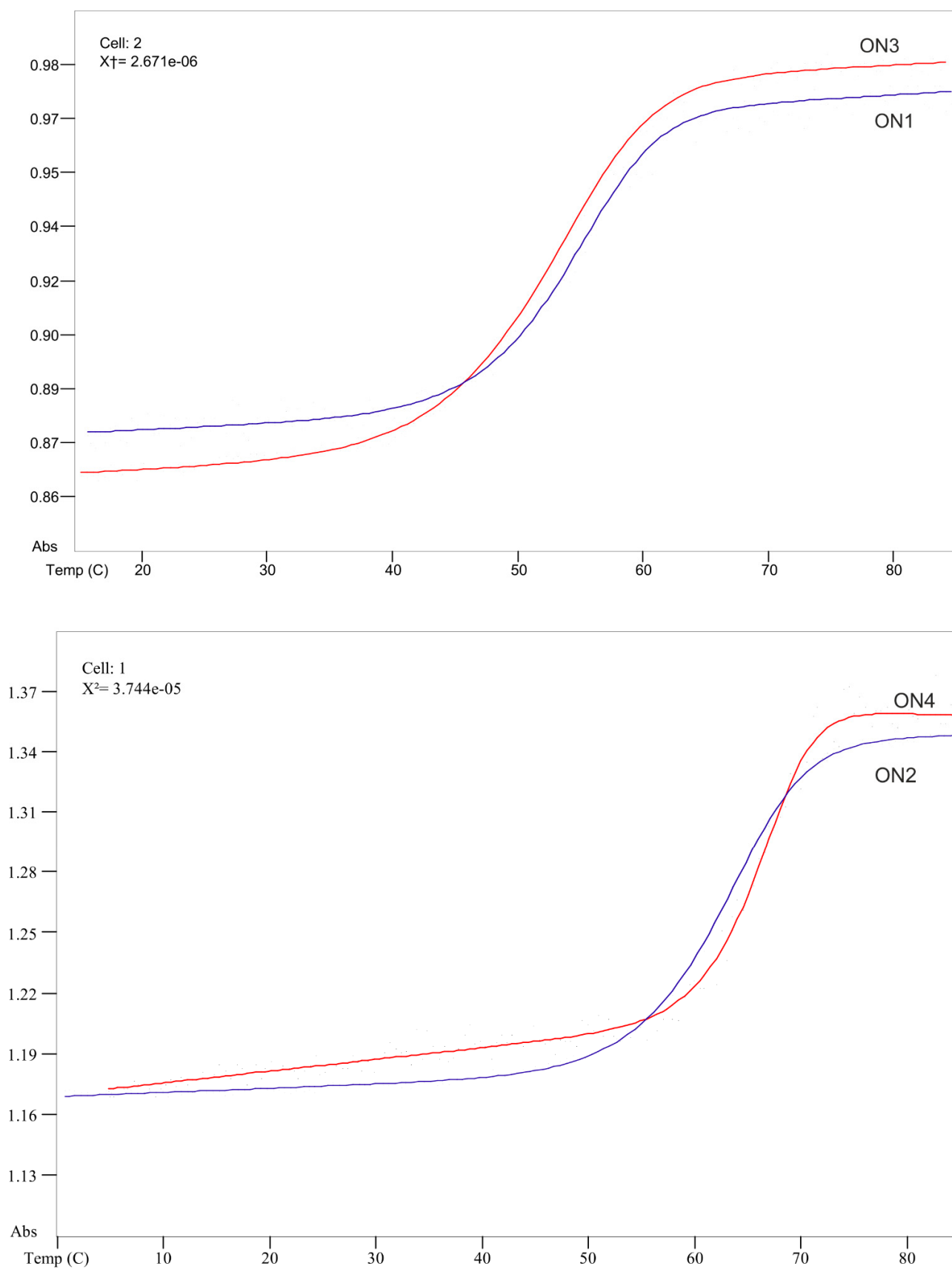


Figure S23. UV melting plots of comparison of thermodynamic stability for **ON1/ON3** and **ON2/ON4** (**ON1** and **ON2** – reference oligonucleotides).

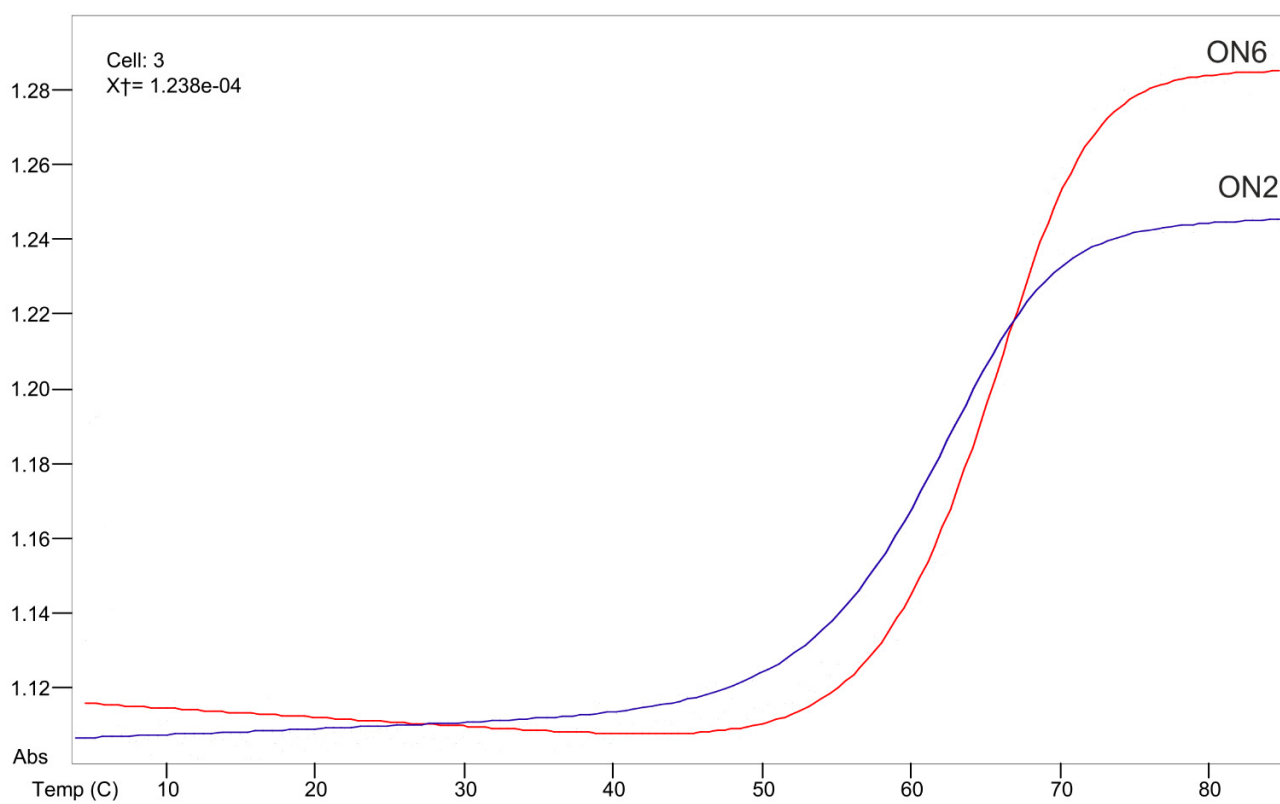
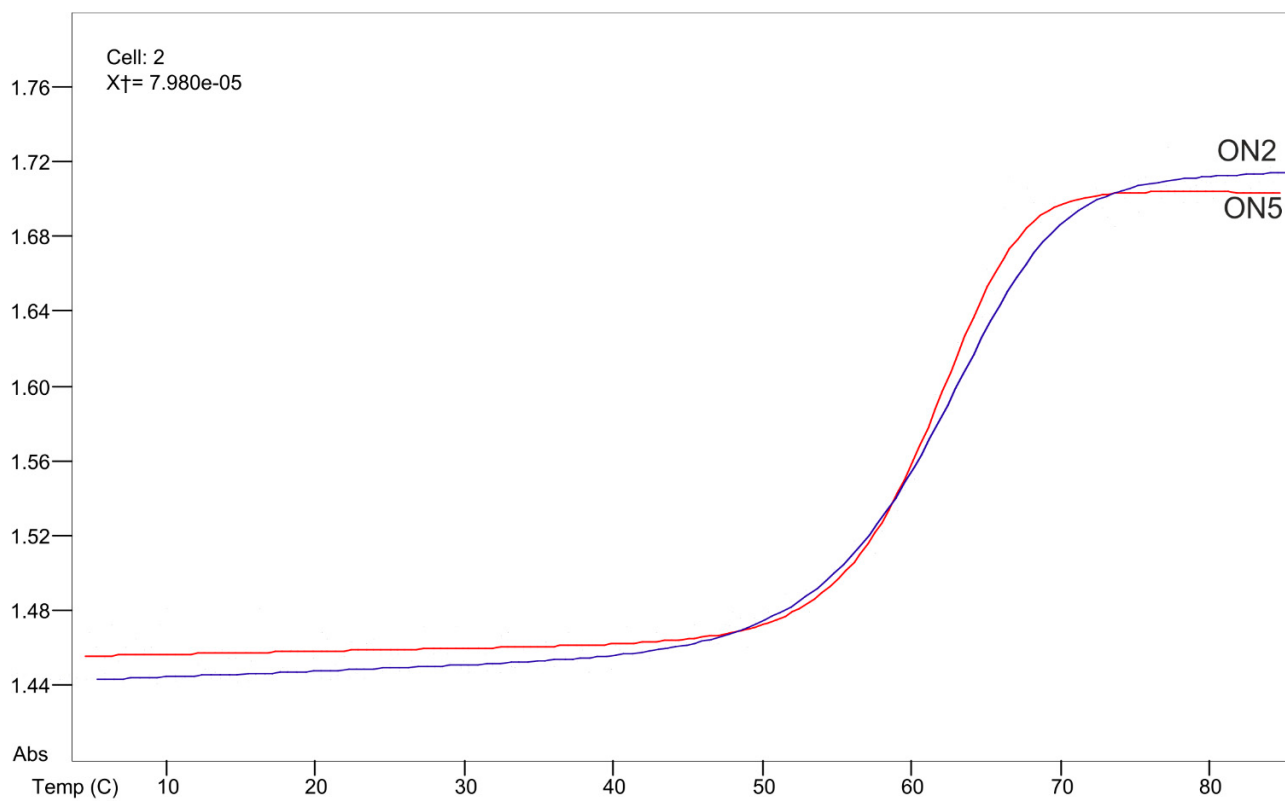


Figure S24. UV melting plots of comparison of thermodynamic stability for **ON2/ON5** and **ON2/ON6** (ON2 – reference oligonucleotide).

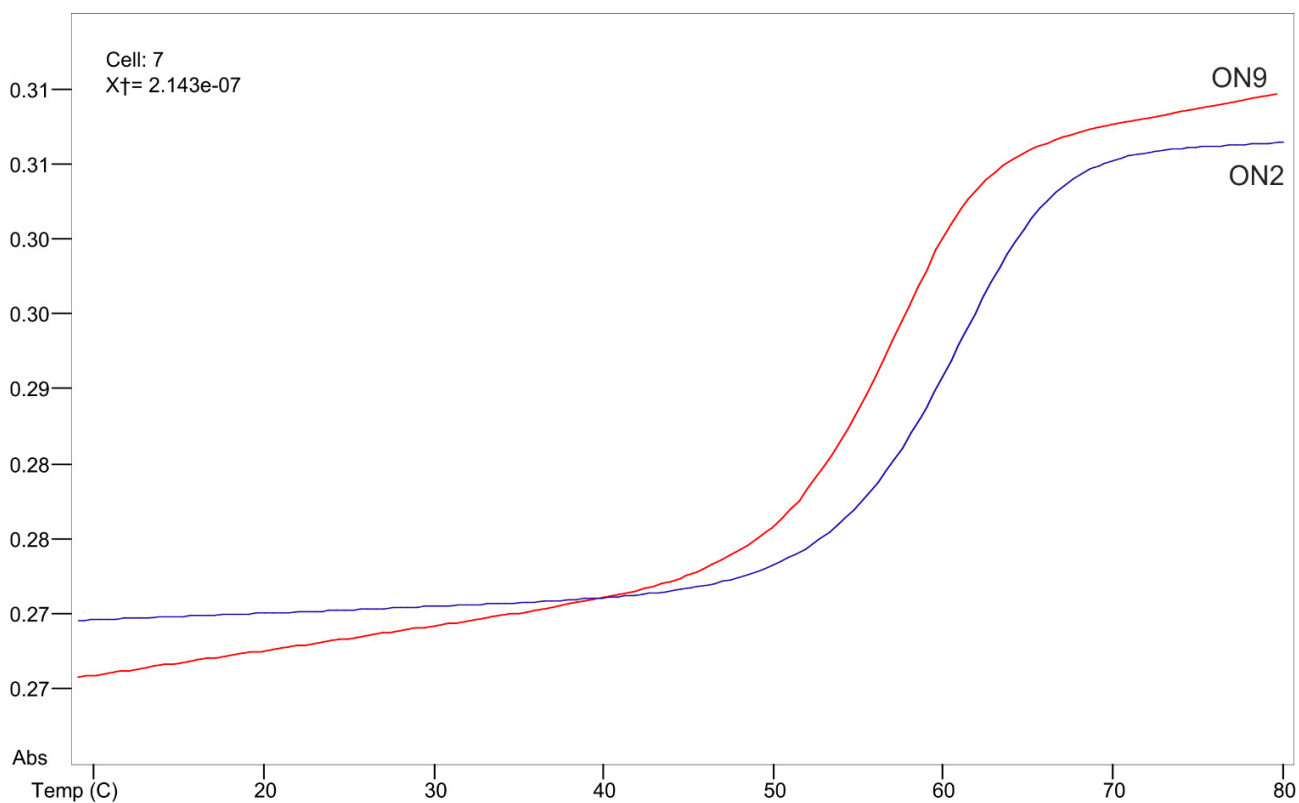
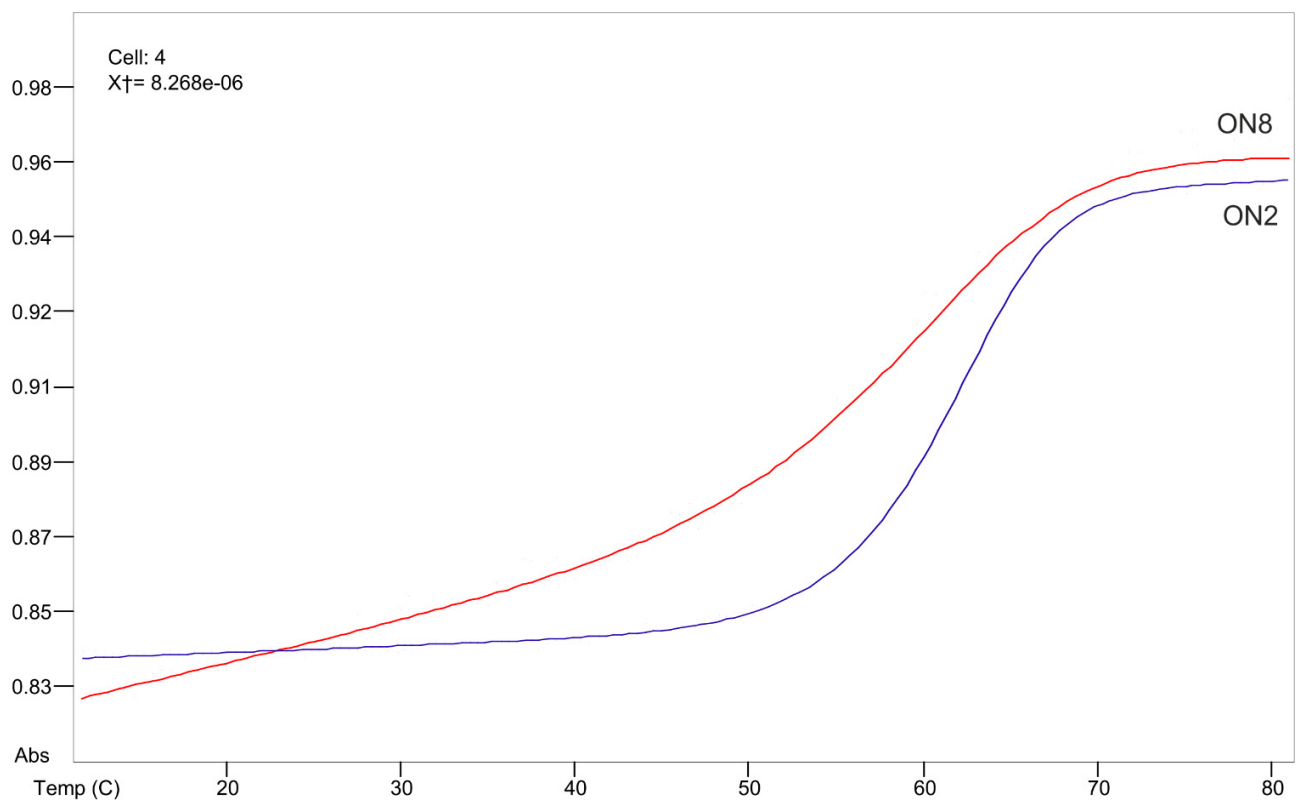


Figure S25. UV melting plots of comparison of thermodynamic stability for **ON2/ON8** and **ON2/ON9** (ON2 – reference oligonucleotide).