

Supplementary Data

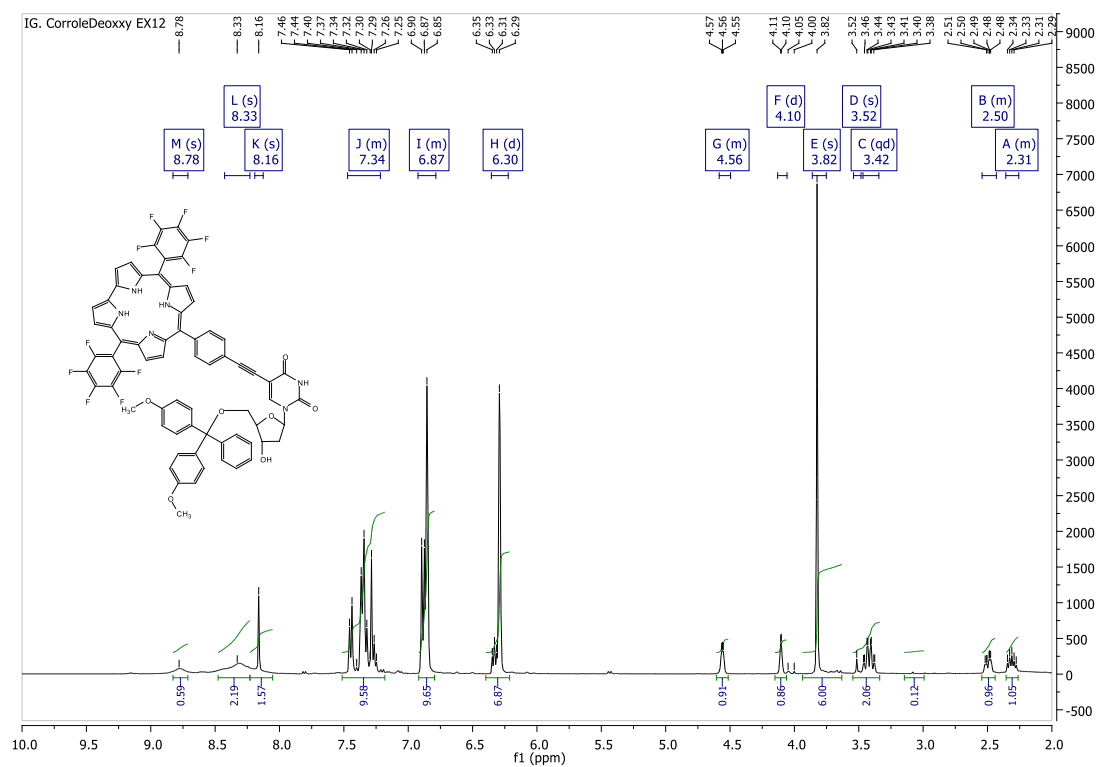
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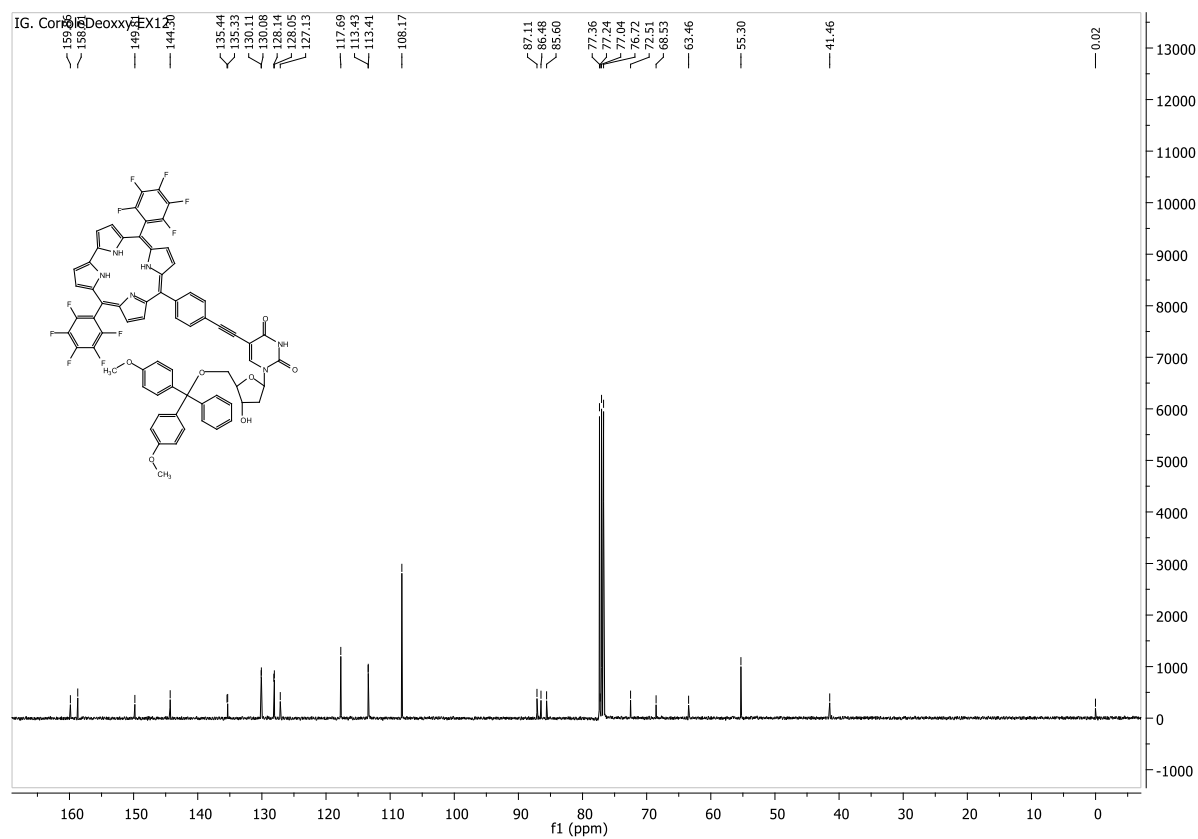
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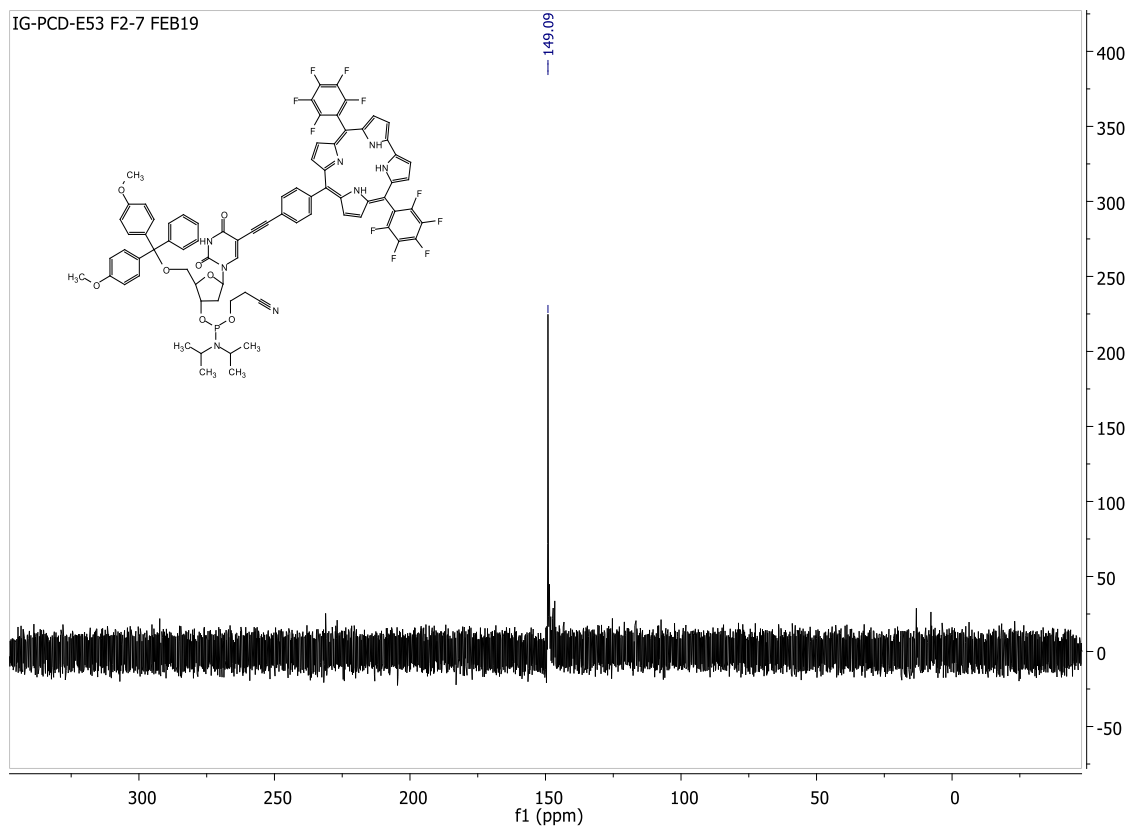
¹H-NMR spectrum of compound 3



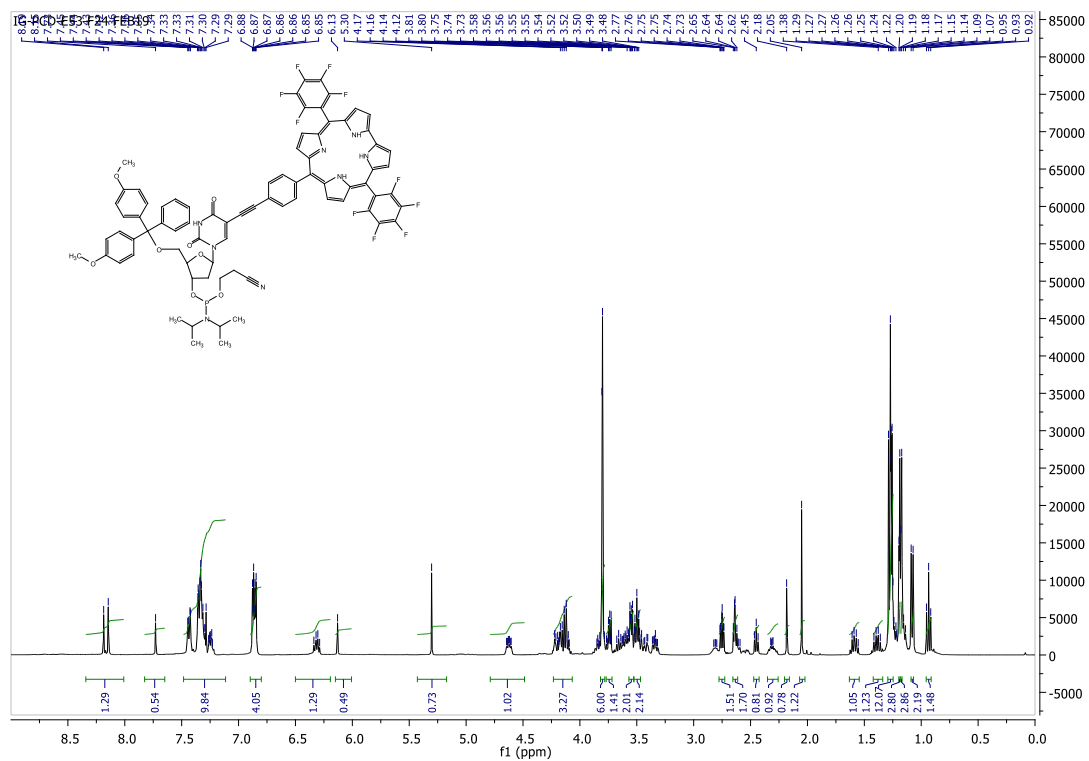
¹³C-NMR spectrum of compound 3

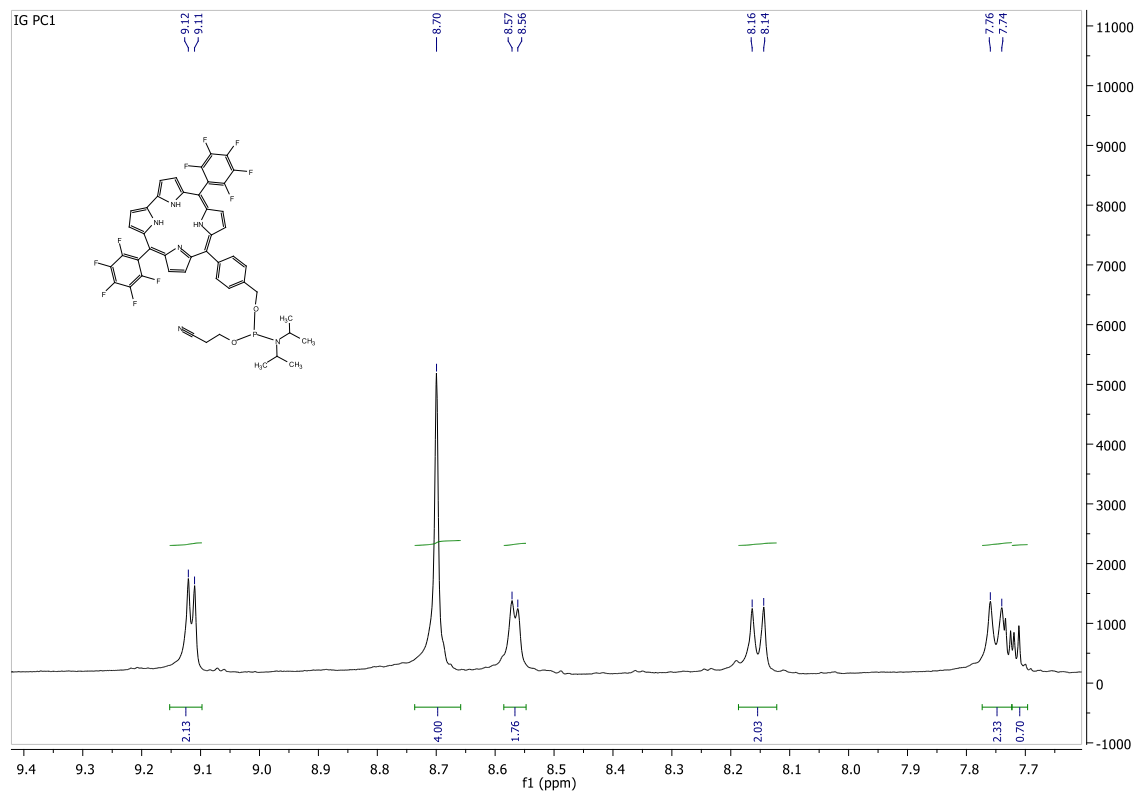


^{31}P -NMR spectrum of compound 4

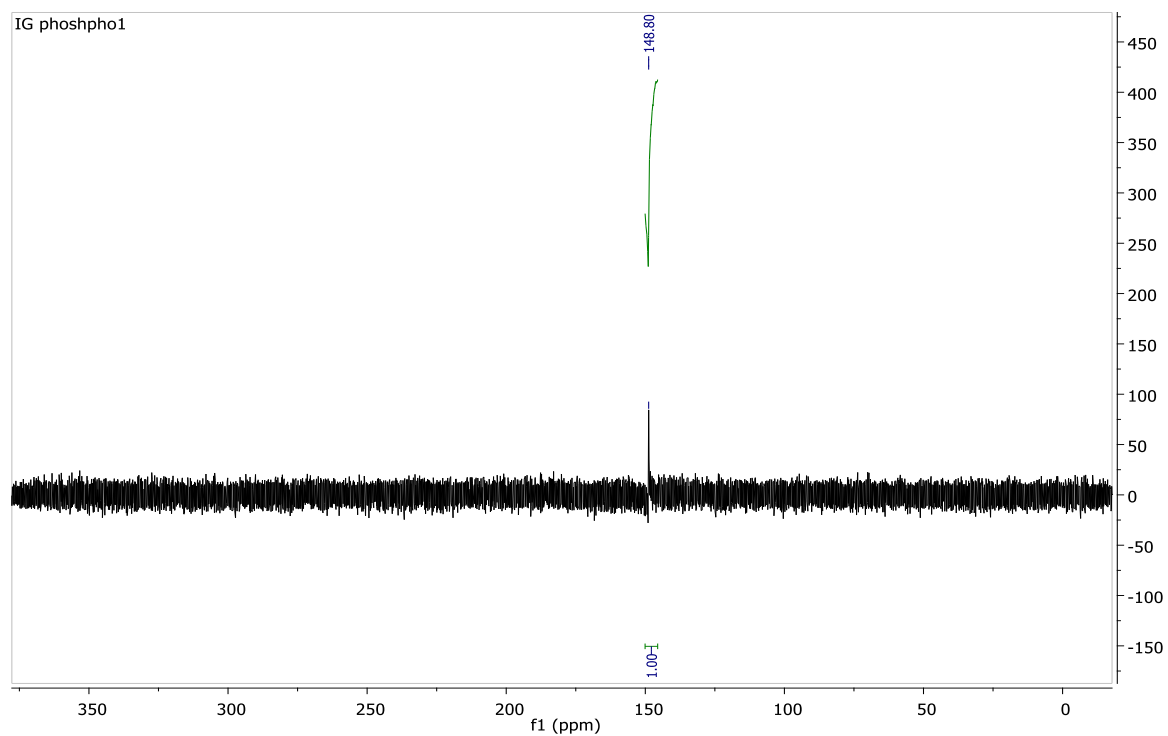


¹H-NMR spectrum of compound 4





^{31}P -NMR spectrum of compound 6

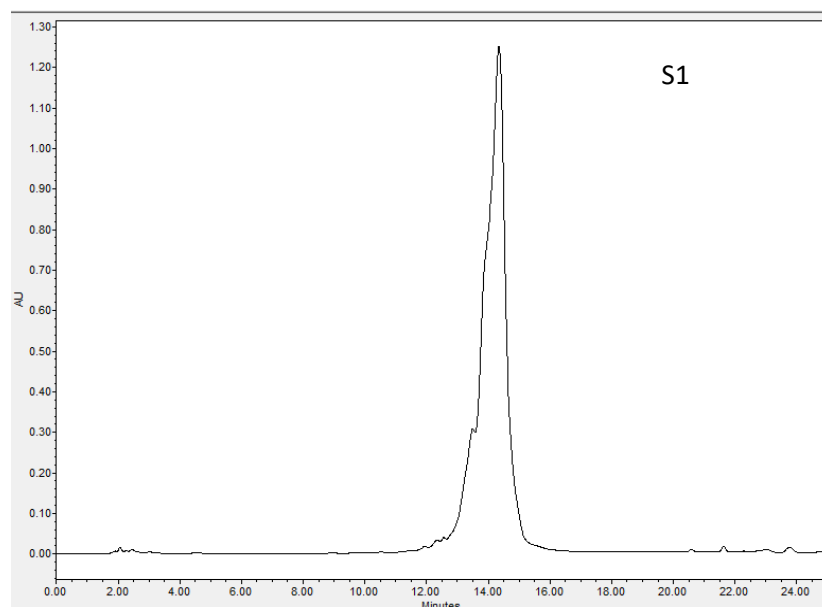


Summary of corrole-siRNA Tm and MW data

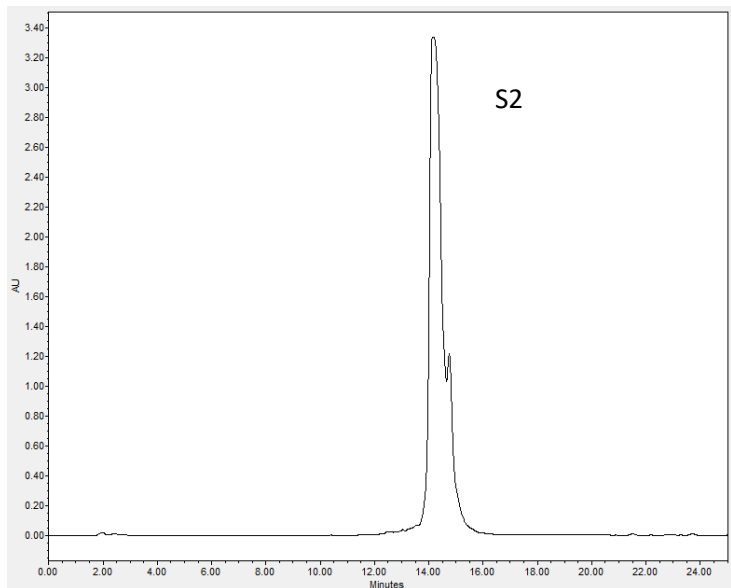
S1: Corrole-siRNA sequences targeting Firefly luciferase mRNA, melting temperatures, and the calculated and found molecular weights of the modified sequences. The top siRNA strand corresponds to the sense strand and the bottom strand is the antisense strand. **Y** corresponds to the modification based from phosphoramidite 6, and **X** corresponds to the deoxyuridine-corrole modification based from phosphoramidite 4 and **WT** is wild-type.

Modifications	Name	siRNA duplex	Tm (°C)	ΔT_m (°C)	Calc. MW of sense strand	Found MW of sense strand
N/A	WT	5'-CUUACGCUGAGUACUUCGAtt-3' 3'-ttGAAUGCACUCAUGAAGCU-5'	74	-	-	-
OH-Corrole-1	S1	5'- Y CUUACGCUGAGUACUUCGAtt-3' 3'-ttGAAUGCACUCAUGAAGCU-5'	58	-16	7400.9843	7400.2548
Alkyl-Corrole-2	S2	5'- X UUACGCUGAGUACUUCGAtt-3' 3'-ttGAAUGCACUCAUGAAGCU-5'	58	-16	7322.0061	7322.0565
Alkyl-Corrole-3	S3	5'-CUUACGCUG X GUACUUCGAtt-3' 3'-ttGAAUGCACUCAUGAAGCU-5'	60	-14	7292.9781	7292.5580
Alkyl-Corrole-4	S4	5'-CUUACGCUGAG X ACUUCGAtt-3' 3'-ttGAAUGCACUCAUGAAGCU-5'	60	-14	7320.0124	7320.7443

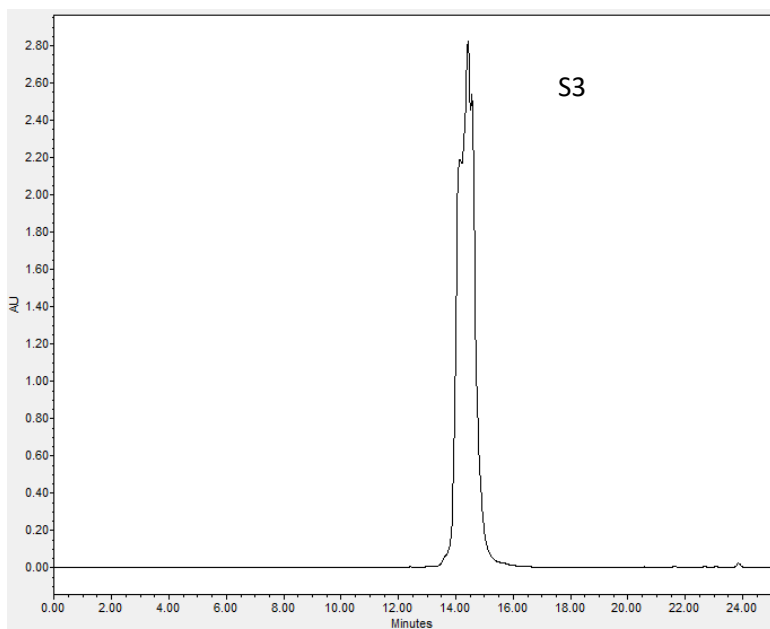
HPLC Traces of sense strand oligos of S1-S4.



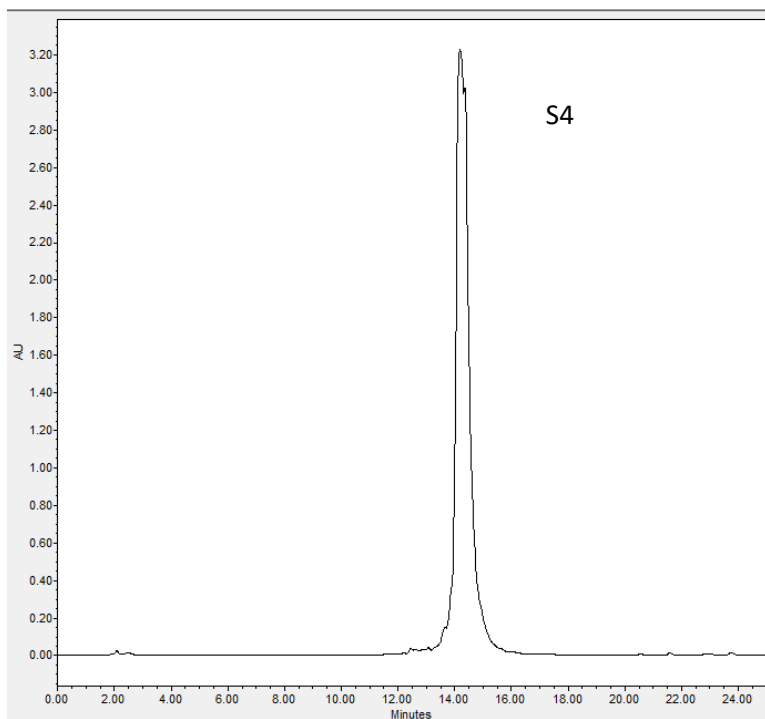
S2. Analytical HPLC spectra for the sense strand of corrole-siRNA S1.



S3. Analytical HPLC spectra for the sense strand of corrole-siRNA S2.

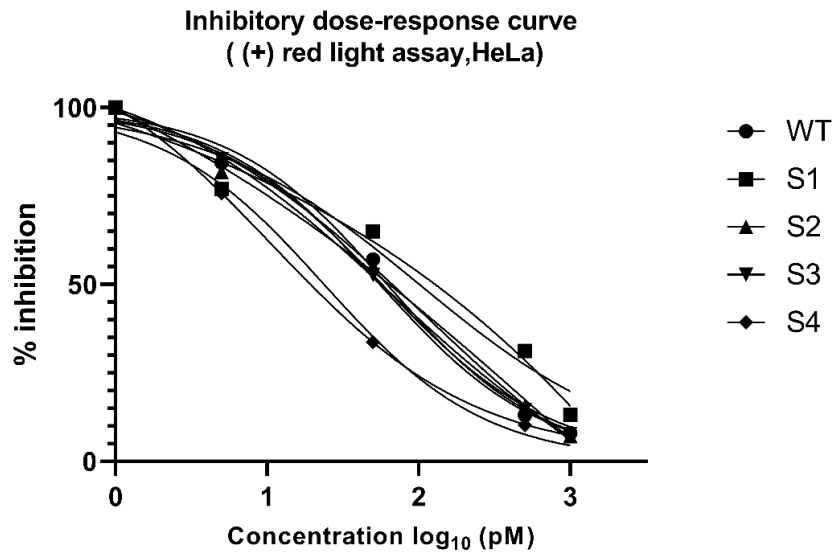


S4. Analytical HPLC spectra for the sense strand of corrole-siRNA S3.

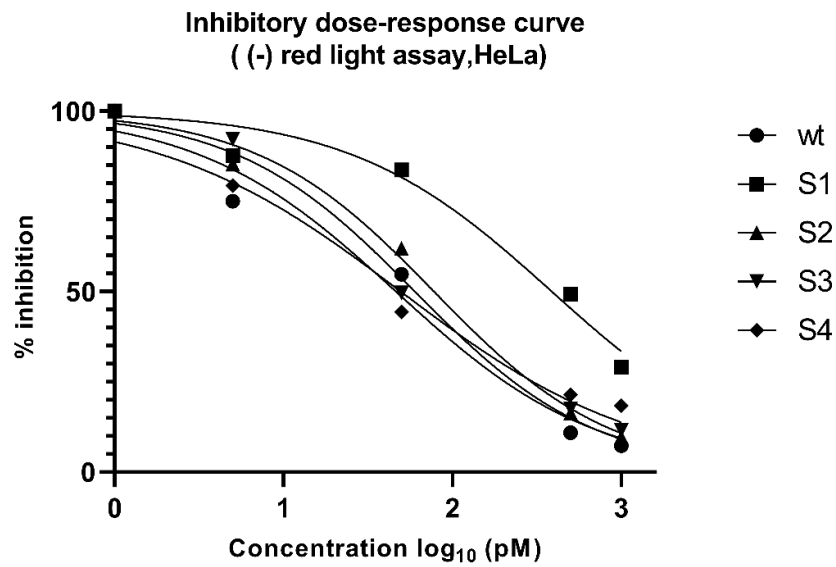


S5. Analytical HPLC spectra for the sense strand of corrole-siRNA S4.

IC₅₀ Data



S6. Inhibitory dose-response curve for corrole-siRNA and WT siRNA targeting firefly luciferase in HeLa cells irradiated with red light for 2 hours.



S7. Inhibitory dose-response curve for corrole-siRNA and WT siRNA targeting firefly luciferase in HeLa cells kept in dark.