

Supplementary Information

Cyclen-based lipidoids for mRNA delivery and immunotherapy

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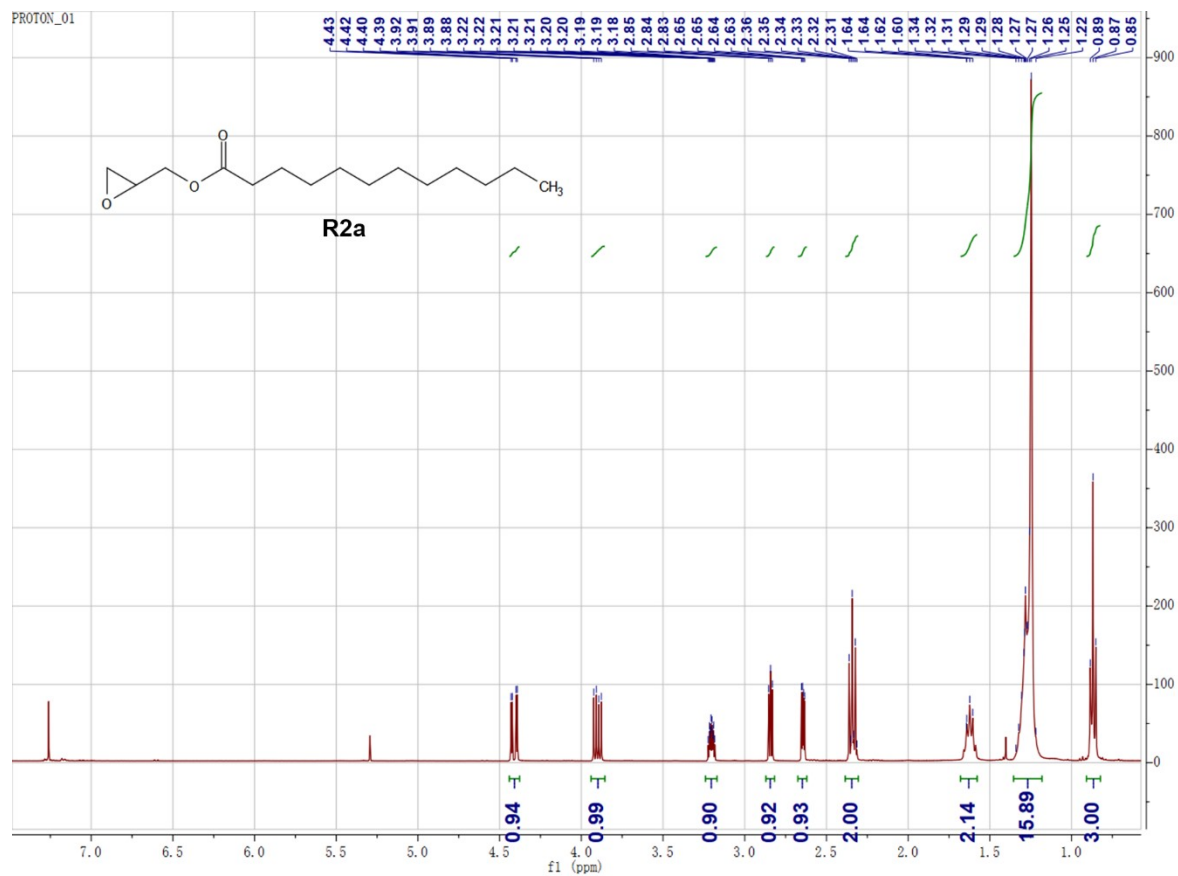
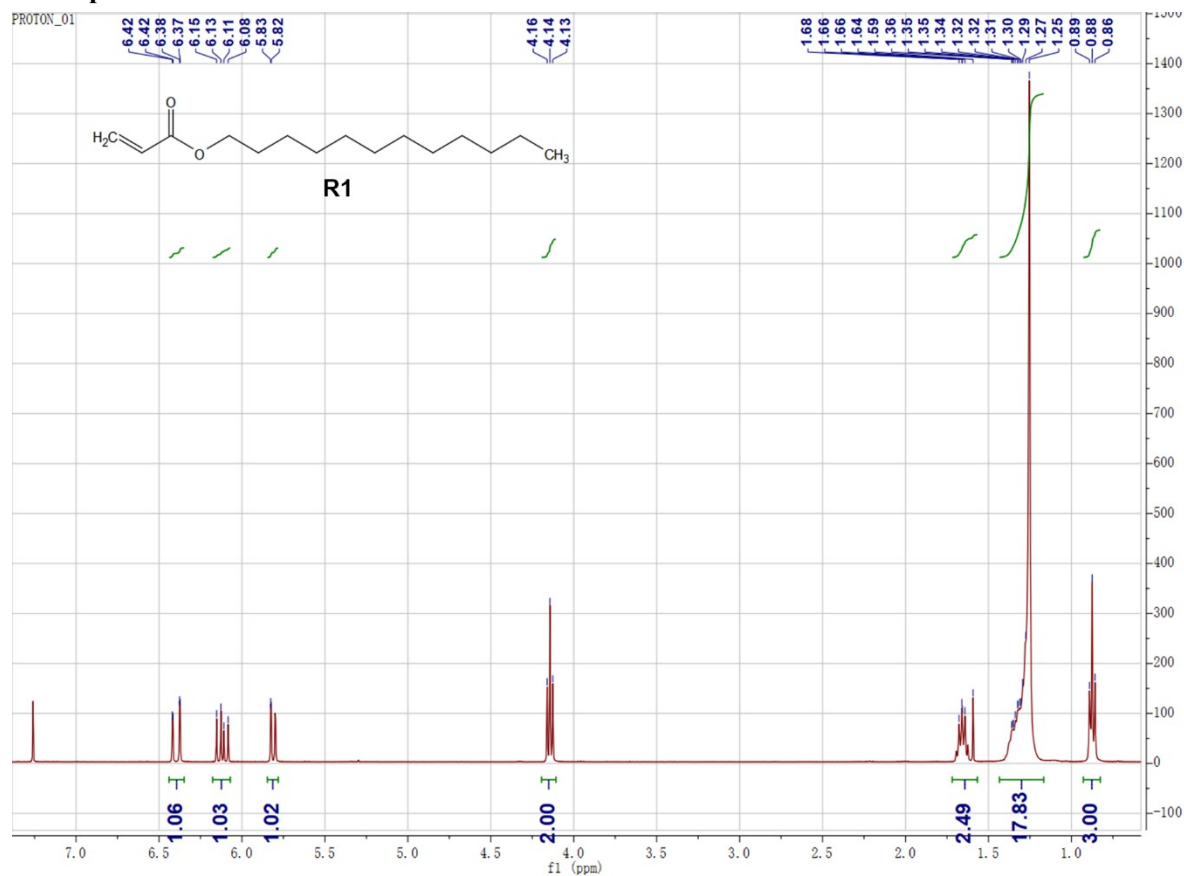
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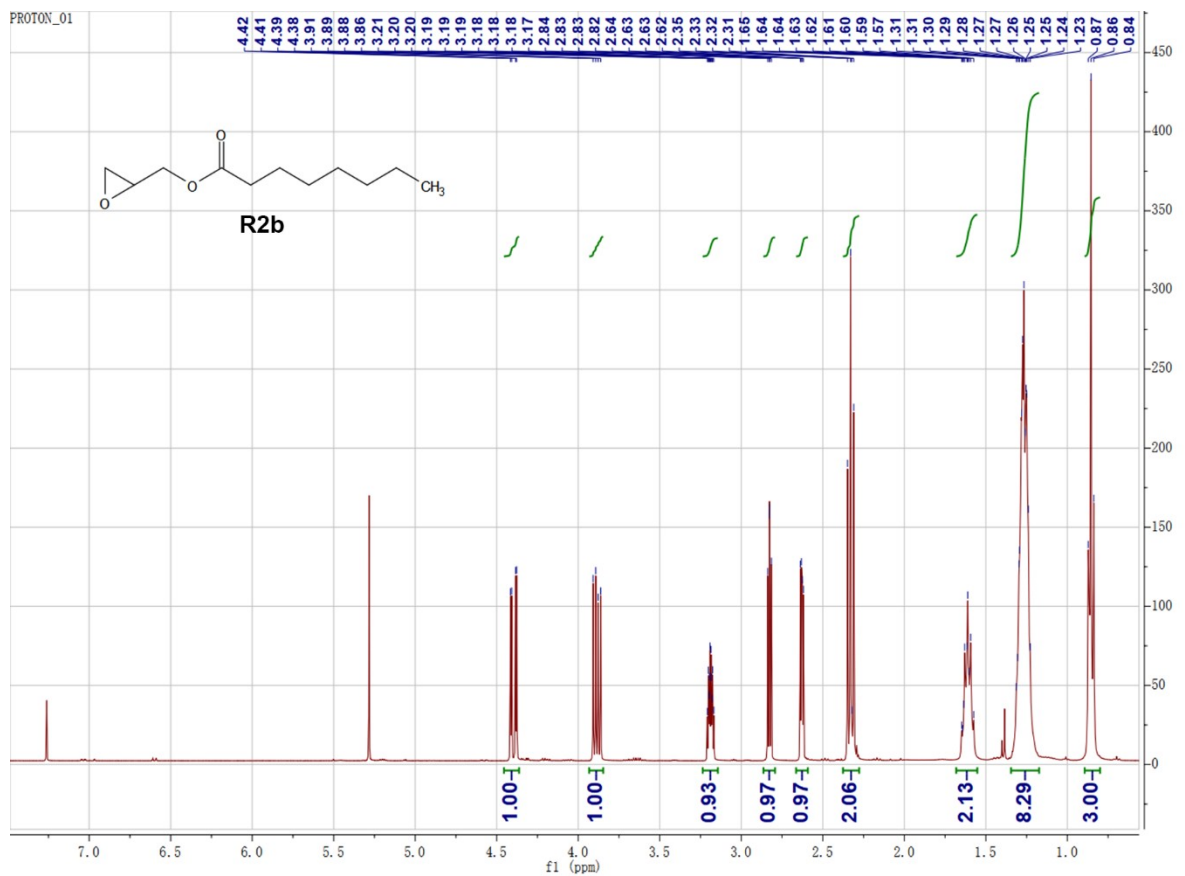
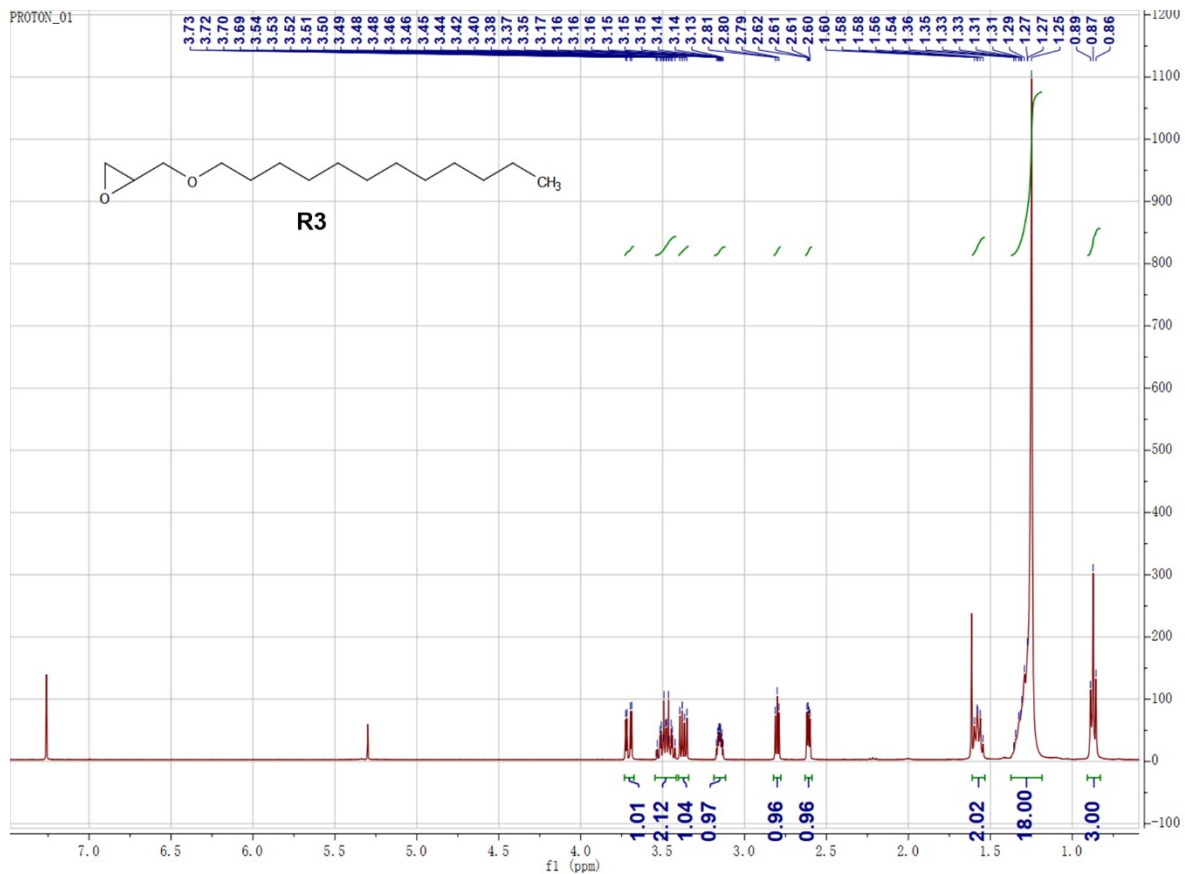
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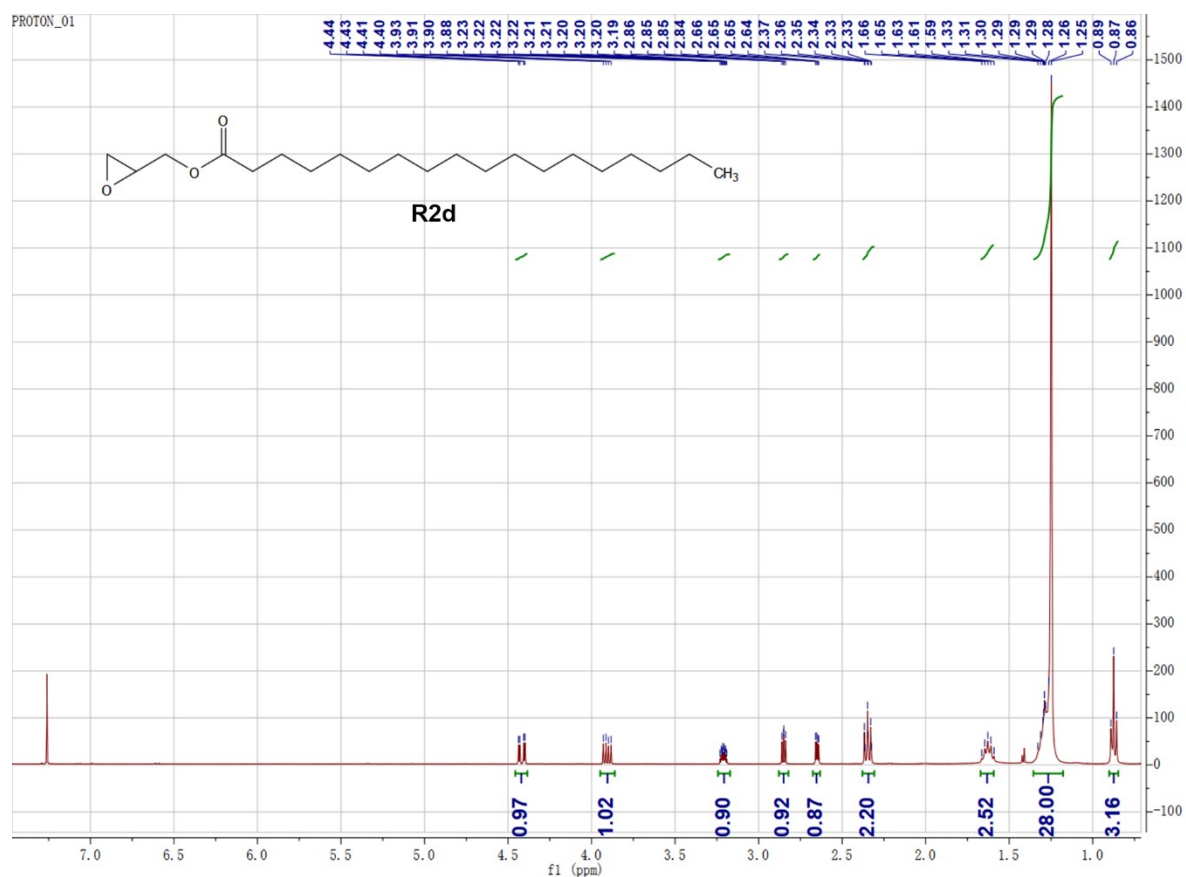
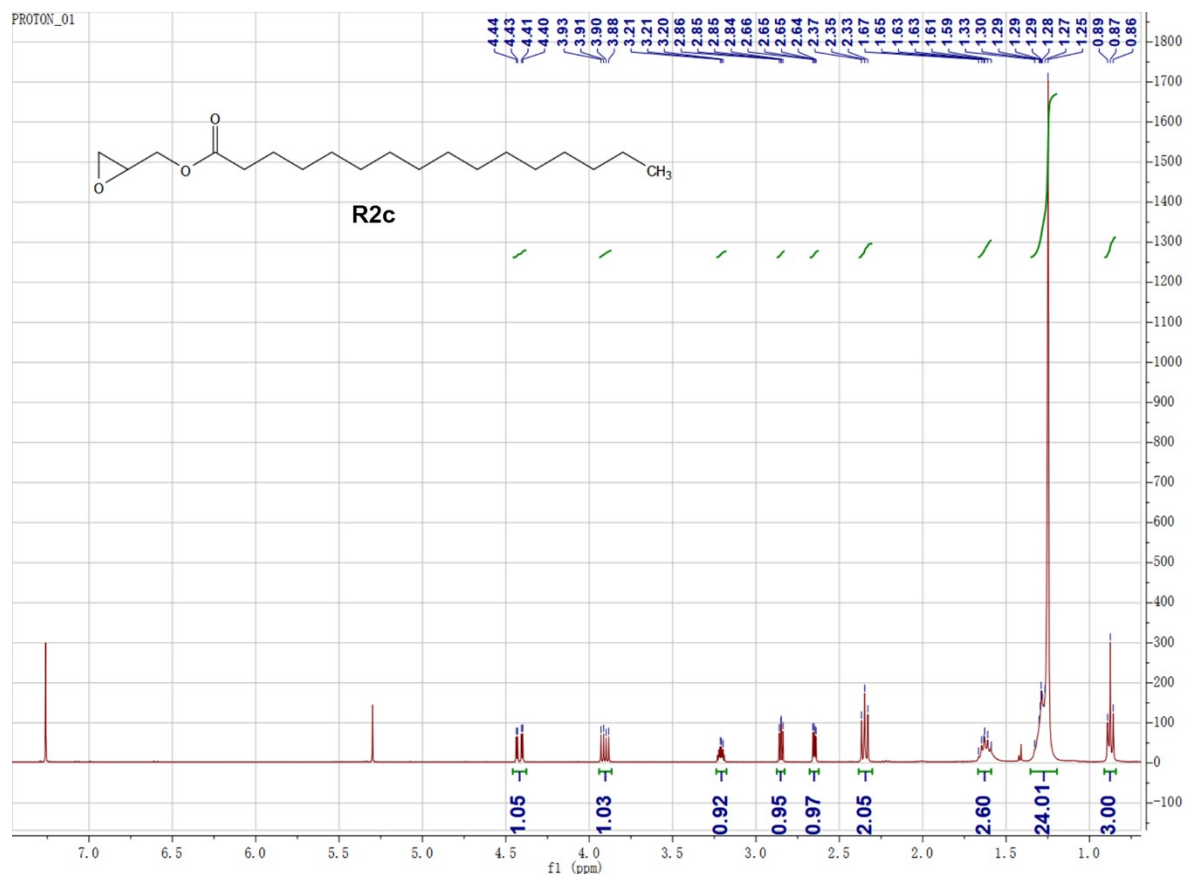
*Corresponding author: jzhang@scu.edu.cn

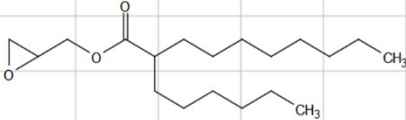
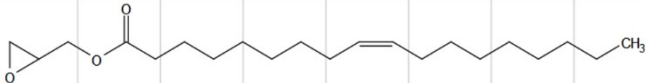
†These authors contributed equally to this work.

NMR spectra:









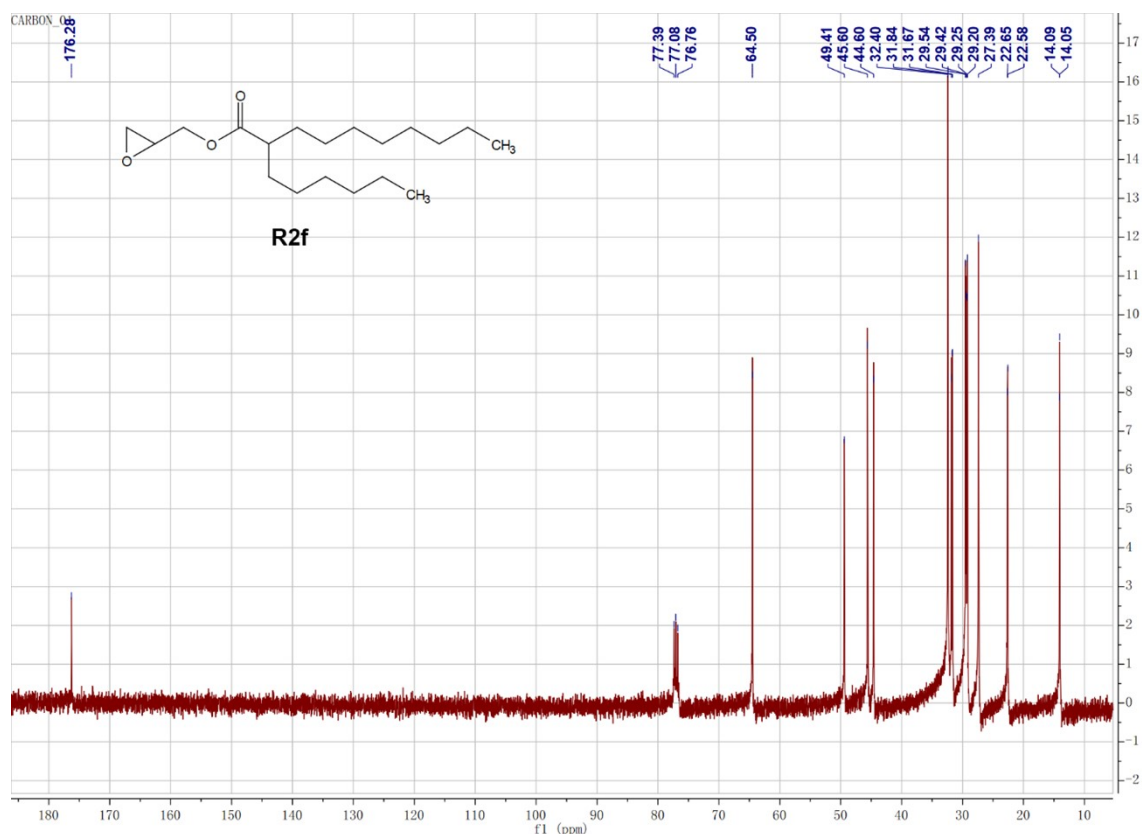


Fig. S1. NMR spectra of the precursors with hydrophobic tails.

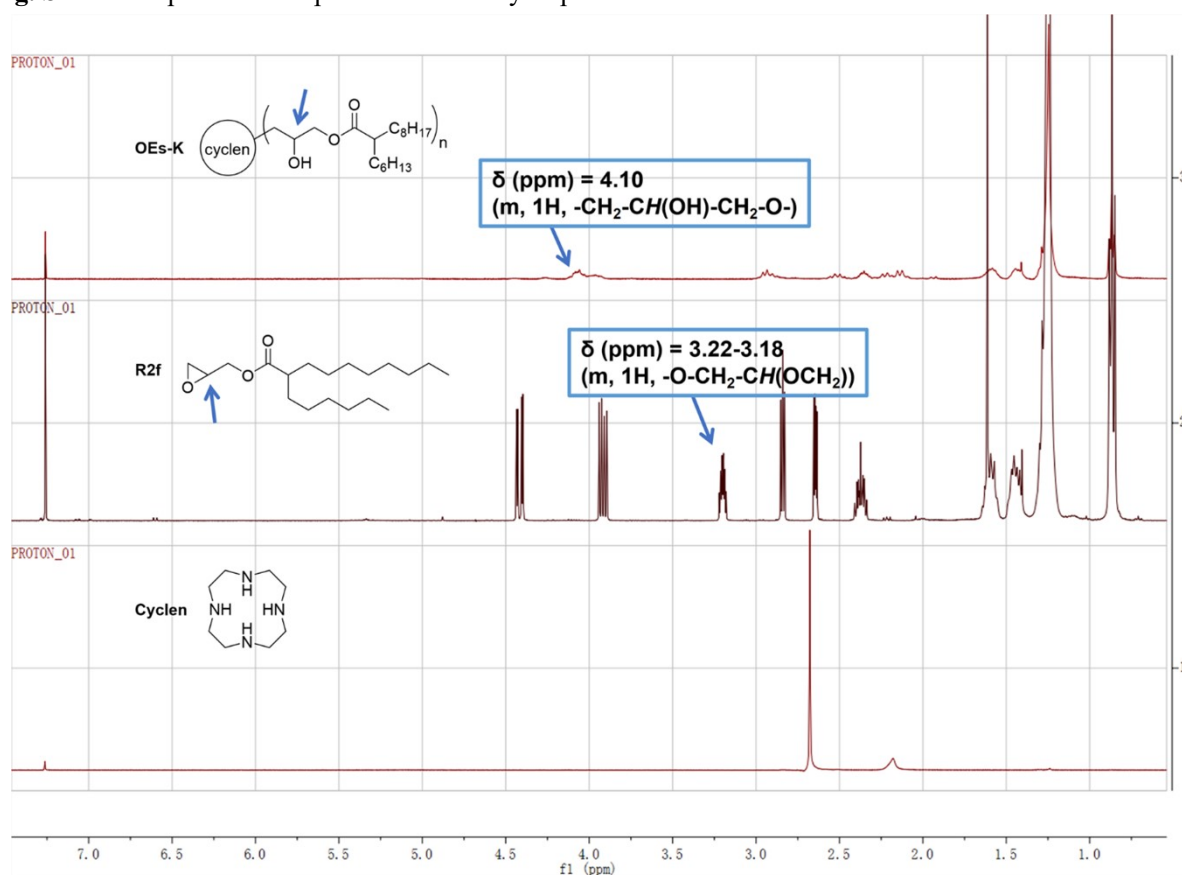
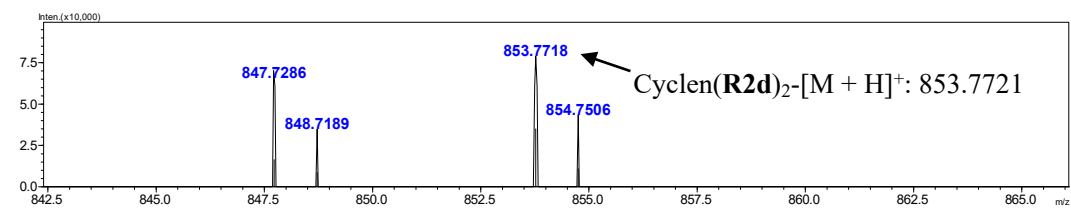
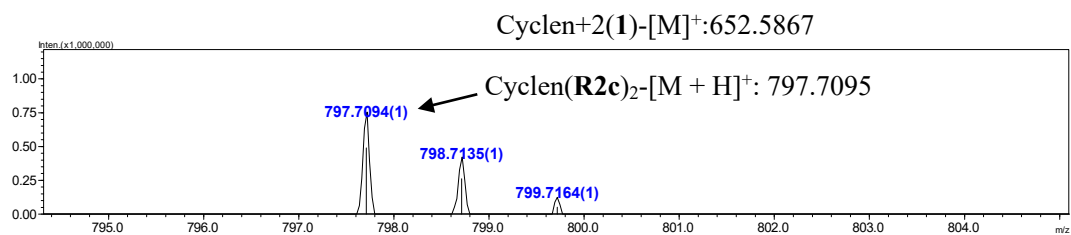
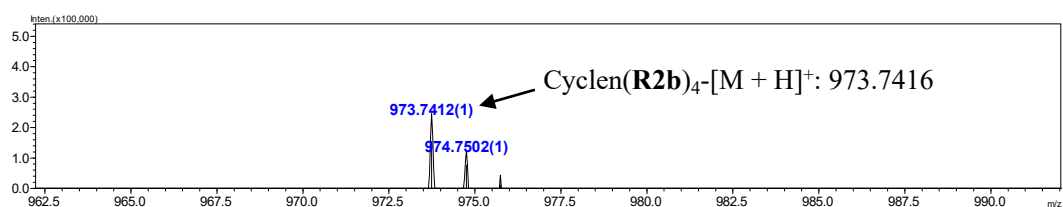
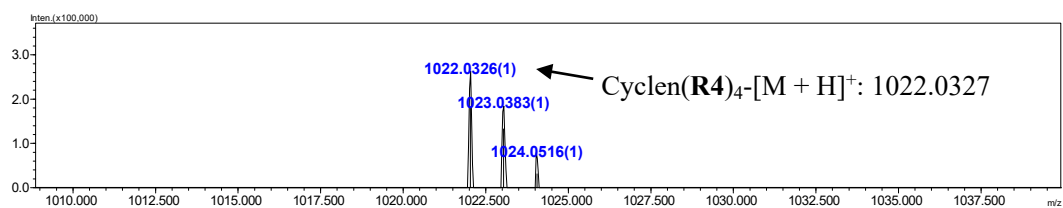
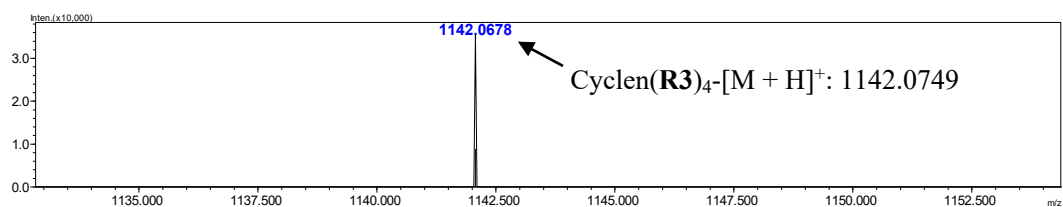
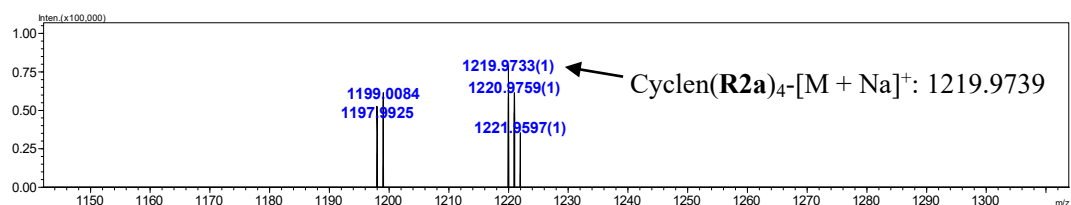
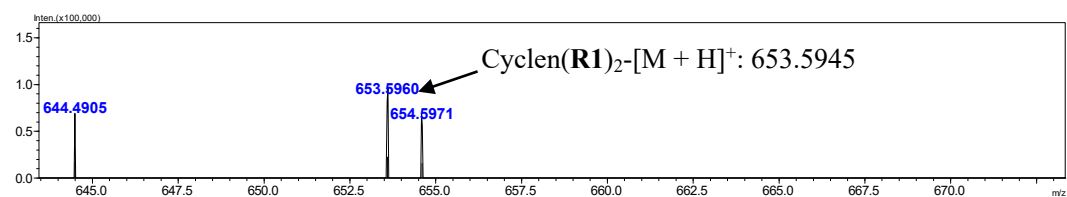


Fig. S2. ¹H NMR spectra of OEs-K, R2f and Cyclen.

HRMS spectra:



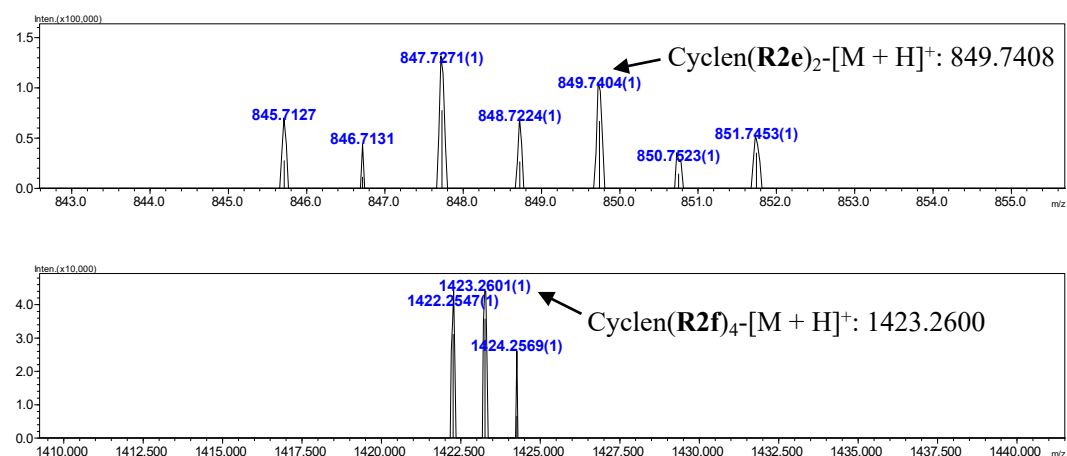


Fig. S3. HRMS spectra of nine lipids.

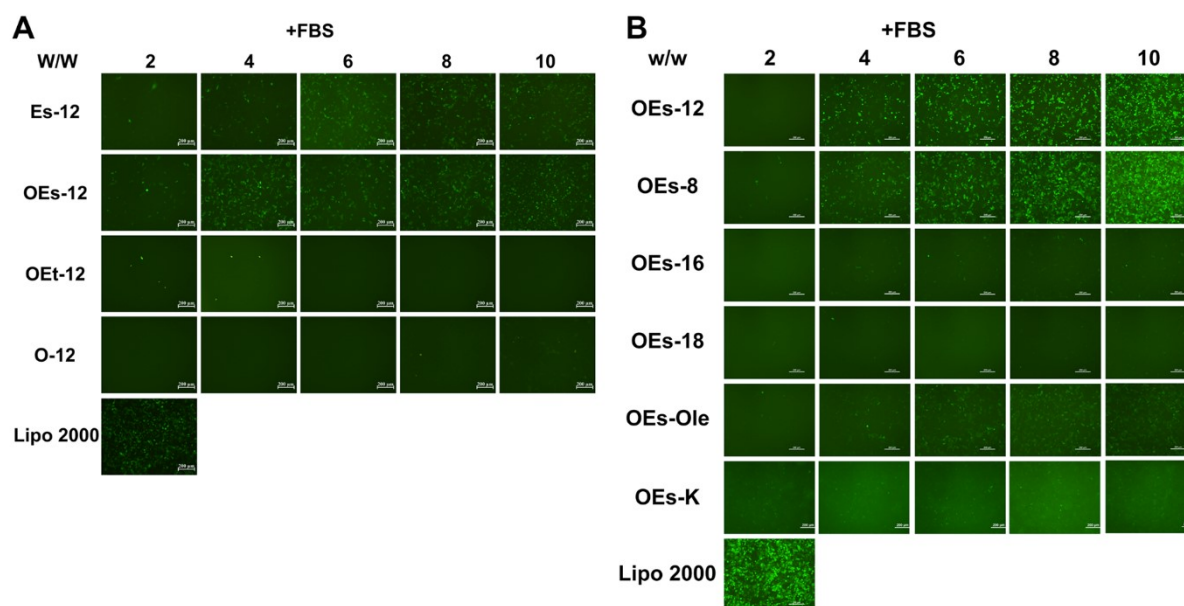


Fig. S4. Fluorescence microscopy images of A549 cells transfected by the GFP mRNA with LNPs at various w/w ratios for 12 h with 10% serum. Lipo 2000 was used as control. Scale bar: 200 μ m.

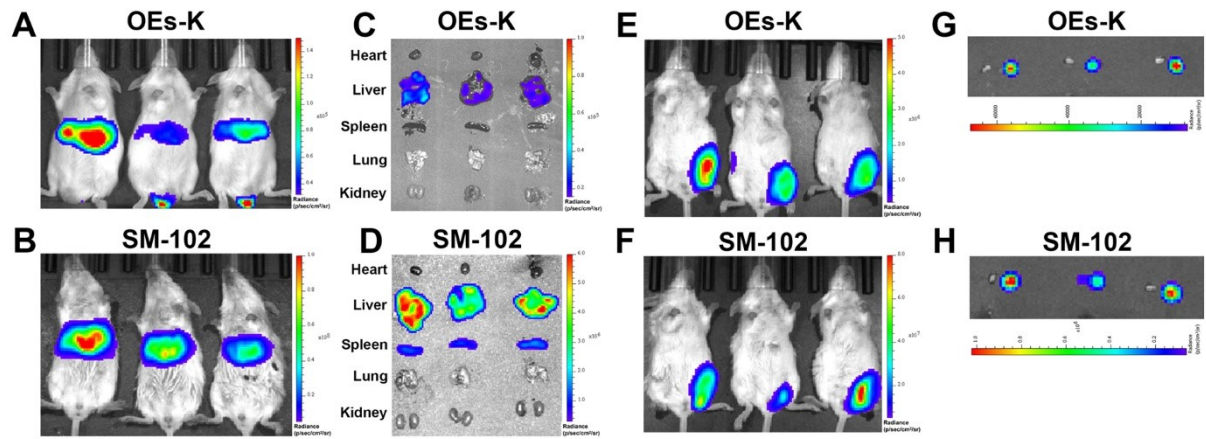


Fig. S5. Bioluminescence imaging of mice (A&B) and organs (C&D) 6 h after a single intravenous injection of **OEes-K** LNPs and SM-102 at a dose of 0.5 mg/kg mRNA. Bioluminescence imaging of mice (E&F) and lymph nodes (G&H) 24 h after a single intramuscular injection of **OEes-K** LNPs and SM-102 at a dose of 0.5 mg/kg mRNA.