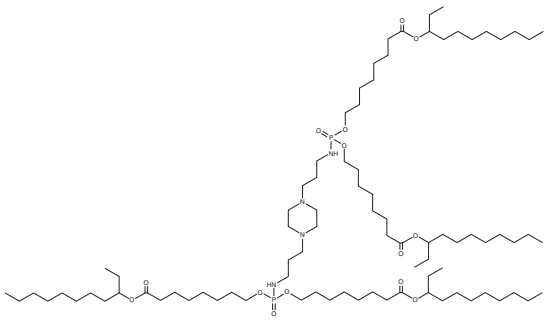
PRODUCT INFORMATION

Lipid PL40

Item No. 46017

CAS Registry No.:	3119903-62-4
Formal Name:	tetra(undecan-3-yl) 8,8',8'',8'''-((((piperazine-1,4-diylbis(propane-3,1-diyl))*bis*(azanediyl))*bis*(oxo-l5-phosphanetriyl))tetrakis(oxy))tetraoctanoate
MF:	$C_{86}H_{170}O_{14}N_4P_2$
FW:	1,546.3
Purity:	≥95%
Supplied as:	A 10 mg/ml solution in ethanol
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

Lipid PL40 is a cardiolipin-mimetic ionizable cationic lipid that has been used in the generation of lipid nanoparticles (LNPs) to deliver mRNA and circular RNA (circRNA) *in vitro* and *in vivo*.[1] LNPs containing lipid PL40 exhibit a ~2-fold increase in cellular uptake in primary T cells compared to LNPs containing ALC-0315 (Item No. 34337). Lipid PL40-containing LNPs encapsulating mouse chimeric antigen receptor mRNA targeting mouse urokinase-type plasminogen activator receptor (mCAR-uPAR) reduce liver damage and fibrotic scarring in a mouse model of liver fibrosis induced by carbon tetrachloride (CCl_4). Lipid PL40-containing, mCAR-uPAR-encapsulating LNPs also reduce symptom severity and hind paw thickness and increase T cell-mediated clearance of senescent cells in the joints in a mouse model of collagen-induced arthritis (CIA).

Reference

1. Zhang, Z., Ma, B., Li, B., *et al.* Cardiolipin-mimic lipid nanoparticles without antibody modification delivered senolytic *in vivo* CAR-T therapy for inflamm-aging. *Cell Rep. Med.* **6(7)**, 102209 (2025).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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