



Lipid 5

Cat. No.:	OB0626WX-3947
Appearance:	Liquid
Purity:	≥95%
Identity:	Confirmed by NMR, TLC, and HPLC.
Size:	10 mg; 25 mg; 50 mg; 100 mg

This product is for research use only and is not intended for diagnostic use.

Product Overview

Description	Lipid 5 is an ionizable cationic amino lipid possessing a defined pKa of 6.56, engineered as a principal matrix component for the assembly of responsive transcript delivery vectors. The precise chemical structure optimizes low-pH oligonucleotide complexation and subsequent membrane fusion within acidic compartments, driving highly efficient endosomal escape to significantly elevate circulating levels of target secretory proteins <i>in vivo</i> .
Formulation	Ethanol solution (100 mg/mL)
Synonyms	8-[(2-hydroxyethyl)[8-(nonyloxy)-8-oxooctyl]amino]octanoic acid, 1-octylnonyl ester; LIPIDV 004; Heptadecan-9-yl 8-[(2-hydroxyethyl)(8-(nonyloxy)-8-oxooctyl)amino]octanoate; 1-Octylnonyl 8-[(2-hydroxyethyl)[8-(nonyloxy)-8-oxooctyl]amino]octanoate; nonyl 8-[(8-heptadecan-9-yloxy-8-octyl)-(2-hydroxyethyl)amino]octanoate; Octanoic acid, 8-[(2-hydroxyethyl)[8-(nonyloxy)-8-oxooctyl]amino]-, 1-octylnonyl ester; 2089251-33-0
CAS No.	2089251-33-0
Compound CID	126697428
Formula	C ₄₄ H ₈₇ NO ₅
Formula Weight	710.2

Specification

Solubility in Ethanol	100 mg/mL
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IUPAC Name	nonyl 8-[(8-heptadecan-9-yloxy-8-oxooctyl)-(2-hydroxyethyl)amino]octanoate
InChI	InChI=1S/C44H87NO5/c1-4-7-10-13-16-25-32-41-49-43(47)35-28-21-17-23-30-37-45(39-40-46)38-31-24-18-22-29-36-44(48)50-42(33-26-19-14-11-8-5-2)34-27-20-15-12-9-6-3/h42,46H,4-41H2,1-3H3
InChI Key	ABCVHPIKBGRCJA-UHFFFAOYSA-N
Canonical SMILES	<chem>OCCN(CCCCCCCC(OC(CCCCCCCC)CCCCCCC)=O)CCCCCCCC(OCCCCCCCCC)=O</chem>
Stability	1 year
Storage	Storage at -20°C.
Applications	Lipid 5 serves as a synthetic ionizable lipid for lipid nanoparticle formulation and nucleic acid delivery studies. It supports formulation optimization, comparative screening of delivery lipids, and investigation of lipid structural features associated with nanoparticle performance.