



Lipid 1 HG3

Cat. No.:	OB0626WX-3685
Appearance:	Liquid
Purity:	≥95%
Identity:	Confirmed by NMR, TLC, and HPLC.
Size:	5 mg; 10 mg; 25 mg; 50 mg

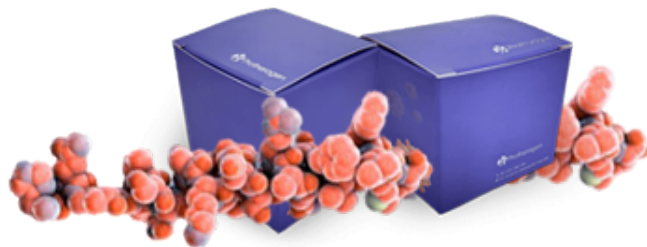
This product is for research use only and is not intended for diagnostic use.

Product Overview

Description	Lipid 1 HG3 is an ionizable cationic lipid developed as a high-performance structural component for engineering responsive lipid nanoparticles. The precise protonation dynamics of its amine headgroup are tailored to coordinate the high-density encapsulation of large, non-viral closed-end DNA architectures, serving as a critical discovery tool for optimizing the structural stability and systemic delivery mechanics of advanced non-viral genetic platforms.
Formulation	Ethanol solution (50 mg/mL)
Synonyms	9-[4-(dimethylamino)-1-oxobutoxy]-hexadecanoic acid, 1-decylundecyl ester; Lipid 1 Head Group 3; 2758820-82-3
CAS No.	2758820-82-3
Compound CID	166117805
Formula	$C_{43}H_{85}NO_4$
Formula Weight	680.1

Specification

Solubility in Other Solvents	Soluble in chloroform.
IUPAC Name	henicosan-11-yl 9-[4-(dimethylamino)butanoyloxy]hexadecanoate
InChI	InChI=1S/C43H85NO4/c1-6-9-12-15-17-19-23-28-34-40(35-29-24-20-18-16-13-10-7-2)47-42(45)37-31-26-21-25-30-36-41(33-27-22-14-11-8-3)48-43(46)38-32-39-44(4)5/h40-41H,6-39H2,1-5H3

**InChI Key**

QNZXZCZYTQCHTI-UHFFFAOYSA-N

Canonical SMILESO=C(OC(CCCCCC)CCCCCCCC(OC(CCCCCCCCCC)CCCCCCCCC)=O)CCCN(C)C**Stability**

1 year

Storage

Storage at -20°C.

Applications

Lipid 1 HG3 is utilized in lipid nanoparticle research to investigate functional lipid components and their contribution to formulation properties. It supports studies focused on lipid composition optimization, nanoparticle design, and evaluation of structure-related characteristics of lipid-based delivery systems.