



Lipid catechol

Cat. No.:	OB0626WX-3852
Appearance:	Solid
Purity:	≥95%
Identity:	Confirmed by NMR, TLC, and HPLC.
Size:	1 mg; 5 mg; 10 mg; 25 mg

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

Product Overview

Description	Lipid catechol is a multi-functional amphiphilic lipid incorporating an alpha-amino phosphonate center, dual 14-carbon acyl chains, and a reactive catechol head group designed to form reversible covalent bonds with boronic acid derivatives. This chemical pairing yields stable prodrug nanoassemblies that exploit localized microenvironments to disrupt established bacterial biofilms, eradicate persistent pathogens, and suppress mammary tumor volume while improving overall survival profiles.
Synonyms	ditetradecyl (((2-(diethylamino)ethyl)amino)(3,4-dihydroxyphenyl)methyl)phosphonate; 2930813-52-6
CAS No.	2930813-52-6
Compound CID	171042958
Formula	C ₄₁ H ₇₉ N ₂ O ₅ P
Formula Weight	711.1

Specification

Solubility in DMSO	1 mg/mL
Solubility in Ethanol	1 mg/mL
IUPAC Name	4-[[2-(diethylamino)ethylamino]-di(tetradecoxy)phosphorylmethyl]benzene-1,2-diol



InChI	InChI=1S/C41H79N2O5P/c1-5-9-11-13-15-17-19-21-23-25-27-29-35-47-49(46,48-36-30-28-26-24-22-20-18-16-14-12-10-6-2)41(42-33-34-43(7-3)8-4)38-31-32-39(44)40(45)37-38/h31-32,37,41-42,44-45H,5-30,33-36H2,1-4H3
InChI Key	FBHHXUJQQWKTRI-UHFFFAOYSA-N
Canonical SMILES	<chem>OC1=CC=C(C(C(P(OCCCCCCCCCCCCC)(OCCCCCCCCCCCCC)=O)NCCN(CC)CC)C=C1O</chem>
Stability	1 year
Storage	Storage at -20°C.
Applications	Lipid catechol serves as a synthetic ionizable lipid for investigating lipid nan oparticle formulation and nucleic acid delivery. It supports formulation optimiz ation, structure-activity relationship studies, nanoparticle physicochemical cha racterization, and evaluation of lipid-mediated intracellular delivery mechanism s.