



SM-102 N-oxide

Cat. No.:	OB0626WX-3829
Appearance:	Liquid
Purity:	≥98%
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	SM-102 N-oxide is a structurally defined, oxygenated tertiary amine derivative that serves as a primary reference standard and critical analytical marker for identifying potential process-related or degradative impurities in commercial preparations of the ionizable lipid SM-102. This molecule features a localized N-oxide transformation at the core amine center, making it essential for validating high-performance liquid chromatography and mass spectrometry purity profiles.
Formulation	Ethanol solution (5 mg/mL)
Synonyms	8-(heptadecan-9-yloxy)-N-(2-hydroxyethyl)-8-oxo-N-(6-oxo-6-(undecyloxy)hexyl)octan-1-amine oxide; CAY10779 N-oxide; Lipid H N-oxide; LNP-102 N-oxide; 2824195-50 -6
CAS No.	2824195-50-6
Compound CID	170367058
Formula	$C_{44}H_{87}NO_6$
Formula Weight	726.2

Specification

Solubility in Ethanol	5 mg/mL
IUPAC Name	8-heptadecan-9-yloxy-N-(2-hydroxyethyl)-8-oxo-N-(6-oxo-6-undecoxyhexyl)octan-1-amine oxide



InChI	InChI=1S/C44H87NO6/c1-4-7-10-13-16-17-18-24-32-41-50-43(47)35-29-25-31-38-45(49,39-40-46)37-30-23-19-22-28-36-44(48)51-42(33-26-20-14-11-8-5-2)34-27-21-15-12-9-6-3/h42,46H,4-41H2,1-3H3
InChI Key	YNUITBCJKUWYSR-UHFFFAOYSA-N
Canonical SMILES	<chem>OCC[N+](CCCCCCCC(OC(CCCCCCCC)CCCCCCCC)=O)([O-])CCCCC(OCCCCCCCCCCCC)=O</chem>
Stability	1 year
Storage	Storage at -20°C.
Applications	SM-102 N-oxide serves as an analytical reference compound for the characterization of SM-102 oxidative degradation products. It supports impurity analysis, stability assessment, LC-MS/MS method development, and quality evaluation of ionizable lipid formulations.