



IM21.7c

Cat. No.:	OB0626WX-3752
Appearance:	Solid
Purity:	≥95%
Identity:	Confirmed by NMR and HPLC.
Size:	5 mg; 10 mg; 20 mg

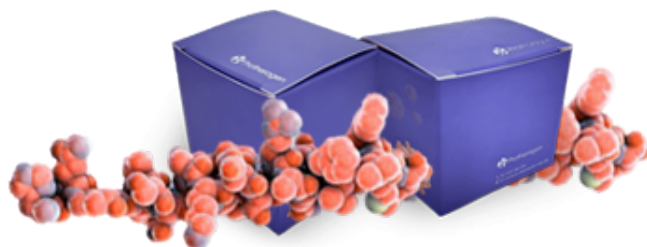
This product is for research use only and is not intended for diagnostic use.

Product Overview

Description	IM21.7c is an amphiphilic cationic lipid engineered to serve as a structural assembly core for nucleic acid-loaded lipid nanoparticles. Upon systemic administration, the unique molecular architecture and charge distribution of this lipid matrix alter typical biodistribution dynamics, causing self-assembled delivery vehicles to bypass primary hepatic clearance and accumulate selectively within respiratory and splenic tissue compartments.
Synonyms	1-butyl-3-[1-(3,7-dimethyloctyl)-6-octadecyltetraacosyl]-1H-imidazolium, monochloride; LipidBrick IM21.7c; IM217c; 2416939-42-7; 1-butyl-3-(2,6-dimethyl-14-octadecyldotriacontan-9-yl)-1H-imidazol-3-ium chloride; 3-butyl-1-(2,6-dimethyl-14-octadecyldotriacontan-9-yl)-1H-imidazol-3-ium chloride
CAS No.	2416939-42-7
Compound CID	146520984
Formula	$C_{59}H_{117}N_2 \cdot Cl$
Formula Weight	890

Specification

Solubility in DMSO	0.1-1 mg/mL
Solubility in Ethanol	1-10 mg/mL
Solubility in Other Solvents	PBS: 0.1-1 mg/mL
IUPAC Name	1-butyl-3-(2,6-dimethyl-14-octadecyldotriacontan-9-yl)imidazol-1-ium chloride



InChI	InChI=1S/C59H117N2.ClH/c1-7-10-13-15-17-19-21-23-25-27-29-31-33-35-37-39-46-58(47-40-38-36-34-32-30-28-26-24-22-20-18-16-14-11-8-2)48-41-42-49-59(51-50-57(6)45-43-44-56(4)5)61-54-53-60(55-61)52-12-9-3;/h53-59H,7-52H2,1-6H3;1H/q+1;/p-1
InChI Key	USLNWJNSKRHZMZ-UHFFFAOYSA-M
Canonical SMILES	CC(CCCC(C)C)CCC([N+](=CN(CCCC)C=C1)CCCC(CCCCCCCCCCCCCCCCCC)CCCCCCCCCCCCCCCC.[Cl-]
Stability	1 year
Storage	Storage at -20°C.
Applications	IM21.7c is used in lipid-based delivery research as a functional lipid material for investigating nanoparticle formation, lipid organization, and formulation optimization. It supports studies focused on lipid composition screening, characterization of delivery systems, and evaluation of lipid-dependent formulation properties.