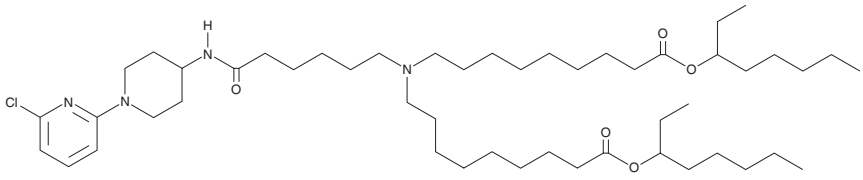
PRODUCT INFORMATION

Lipid S4

Item No. 46729

Formal Name:	di(octan-3-yl) 9,9'-((6-((1-(6-chloropyridin-2-yl) piperidin-4-yl)amino)-6-oxohexyl) azanediyl)dinonanoate
MF:	$C_{50}H_{89}ClN_4O_5$
FW:	861.7
Purity:	≥98%
Supplied as:	A 10 mg/ml solution in ethanol
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

Lipid S4 is an ionizable cationic lipid that has been used in the generation of lipid nanoparticles (LNPs) for the delivery of mRNA *in vitro* and *in vivo*.[1] It contains SR-527227 (Item No. 35499), a ligand for the serotonin (5-HT) receptor subtype 5-HT_3, allowing lipid S4-based LNPs to be targeted to the brain. LNPs containing lipid S4 accumulate primarily in neurons, astrocytes, microglia, and brain capillary endothelial cells (BCECs) in mice. Lipid S4-containing LNPs encapsulating mRNA encoding a modified form of IL-12, which contains a portion of the IL-12 receptor *via* a matrix metalloproteinase-cleavable linker, reduce tumor growth and increase survival in an orthotopic mouse model of glioblastoma.

Reference

1. Cao, D., Hou, X., Wang, C., *et al*. Lipid nanoparticles for mRNA delivery in brain via systemic administration. *Sci. Adv.* **11(33)**, eadw0730 (2025).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 09/21/2026

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM