

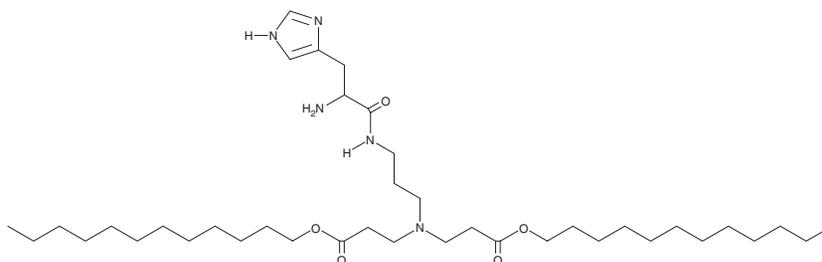
PRODUCT INFORMATION



O12-D3-I3

Item No. 41385

CAS Registry No.: 3041009-08-6
Formal Name: didodecyl 3,3'-((3-(2-amino-3-(1H-imidazol-4-yl)propanamido)propyl)azanediyl)dipropionate
MF: C₃₉H₇₃N₅O₅
FW: 692.0
Purity: ≥95%
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

O12-D3-I3 is an ionizable cationic lipid ($pK_a = 6.39$) that has been used in the generation of lipid nanoparticles (LNPs) for siRNA delivery *in vitro* and *in vivo*.¹ LNPs containing O12-D3-I3 and encapsulating ferrocene and siRNA targeting nuclear factor erythroid 2-related factor 2 (Nrf2) or the system x_c^- cystine/glutamate transporter decrease viability of HepG2 hepatocellular carcinoma cells. LNPs containing O12-D3-I3 and an mRNA reporter selectively accumulate in the tumor and liver over the lungs, kidneys, spleen, and heart in an MCF-7 breast cancer mouse xenograft model. LNPs containing O12-D3-I3 and encapsulating ferrocene and either Nrf2-targeting siRNA or system x_c^- cystine/glutamate transporter-targeting siRNA reduce tumor growth and volume in an MCF-7 mouse xenograft model. LNPs containing O12-D3-I3 and encapsulating siRNA targeting Factor VII decrease hepatocyte Factor VII mRNA levels in mice.

Reference

1. Liu, Y., He, F., Chen, L., *et al.* Imidazolyl lipids enhanced LNP endosomal escape for ferroptosis RNAi treatment of cancer. *Small* **20(40)**, e2402362 (2024).

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.

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