

Product Data Sheet

Product Name: O12-D3-I3

Cat. No.: GC92048

Chemical Properties

Cas. No.

Chemical Name didodecyl 3,3'-((3-(2-amino-3-(1H-imidazol-4-yl)propanamido)propyl)azanediyl)dipropionate

SMILES O=C(NCCCCN(CCC(OCCCCCCCCCCCCC)=O)CCC(OCCCCCCCCCCCCC)=O)C(N)CC1=CNC=N1

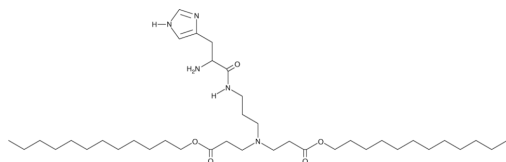
Formula $C_{39}H_{73}N_5O_5$ M.Wt 692

Solubility Ethanol: Soluble: ≥ 10 mg/ml Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

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

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

hepatocyte Factor VII mRNA levels in mice.

References:

[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).

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA