

PRODUCT INFORMATION



Lipid 12T-O14

Item No. 41946

Formal Name: tetradecyl 3-((4-((4-decylphenyl)amino)-4-iminobutyl)thio)propanoate

MF: C₃₇H₆₆N₂O₂S

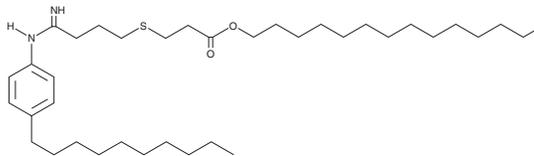
FW: 603.0

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥2 years



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

Laboratory Procedures

Lipid 12T-O14 is supplied as a solid. A stock solution may be made by dissolving the lipid 12T-O14 in the solvent of choice, which should be purged with an inert gas. Lipid 12T-O14 is slightly soluble (0.1-1 mg/ml) in ethanol and methanol.

Description

Lipid 12T-O14 is an amidine-incorporated degradable (AID) lipid ($pK_a = 8.15$) that has been used in the generation of lipid nanoparticles (LNPs) for the delivery of siRNA and mRNA *in vitro* or *in vivo*.¹ LNPs containing lipid 12T-O14 and encapsulating GFP-targeting siRNA reduce GFP levels in HepG2-GFP cells. Intramuscular delivery of LNPs containing lipid 12T-O14 and encapsulating severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) spike-encoding mRNA increases anti-SARS-CoV-2 spike protein IgG titers in mice in a prime and boost immunization regimen. LNPs containing lipid 12T-O14 accumulate in the liver, but LNPs containing both lipid 12T-O14 and MC3 (DLin-MC3-DMA; Item No. 34364) can be tuned to target the lungs or the spleen.

Reference

1. Han, X., Alameh, M.G., Gong, N., *et al.* Fast and facile synthesis of amidine-incorporated degradable lipids for versatile mRNA delivery *in vivo*. *Nat. Chem.* **16**(10), 1687-1697 (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.

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