

Certificate of Analysis

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Product Name: DOTAP

Catalog No.: 7179

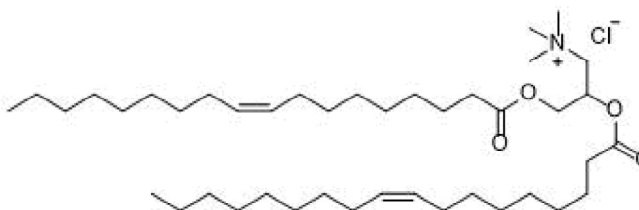
Batch No.: 1

CAS Number: 132172-61-3

IUPAC Name: *N,N,N*-Trimethyl-2,3-bis(oleoyloxy)propan-1-aminium chloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄₂H₈₀ClNO₄
Batch Molecular Weight: 698.54
Physical Appearance: White solid
Solubility: ethanol to 100 mM
 chloroform to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 92.2 % purity

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

DOTAP is a cationic agent used in liposome formation. Facilitates the transfection of DNA, RNA, and other molecules with negative charges into eukaryotic cells. Can be used to generate selective organ-targeting (SORT) lipid nanoparticles. For more information on how to prepare MC3 lipid nanoparticles for RNA delivery, please see our protocol.

Physical and Chemical Properties:

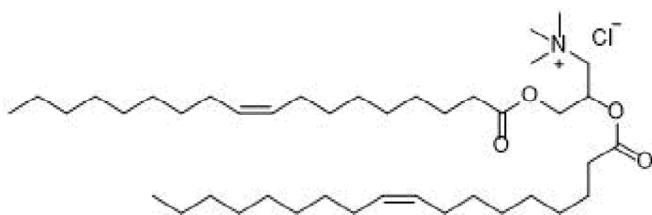
Batch Molecular Formula: C₄₂H₈₀ClNO₄

Batch Molecular Weight: 698.54

Physical Appearance: White solid

Minimum Purity: ≥90%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

ethanol to 100 mM

chloroform to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Wang et al (2023) Preparation of selective organ-targeting (SORT) lipid nanoparticles (LNPs) using multiple technical methods for tissue-specific mRNA delivery. *Nat. Protoc.* **18** 265. PMID: 36316378.

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