

Certificate of Analysis

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Product Name: DSPC

Catalog No.: 7943

Batch No.: 2

CAS Number: 816-94-4

IUPAC Name: 1,2-Distearoyl-*sn*-glycero-3-phosphocholine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄₄H₈₈NO₈P

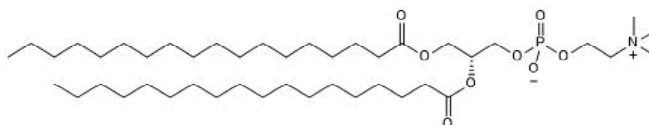
Batch Molecular Weight: 790.15

Physical Appearance: White solid

Solubility: chloroform to 100 mM
ethanol to 20 mM with gentle warming

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity

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

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CAS Number: 816-94-4

IUPAC Name: 1,2-Distearoyl-*sn*-glycero-3-phosphocholine

Description:

DSPC is a phosphatidylcholine, a type of neutral phospholipid with two saturated long-chains (18:0). Commonly used in the generation of micelles, liposomes, lipid nanoparticles (LNPs) and other types of artificial membranes. DSPC is used in formulation of LNPs for nonviral drug delivery systems. For more information on how to prepare MC3 lipid nanoparticles for RNA delivery, please see our protocol. For a fully formulate LNP containing Dlin-MC3-DMA and a luciferase mRNA reporter, see MC3 LNP Luciferase (Cat. No. 8889). Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

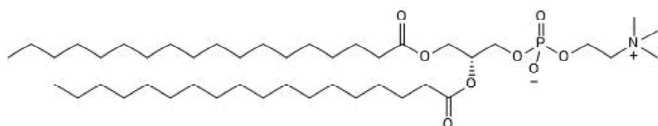
Batch Molecular Formula: C₄₄H₈₈NO₈P

Batch Molecular Weight: 790.15

Physical Appearance: White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



References:

Lou et al (2020) Delivery of self-amplifying mRNA vaccines by cationic lipid nanoparticles: The impact of cationic lipid selection. *J.Control Release* **325** 370. PMID: 32619745.

Zhang et al (2020) Liver-targeted siRNA lipid nanoparticles treat hepatic cirrhosis by dual antifibrotic and anti-inflammatory activities. *ACS Nano* **14** 6305. PMID: 32378877.

Storage: Store at -20°C

Solubility & Usage Info:

chloroform to 100 mM

ethanol to 20 mM with gentle warming

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.

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