

Certificate of Analysis

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Product Name: DSPE-PEG 2000 Biotin

Catalog No.: 8838

Batch No.: 1

CAS Number: 474964-24-4

IUPAC Name: 1,2-Distearoyl-*sn*-glycero-3-phosphoethanolamine-*N*-[biotinyl(polyethylene glycol)-2000]

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $(C_{2}H_{4}O)_n C_{54}H_{100}N_4O_{12}PS.NH_4$

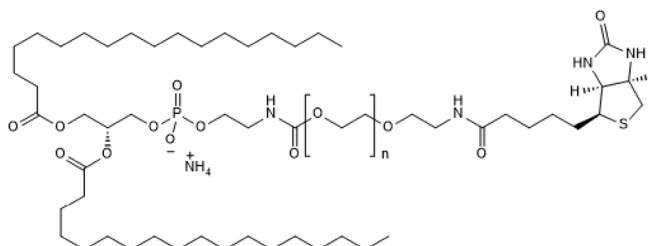
Batch Molecular Weight: 1

Physical Appearance: White solid

Solubility: chloroform to 10 mg/ml
ethanol to 10 mg/ml

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.5% purity

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

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Description:

DSPE-PEG 2000 Biotin is a biotinylated phospholipid conjugate designed for applications in lipid-based drug delivery, bioconjugation, and targeted molecular interactions. DSPE-PEG 2000 Biotin comprises 1,2-distearoyl-*sn*-glycero-3-phosphoethanolamine (DSPE), a polyethylene glycol (PEG 2000) spacer, and a biotin functional group enabling biotin-streptavidin binding.

Physical and Chemical Properties:

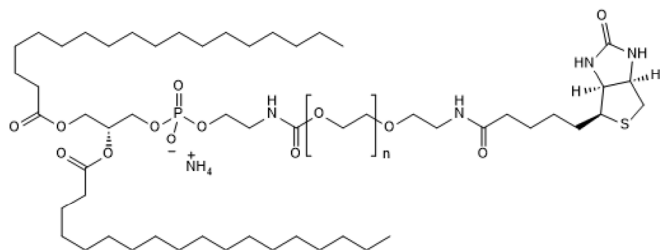
Batch Molecular Formula: $(C_2H_4O)_n C_{54}H_{100}N_4O_{12}PS.NH_4$

Batch Molecular Weight: 1

Physical Appearance: White solid

Minimum Purity: ≥90%

Batch Molecular Structure:



Storage: Store at -20°C. This product is packaged under an inert atmosphere.

Solubility & Usage Info:

chloroform to 10 mg/ml

ethanol to 10 mg/ml

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:

Ao et al (2024) Bioorthogonal click labeling of an amber-free HIV-1 provirus for in-virus single molecule imaging. *Cell Chem.Biol.* **31** 487. PMID: 38232732.

Bourn et al (2023) Tumour associated vasculature-on-a-chip for the evaluation of microbubble-mediated delivery of targeted liposomes. *Lab Chip.* **23** 1674. PMID: 36779251.

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