

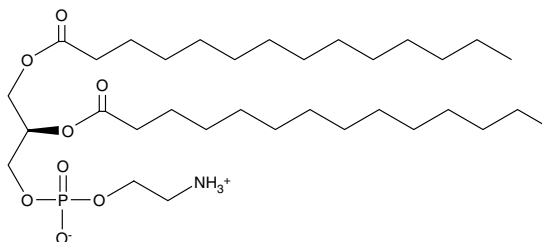
Product Information



1,2-Dimyristoyl-*sn*-glycero-3-PE

Item No. 15090

CAS Registry No.: 998-07-2
Formal Name: 1,2-dimyristoyl-*sn*-glycero-3-phosphoethanolamine
Synonyms: 1,2-dimyristoyl-*sn*-glycero-3-phosphoethanolamine, DMPE
MF: C₃₃H₆₆NO₈P
FW: 635.9
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that 1,2-dimyristoyl-*sn*-glycero-3-PE (DMPE) be stored as supplied at -20°C. It should be stable for at least two years.

DMPE is supplied as a crystalline solid. A stock solution may be made by dissolving the DMPE in the solvent of choice. DMPE is soluble in chloroform at a concentration of approximately 3 mg/ml.

DMPE is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Phosphatidylethanolamines (PEs) are phospholipids found in biological membranes, serving both structural and functional roles.^{1,2} Different types of PEs are commonly used in the generation of micelles, liposomes, and other types of artificial membranes.^{3,4} DMPE is a phospholipid containing the long-chain (14:0) myristic acid inserted at the *sn*-1 and *sn*-2 positions.

References

1. Vance, J.E. and Tasseva, G. Formation and function of phosphatidylserine and phosphatidylethanolamine in mammalian cells. *Biochim. Biophys. Acta.* **1831(3)**, 543-554 (2013).
2. Wellner, N., Diep, T.A., Janfelt, C., *et al.* N-acylation of phosphatidylethanolamine and its biological functions in mammals. *Biochim. Biophys. Acta.* **1831(3)**, 652-662 (2013).
3. Simões, S., Moreira, J.N., Fonseca, C., *et al.* On the formulation of pH-sensitive liposomes with long circulation times. *Adv. Drug Deliv. Rev.* **56(7)**, 947-965 (2004).
4. Fattal, E., Couvreur, P., and Dubernet, C. "Smart" delivery of antisense oligonucleotides by anionic pH-sensitive liposomes. *Adv. Drug Deliv. Rev.* **56(7)**, 931-946 (2004).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/15090

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery.**

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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