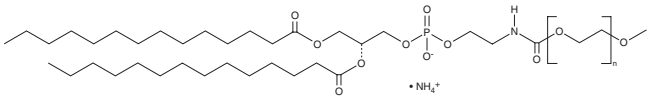
PRODUCT INFORMATION

DMPE-mPEG(2000) (ammonium salt)

Item No. 41956

CAS Registry No.: 474922-82-2
Formal Name: α-[(9R)-6-hydroxy-6-oxido-1,12-dioxo-9-[(1-oxotetradecyl)oxy]-5,7,11-trioxa-2-aza-6-phosphapentacos-1-yl]-ω-methoxy-poly(oxy-1,2-ethanediyl), monoammonium salt
Synonyms: 1,2-Dimyristoyl-*sn*-glycero-3-phosphoethanolamine-N-methoxy-polyethylene glycol-2000, 1,2-Dimyristoyl Phosphatidylethanolamine-N-mPEG(2000), 1,2-Ditetradecanoyl-*sn*-glycero-3-phosphoethanolamine-N-mPEG(2000), 1,2-DMPE-mPEG(2000), PE(14:0/14:0)-mPEG(2000), PtdEtn-(1,2-dimyristoyl)-N-mPEG(2000)
MF: $(C_2H_4O)_nC_{35}H_{67}NO_{10}P \bullet NH_4$
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

DMPE-mPEG(2000) (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the DMPE-mPEG(2000) (ammonium salt) in the solvent of choice, which should be purged with an inert gas. DMPE-mPEG(2000) (ammonium salt) is slightly soluble (0.1-1 mg/ml) in ethanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of DMPE-mPEG(2000) (ammonium salt) can be prepared by directly dissolving the solid in aqueous buffers. DMPE-mPEG(2000) (ammonium salt) is slightly soluble (0.1-1 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

DMPE-mPEG(2000) is a PEGylated derivative of 1,2-dimyristoyl-*sn*-glycero-3-PE (1,2-DMPE; Item No. 15090). It has been used in the formation of nanostructured lipid carriers (NLCs) and liposomes for the delivery of small molecules *in vitro* and *in vivo*.[1,2] NLCs containing DMPE-mPEG(2000) have been used for ocular delivery of ciprofloxacin (Item No. 14286) in rabbits.[1] Liposomes containing DMPE-mPEG(2000) and encapsulating cabazitaxel (Item No. 22262) decrease tumor volume and weight in a primary 4T1 murine breast cancer model.[2] These liposomes also decrease the number of pulmonary metastatic nodules and increase survival in a metastatic 4T1 murine breast cancer model.

References

1. Balguri, S.P., Adelli, G.R., Janga, K.Y., *et al.* Ocular disposition of ciprofloxacin from topical, PEGylated nanostructured lipid carriers: Effect of molecular weight and density of poly (ethylene) glycol. *Int. J. Pharm.* **529(1-2)**, 32-43 (2017).
2. Liang, Y., Li, X., Zhang, Y., *et al.* Deciphering apolipoprotein A4 in the protein corona of ligand-modified liposomes for tumor targeting and penetration. *ACS Nano* **20(15)**, 11673-11691 (2026).

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.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/13/2026

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM