

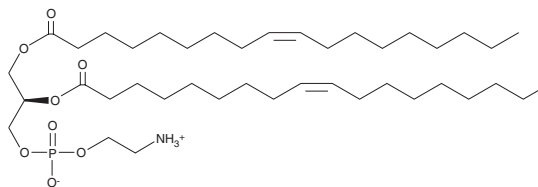
PRODUCT INFORMATION



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

Item No. 15091

CAS Registry No.: 4004-05-1
Formal Name: 1,2-dioleoyl-*sn*-glycero-3-phosphatidylethanolamine
Synonyms: 1,2-Dioleoyl-*sn*-glycero-3-Phosphoethanolamine, 1,2-DOPE
MF: C₄₁H₇₈NO₈P
FW: 744.1
Purity: ≥98%
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

1,2-DOPE is supplied as a crystalline solid. A stock solution may be made by dissolving the 1,2-DOPE in the solvent of choice, which should be purged with an inert gas. 1,2-DOPE is soluble in the organic solvent chloroform at a concentration of approximately 3.3 mg/ml.

1,2-DOPE 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.

Description

1,2-DOPE is a synthetic analog of naturally-occurring PE containing 18:1 fatty acids at the *sn*-1 and *sn*-2 positions. The compound features the same diacylglycerol stereochemistry as that of the natural compound. 1,2-DOPE can be used as an emulsifier to facilitate DNA-liposome complex transport across membranes. It is used in combination with cationic phospholipids to increase efficiency during DNA transfection studies as a non-viral method of gene delivery.¹⁻³

References

1. MacDonald, R.C., Rakhmanova, V.A., Choi, K.L., *et al.* O-ethylphosphatidylcholine: A metabolizable cationic phospholipid which is a serum-compatible DNA transfection agent. *J. Pharm. Sci.* **88(9)**, 896-904 (1999).
2. Misra, S.K., Biswas, J., Kondaiah, P., *et al.* Gene transfection in high serum levels: Case studies with new cholesterol based cationic gemini lipids. *PLoS One* **8(7)**, e68305 (2013).
3. Chen, Y., Sun, J., Lu, Y., *et al.* Complexes containing cationic and anionic pH-sensitive liposomes: Comparative study of factors influencing plasmid DNA gene delivery to tumors. *Int. J. Nanomedicine* **8**, 1573-1593 (2013).

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, 10/12/2022

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