

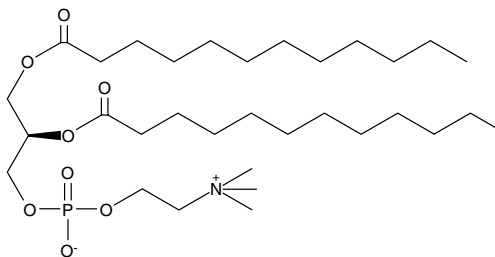
Product Information



1,2-Dilauroyl-*sn*-glycero-3-PC

Item No. 11023

CAS Registry No.: 18194-25-7
Formal Name: 1,2-Dilauroyl-*sn*-glycero-3-phosphatidylcholine
Synonyms: 1,2-Dilauroyl-*sn*-glycero-3-Phosphocholine, DLPC
MF: C₃₂H₆₄NO₈P
FW: 621.8
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

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

DLPC is supplied as a crystalline solid. A stock solution may be made by dissolving the DLPC in the solvent of choice. DLPC is soluble in ethanol at a concentration of approximately 25 mg/ml.

DLPC 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.

DLPC is a phospholipid containing the medium-chain (12:0) lauric acid inserted at the *sn*-1 and *sn*-2 positions. It is commonly used in the generation of micelles, liposomes, and other types of artificial membranes.¹⁻³ Experimentally, DLPC is used to form thinner membranes than those produced with PC containing the more common long-chain or very long-chain fatty acids, or to simply vary membrane formulation.^{3,4}

References

1. Nipper, M.E., Dakanali, M., Theodorakis, E., *et al.* Detection of liposome membrane viscosity perturbations with ratiometric molecular rotors. *Biochimie* **93**(6), 988-994 (2011).
2. Mazari, A., Iwamoto, S., and Yamauchi, R. Effects of linoleic acid position in phosphatidylcholines and cholesterol addition on their rates of peroxidation in unilamellar liposomes. *Biosci. Biotechnol. Biochem.* **74**(5), 1013-1017 (2010).
3. Muhle-Goll, C., Hoffmann, S., Afonin, S., *et al.* Hydrophobic matching controls the tilt and stability of the dimeric platelet-derived growth factor receptor (PDGFR) β transmembrane segment. *J. Biol. Chem.* **287**(31), 26178-26186 (2012).
4. Kim, T., Lee, K.I., Morris, P., *et al.* Influence of hydrophobic mismatch on structures and dynamics of gramicidin A and lipid bilayers. *Biophys. J.* **102**(7), 1551-1560 (2012).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11023

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.

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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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