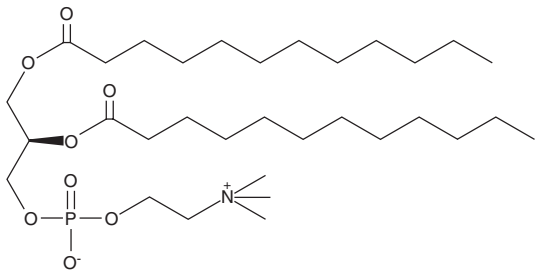
PRODUCT INFORMATION

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, 1,2-DLPC
MF:	$C_{32}H_{64}NO_8P$
FW:	621.8
Purity:	≥98%
Supplied as:	A crystalline 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

1,2-Dilauroyl-*sn*-glycero-3-PC (1,2-DLPC) is supplied as a crystalline solid. A stock solution may be made by dissolving the 1,2-DLPC in the solvent of choice. 1,2-DLPC is soluble in ethanol at a concentration of approximately 25 mg/ml.

1,2-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.

Description

1,2-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, 1,2-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) b 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).

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