

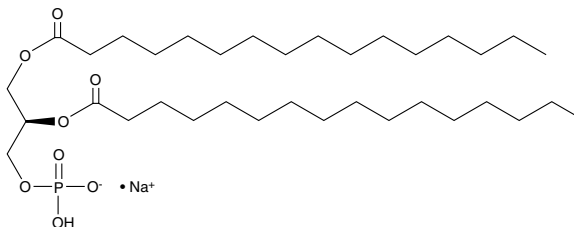
Product Information



1,2-Dipalmitoyl-*sn*-glycero-3-phosphate (sodium salt)

Item No. 15082

CAS Registry No.: 169051-60-9
Formal Name: 1,2-dipalmitoyl-*sn*-glycero-3-phosphatic acid, monosodium salt
Synonyms: 1,2-Dipalmitoyl-*sn*-glycero-3-phosphatic acid, 1,2-DPPA
MF: C₃₅H₆₈O₈P • Na
FW: 670.9
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

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

1,2-DPPA (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the 1,2-DPPA (sodium salt) in the solvent of choice. 1,2-DPPA (sodium salt) is soluble in chloroform at a concentration of approximately 1.6 mg/ml.

1,2-DPPA (sodium salt) 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.

Phosphatidic acids can be formed by the acylation of lysophosphatidic acids, the phosphorylation of diacylglycerols, or the removal of the choline group from phosphatidylcholine.¹ They have important roles in intracellular and extracellular signaling.^{2,3} 1,2-DPPA is a phospholipid containing the long-chain (16:0) palmitic acid inserted at the *sn*-1 and *sn*-2 positions. It is used in the generation of micelles, liposomes, and artificial membranes.^{4,5}

References

1. Athenstaedt, K. and Daum, G. Phosphatidic acid, a key intermediate in lipid metabolism. *Eur. J. Biochem.* **266**, 1-16 (1999).
2. English, D. Phosphatidic acid: A lipid messenger involved in intracellular and extracellular signalling. *Cell. Signal.* **8**, 341-347 (1996).
3. Gomez-Cambronero, J. New concepts in phospholipase D signaling in inflammation and cancer. *ScientificWorldJournal* **10**, 1356-1369 (2010).
4. Sierra-Valdez, F.J., Forero-Quintero, L.S., Zapata-Morin, P.A., *et al.* The influence of non polar and polar molecules in mouse motile cells membranes and pure lipid bilayers. *PLoS One* **8(4)**, e59364 (2013).
5. Jing, W., Prenner, E.J., Vogel, H.J., *et al.* Headgroup structure and fatty acid chain length of the acidic phospholipids modulate the interaction of membrane mimetic vesicles with the antimicrobial peptide protegrin-1. *J. Pept. Sci.* **11(11)**, 735-743 (2005).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/15082

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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