

Product Information



1-Palmitoyl Lysophosphatidic Acid (sodium salt)

Item No. 10010290

CAS Registry No.: 17618-08-5

Formal Name: 1-palmitoyl-2-hydroxy-*sn*-glycero-3-phosphate, monosodium salt

Synonym: 1-Palmitoyl LPA

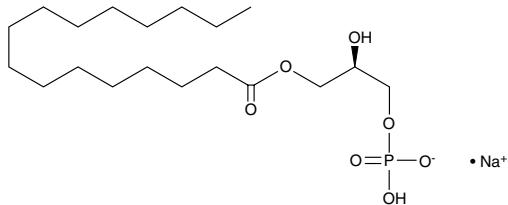
MF: C₁₉H₃₈O₇P • Na

FW: 432.5

Purity: ≥98%

Stability: ≥2 years at -20°C

Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that 1-palmitoyl lysophosphatidic acid (1-palmitoyl LPA) (sodium salt) be stored as supplied at -20°C. It should be stable for at least two years.

1-Palmitoyl LPA (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-palmitoyl LPA in an organic solvent purged with an inert gas. 1-Palmitoyl LPA (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 1-palmitoyl LPA (sodium salt) in these solvents is approximately <0.05 mg/ml.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that 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.

1-Palmitoyl LPA is a LPA analog containing palmitic acid at the *sn*-1 position. 1-Palmitoyl LPA binds to one of five different G protein-coupled receptors (GPCRs) to mediate a variety of biological responses including cell proliferation, smooth muscle contraction, platelet aggregation, neurite retraction, and cell motility.^{1,2} In addition to playing a role in the aforementioned biological responses, 1-palmitoyl LPA enhances the action of β-lactam antibiotics (ampicillin, piperacillin, and ceftazidime) on various strains of *Pseudomonas aeruginosa*, a pathogen associated with pulmonary disease and pneumonia, *via* binding both Ca²⁺ and Mg²⁺.³

References

1. Noguchi, K., Ishii, S., and Shimizu, T. Identification of p2y9/GPR23 as a novel G protein-coupled receptor for lysophosphatidic acid, structurally distant from the Edg family. *J. Biol. Chem.* **278**(28), 25600-25606 (2003).
2. Moolenaar, W.H. LPA: A novel lipid mediator with diverse biological actions. *Trends Cell Biol.* **4**, 213-219 (1994).
3. Krogfelt, K.A., Utley, M., Krivan, H.C., *et al.* Specific phospholipids enhance the activity of β-lactam antibiotics against *Pseudomonas aeruginosa*. *Journal of Antimicrobial Chemotherapy* **46**(3), 377-384 (2000).

Related Products

For a list of related products please visit: www.caymancell.com/catalog/10010290

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymancell.com

Webs
www.caymancell.com

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.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

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.

For further details, please refer to our **Warranty and Limitation of Remedy** located on our website and in our catalog.

Copyright Cayman Chemical Company, 12/12/2013