

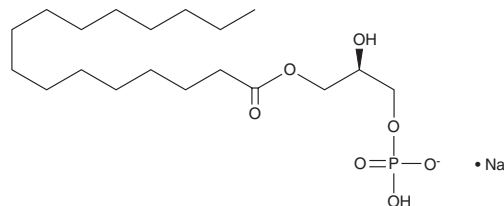
PRODUCT INFORMATION



1-Palmitoyl-2-hydroxy-*sn*-glycero-3-PA (sodium salt)

Item No. 10010290

CAS Registry No.: 17618-08-5
Formal Name: hexadecanoic acid, 2R-hydroxy-3-(phosphonoxy) propyl ester, monosodium salt
Synonyms: 1-Hexadecanoyl-2-hydroxy-*sn*-glycero-3-phosphate, 16:0 LPA, LPA 16:0, PA(16:0/0:0), 1-Palmitoyl LPA, 1-Palmitoyl Lysophosphatidic Acid
MF: C₁₉H₃₈O₇P • Na
FW: 432.5
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-Palmitoyl-2-hydroxy-*sn*-glycero-3-PA (1-palmitoyl LPA) (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-palmitoyl LPA in the solvent of choice, which should be 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.

Description

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(6)**, 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*. *J. Antimicrob. Chemother.* **46(3)**, 377-384 (2000).

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
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