

PRODUCT INFORMATION



1-Palmitoyl-d₉-2-hydroxy-sn-glycero-3-PA

Item No. 33479

CAS Registry No.: 2830282-77-2

Formal Name: hexadecanoic acid-
13,13,14,14,15,15,16,16,16-d₉, 2R-hydroxy-
3-(phosphonooxy)propyl ester

Synonyms: 1-Hexadecanoyl-d₉-2-hydroxy-sn-glycero-
3-phosphate, 16:0-d₉ LPA, LPA 16:0-d₉,
PA(16:0-d₉/0:0), 1-Palmitoyl-d₉ LPA,
1-Palmitoyl-d₉ Lysophosphatidic Acid

MF: C₁₉H₃₀D₉O₇P

FW: 419.5

Chemical Purity: ≥95% (1-Palmitoyl Lysophosphatidic Acid)

Deuterium

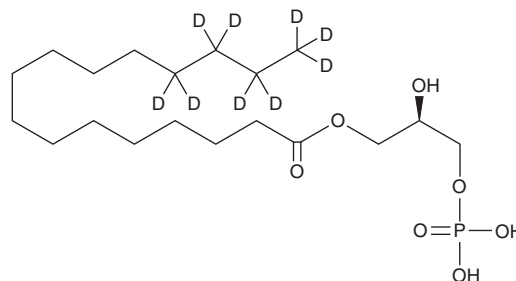
Incorporation: ≥99% deuterated forms (d₁-d₉); ≤1% d₀

Supplied as: A solution in chloroform

Storage: -20°C

Stability: ≥1 year

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



Laboratory Procedures

1-Palmitoyl-d₉-2-hydroxy-sn-glycero-3-PA (1-palmitoyl-d₉ LPA) is intended for use as an internal standard for the quantification of 1-palmitoyl LPA (Item Nos. 10010094 | 10010290) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

1-Palmitoyl-d₉ LPA is supplied as a solution in chloroform. To change the solvent, simply evaporate the chloroform under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol purged with an inert gas can be used. The solubility of 1-palmitoyl-d₉ LPA in ethanol is approximately 10 mg/ml.

Description

1-Palmitoyl LPA is an analog of LPA that contains palmitic acid (Item No. 10006627) at the sn-1 position. It induces reporter gene expression in PC12 cells expressing human lysophosphatidic acid receptor 4 (LPA₄) when used at concentrations ranging from 0.01 to 10 μM.¹ 1-Palmitoyl LPA (12-300 μM) induces aggregation of isolated human platelets, an effect that can be reversed by prostaglandin E₁ (PGE₁; Item No. 13010), theophylline (Item No. 23760), or EDTA.² It also binds to calcium and magnesium and enhances the activity of ampicillin (Item No. 14417), piperacillin (Item No. 20766), and ceftazidime (Item No. 14828) against *P. aeruginosa* isolates from patients with cystic fibrosis.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. Gerrard, J.M., Kindom, S.E., Peterson, D.A., et al. Lysophosphatidic acids. Influence on platelet aggregation and intracellular calcium flux. *Am. J. Pathol.* **96**(2), 423-438 (1979).
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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