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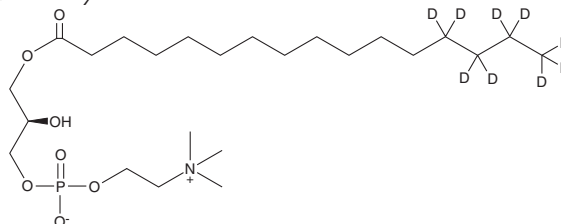
PRODUCT INFORMATION



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

Item No. 28153

CAS Registry No.:	1872379-72-0
Formal Name:	(7R)-4,7-dihydroxy-N,N,N-trimethyl-10-oxo-3,5,9-trioxa-4-phosphapentacosan-22,22,23,23,24,24,25,25,25-d ₉ -1-aminium, 4-oxide, inner salt
Synonyms:	1-Hexadecanoyl-d ₉ -sn-glycero-3-Phosphatidylcholine, 1-Hexadecanoyl-d ₉ -sn-glycero-3-Phosphocholine, 16:0(d ₉) Lyso-PC, PC(16:0-d ₉ /0:0), 16:0-d ₉ /0:0-PC
MF:	C ₂₄ H ₄₁ D ₉ NO ₇ P
FW:	504.7
Chemical Purity:	≥95% (1-Palmitoyl-2-hydroxy-sn-glycero-3-PC)
Deuterium Incorporation:	≥99% deuterated forms (d ₁ -d ₉); ≤1% d ₀
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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-PC is intended for use as an internal standard for the quantification of 1-palmitoyl-2-hydroxy-sn-glycero-3-PC (Item No. 10172) 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-d₉-2-hydroxy-sn-glycero-3-PC is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-palmitoyl-d₉-2-hydroxy-sn-glycero-3-PC in the solvent of choice, which should be purged with an inert gas. 1-Palmitoyl-d₉-2-hydroxy-sn-glycero-3-PC is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 1-palmitoyl-d₉-2-hydroxy-sn-glycero-3-PC in these solvents is approximately 10 mg/ml.

Description

1-Palmitoyl-2-hydroxy-sn-glycero-3-PC is the ubiquitous lipid species generated following phospholipase A₂ (PLA₂) hydrolysis of phosphatidylcholine.¹ It increases the production of reactive oxygen species (ROS) and decreases superoxide dismutase (SOD) and endothelial nitric oxide synthase (eNOS) protein levels and phosphorylation of ERK1/2 in human umbilical vein endothelial cells (HUVECs) when used at a concentration of 125 μM.² 1-Palmitoyl-2-hydroxy-sn-glycero-3-PC potentiates the secretion of IL-6, IL-1β, IL-12, and TNF-α in LPS-stimulated M1 macrophages, but has no effect on CD163, CD206, CD36, or IL-10 in LPS-stimulated M2 macrophages when used at concentrations of 0.3 and 1.0 μM.³ It increases TGF-β1 production and enhances Foxp3 protein levels in T_{reg} cells in isolated human peripheral blood when used at a concentration of 10 μM.⁴ 1-Palmitoyl-2-hydroxy-sn-glycero-3-PC enhances neutrophil function, bacterial clearance, and survival in mouse models of sepsis when administered at a dose of 10 mg/kg.⁵

References

1. Balsinde, J., Winstead, M.V., and Dennis, E. *FEBS Lett.* **531(1)**, 2-6 (2002).
2. Choi, S., Park, S., Liang, G.H., et al. *Cell Physiol. Biochem.* **25(2-3)**, 233-240 (2010).
3. Qin, X., Qiu, C., and Zhao, L. *Cell. Immunol.* **289(1-2)**, 185-190 (2014).
4. Hasegawa, H., Lei, J., Matsumoto, T., et al. *Biochem. Biophys. Res. Commun.* **415(3)**, 526-531 (2011).
5. Yan, J.-J., Jung, J.-S., Lee, J.-E., et al. *Nat. Med.* **10(2)**, 161-167 (2004).

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.

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