

PRODUCT INFORMATION



1-Oleoyl-2-hydroxy-sn-glycero-3-PE

Item No. 25596

CAS Registry No.: 89576-29-4

Formal Name: 1-oleoyl-2-hydroxy-sn-glycero-3-phosphatidylethanolamine

Synonyms: 18:1 LPE, 18:1 Lyso-PE, 1-Oleoyl-2-hydroxy-sn-glycero-3-phosphoethanolamine

MF: $C_{23}H_{46}NO_7P$

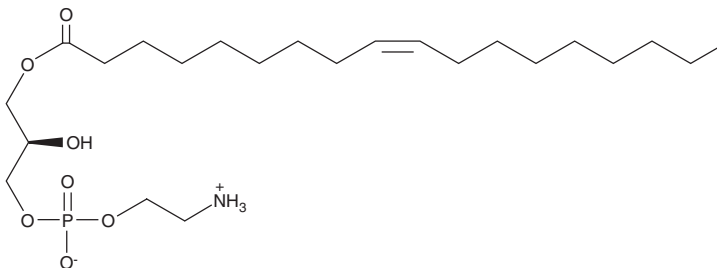
FW: 479.6

Purity: $\geq 95\%$

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-Oleoyl-2-hydroxy-sn-glycero-3-PE is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-oleoyl-2-hydroxy-sn-glycero-3-PE in the solvent of choice, which should be purged with an inert gas. 1-Oleoyl-2-hydroxy-sn-glycero-3-PE is soluble in the organic solvent chloroform at a concentration of approximately 3 mg/ml.

Description

1-Oleoyl-2-hydroxy-sn-glycero-3-PE is a naturally-occurring lysophospholipid and an analog of plasmalogen lysophosphatidylethanolamine.¹⁻³ It induces transient increases in intracellular calcium in PC12 rat neuronal cells in a concentration-dependent manner, an effect that can be blocked by the lysophosphatidic acid receptor 1 (LPA₁) antagonist AM095 (Item No. 22141).² 1-Oleoyl-2-hydroxy-sn-glycero-3-PE (100 ng/ml) increases IL-2 production in CD1d-stimulated murine natural killer T (NKT) cell hybridoma 2H4 cells.³ It also induces production of IL-4, but not IFN- γ , in murine splenocytes when used at a concentration of 100 ng/ml and in mouse serum when administered at a dose of 1 μg per animal, indicating induction of the T helper 2 (Th2) response. 1-Oleoyl-2-hydroxy-sn-glycero-3-PE levels increase in interscapular brown adipose tissue (iBAT) in mice following three-day cold exposure.¹

References

1. Marcher, A.B., Loft, A., Nielsen, R., *et al.* RNA-Seq and mass-spectrometry-based lipidomics reveal extensive changes of glycerolipid pathways in brown adipose tissue in response to cold. *Cell. Rep.* **13**(9), 2000-2013 (2015).
2. Lee, J.M., Park, S.J., and Im, D.S. Lysophosphatidylethanolamine increases intracellular Ca^{2+} through LPA₁ in PC-12 neuronal cells. *Biochem. Bioph. Res. Commun.* **461**(2), 378-382 (2015).
3. Ni, G., Li, Z., Liang, K., *et al.* Synthesis and evaluation of immunostimulant plasmalogen lysophosphatidylethanolamine and analogues for natural killer T cells. *Bioorg. Med. Chem.* **22**(11), 2966-2973 (2014).

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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