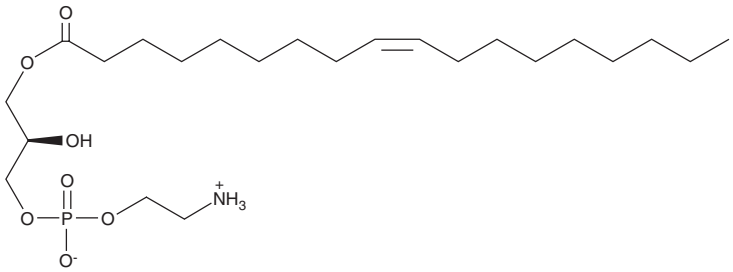
PRODUCT INFORMATION

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:	≥95%
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-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. 1-Oleoyl-2-hydroxy-*sn*-glycero-3-PE is soluble in the organic solvent chloroform, which should be purged with an inert gas, 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 (LPA_1) 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 LPA_1 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).

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