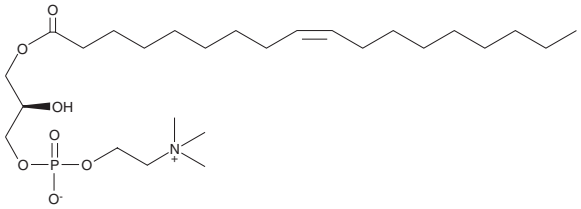
PRODUCT INFORMATION

1-Oleoyl-2-hydroxy-*sn*-glycero-3-phosphocholine

Item No. 20959

CAS Registry No.: 19420-56-5
Formal Name: 4,7R-dihydroxy-N,N,N-trimethyl-10-oxo-3,5,9-trioxa-4-phosphaheptacos-18Z-en-1-aminium, 4-oxide, inner salt
Synonyms: LPC(18:1), 1-(9(Z)-Octadecenoyl)-2-hydroxy-*sn*-glycero-3-phosphocholine, 1-Oleoyl-2-hydroxy Phosphatidylcholine, PC(18:1/0:0), PC(18:1(9Z)/0:0), PtdCho-(1-oleoyl, 2-hydroxy)
MF: $C_{26}H_{52}NO_7P$
FW: 521.7
Purity: ≥95%
UV/Vis.: λ_{max}: 221 nm
Supplied as: A 10 mg/ml solution in chloroform
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-phosphocholine is supplied as a solution in chloroform. For biological experiments, we suggest that organic solvent-free aqueous solutions of 1-oleoyl-2-hydroxy-*sn*-glycero-3-phosphocholine be prepared by directly dissolving the neat oil in aqueous buffers. The solubility of 1-oleoyl-2-hydroxy-*sn*-glycero-3-phosphocholine in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

1-Oleoyl-2-hydroxy-*sn*-glycero-3-phosphocholine is a lysophospholipid containing oleic acid (Item Nos. 90260 | 24659) at the *sn*-1 position. It inhibits taurine uptake in Caco-2 cells when used at a concentration of 200 µM.[1] Levels of 1-oleoyl-2-hydroxy-*sn*-glycero-3-phosphocholine are increased in conditioned medium in VEGF-stimulated primary normal human bronchial epithelial (NHBE) cells, an effect that can be reversed by the phospholipase A_2 (PLA_2) inhibitor oleyloxyethyl phosphorylcholine (Item No. 70560).[2] Plasma levels of 1-oleoyl-2-hydroxy-*sn*-glycero-3-phosphocholine are decreased in patients with lung cancer or abdominal aortic aneurysm.[3,4]

References

1. Ishizuka, K., Miyamoto, Y., Satsu, H., *et al.* Characteristics of lysophosphatidylcholine in its inhibition of taurine uptake by human intestinal Caco-2 cells. *Biosci. Biotechnol. Biochem.* **66(4)**, 730-736 (2002).
2. Zhuge, Y., Yuan, Y., van Breemen, R., *et al.* Stimulated bronchial epithelial cells release bioactive lysophosphatidylcholine 16:0, 18:0, and 18:1. *Allergy Asthma Immunol. Res.* **6(1)**, 66-74 (2014).
3. Dong, J., Xiaoming, C., Zhao, L., *et al.* Lysophosphatidylcholine profiling of plasma: Discrimination of isomers and discovery of lung cancer biomarkers. *Metabolomics* **6(4)**, 478-488 (2010).
4. Xie, T., Lei, C., Song, W., *et al.* Plasma lipidomics analysis reveals the potential role of lysophosphatidylcholines in abdominal aortic aneurysm progression and formation. *Int. J. Mol. Sci.* **24(12)**, 10253 (2023).

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