

PRODUCT INFORMATION

1-1(Z)-Octadecenyl-2-hydroxy-*sn*-glycero-3-PE

Item No. 41466

CAS Registry No.: 174062-73-8
Formal Name: Phosphoric acid, mono(2-aminoethyl) mono[(2R)-2-hydroxy-3-[(1Z)-1-octadecen-1-yloxy]propyl] ester

Synonyms: 18p/0:0-PE, C18(plasm)-0:0-PE, LPE P-18:0, 1-1(Z)-Octadecenyl-2-hydroxy-*sn*-glycero-3-phosphoethanolamine, PE(P-18:0/0:0)

MF: C₂₃H₄₈NO₆P

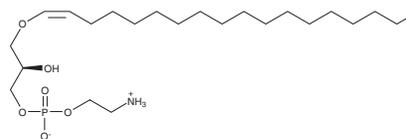
FW: 465.6

Purity: ≥98%

Supplied as: A 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

1-1(Z)-Octadecenyl-2-hydroxy-*sn*-glycero-3-PE is supplied as a solid. A stock solution may be made by dissolving the 1-1(Z)-octadecenyl-2-hydroxy-*sn*-glycero-3-PE in the solvent of choice, which should be purged with an inert gas. 1-1(Z)-Octadecenyl-2-hydroxy-*sn*-glycero-3-PE is slightly soluble (0.1-1 mg/ml) in acetonitrile DMSO.

Description

1-1(Z)-Octadecenyl-2-hydroxy-*sn*-glycero-3-PE is a lysoplasmalogen that contains 1(Z)-octadecenoic acid at the *sn*-1 position.¹ It increases intracellular levels of cAMP, mitochondrial oxygen consumption rate (OCR), basal and maximal respiration, and ATP production in C3H/10T1/2 murine fibroblasts when used at a concentration of 10 μM. 1-1(Z)-Octadecenyl-2-hydroxy-*sn*-glycero-3-PE (200 μg/kg per day) reduces blood levels of glucose in an intraperitoneal glucose tolerance test (GTT) in mice fed a high-fat diet. The serum levels of 1-1(Z)-octadecenyl-2-hydroxy-*sn*-glycero-3-PE are reduced in patients with sepsis-induced acute respiratory distress syndrome (ARDS).² 1-1(Z)-Octadecenyl-2-hydroxy-*sn*-glycero-3-PE has been found in fish viscera.³

References

1. Cho, Y.K., Yoon, Y.C., Im, H., *et al.* Adipocyte lysoplasmalogenase TMEM86A regulates plasmalogen homeostasis and protein kinase A-dependent energy metabolism. *Nat. Commun.* **13**(1), 4084 (2022).
2. Chang, Y., Yoo, H.J., Kim, S.J., *et al.* A targeted metabolomics approach for sepsis-induced ARDS and its subphenotypes. *Crit. Care* **27**(1), 263 (2023).
3. Shen, Q., Wang, Y., Gong, L., *et al.* Shotgun lipidomics strategy for fast analysis of phospholipids in fisheries waste and its potential in species differentiation. *J. Agric. Food Chem.* **60**(37), 9384-9393 (2012).

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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