

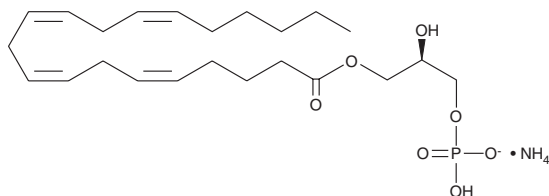
PRODUCT INFORMATION



1-Arachidonoyl-2-hydroxy-*sn*-glycero-3-PA (ammonium salt)

Item No. 10019

CAS Registry No.: 799268-65-8
Formal Name: (5Z,8Z,11Z,14Z)-eicosatetraenoic acid, (2R)-hydroxy-3-(phosphonoxy)propyl ester, monoammonium salt
Synonyms: 1-Arachidonoyl LPA, 1-Arachidonoyl Lysophosphatidic Acid, 1-Eicosatetraenoyl-2-hydroxy-*sn*-glycero-3-phosphate, 20:4 LPA, LPA 20:4, PA(20:4/0:0)
MF: C₂₃H₃₈O₇P • NH₄
FW: 475.6
Purity: ≥95%
Supplied as: A solid
Storage: -80°C
Stability: ≥6 months



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

1-Arachidonoyl-2-hydroxy-*sn*-glycero-3-PA is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-arachidonoyl-2-hydroxy-*sn*-glycero-3-PA in the solvent of choice, which should be purged with an inert gas. 1-Arachidonoyl-2-hydroxy-*sn*-glycero-3-PA is sparingly soluble in methanol.

Description

1-Arachidonoyl-2-hydroxy-*sn*-glycero-3-PA is a phospholipid containing arachidonic acid at the *sn*-1 position. It has been found in rat brain as 37% of the arachidonic acid-containing lysophosphatidic acid (LPA) species and is a precursor to 1-arachidonoyl glycerol (1-AG; Item No. 62150).¹ 1-Arachidonoyl-2-hydroxy-*sn*-glycero-3-PA binds to the LPA₂/EDG4 receptor with an EC₅₀ value of approximately 10 nM.² It prevents TNF-α and IL-6 secretion in wild-type but not *Lpa2*^{-/-} dendritic cells stimulated by LPS.³ It also decreases differentiation of HT-29 human colon carcinoma cells to goblet cells in the presence of sodium butyrate.⁴

References

1. Nakane, S., Oka, S., Arai, S., *et al.* 2-Arachidonoyl-*sn*-glycero-3-phosphate, an arachidonic acid-containing lysophosphatidic acid: Occurrence and rapid enzymatic conversion to 2-arachidonoyl-*sn*-glycerol, a cannabinoid receptor ligand, in rat brain. *Arch. Biochem. Biophys.* **402(1)**, 51-58 (2002).
2. Bandoh, K., Aoki, J., Taira, A., *et al.* Lysophosphatidic acid (LPA) receptors of the EDG family are differentially activated by LPA species. Structure-activity relationship of cloned LPA receptors. *FEBS Lett.* **478(1-2)**, 159-165 (2000).
3. Emo, J., Meednu, N., Chapman, T.J., *et al.* Lpa2 is a negative regulator of both dendritic cell activation and murine models of allergic lung inflammation. *J. Immunol.* **188(8)**, 3784-3790 (2012).
4. Hidaka, M., Nishihara, M., and Tokumura, A. Three lysophosphatidic acids with a distinct long chain moiety differently affect cell differentiation of human colon epithelial cells to goblet cells. *Life Sci.* **197**, 73-79 (2018).

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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