

PRODUCT INFORMATION



1-Arachidoyl-2-hydroxy-*sn*-glycero-3-PA (sodium salt)

Item No. 39227

Formal Name: eicosanoic acid, (2R)-2-hydroxy-3-(phosphonoxy)propyl ester, monosodium salt

Synonyms: LPA 20:0, PA(20:0/0:0), 1-Arachidoyl LPA, 1-Arachidoyl Lysophosphatidic Acid, 1-Eicosanoyl-2-hydroxy-*sn*-glycero-3-phosphate, 20:0 LPA

MF: C₂₃H₄₆O₇P • Na

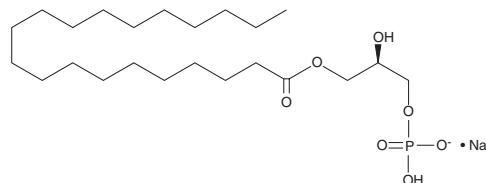
FW: 488.6

Purity: ≥95%

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-Arachidoyl-2-hydroxy-*sn*-glycero-3-PA (1-arachidoyl LPA) (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the 1-arachidoyl LPA (sodium salt) in the solvent of choice, which should be purged with an inert gas. 1-Arachidoyl LPA (sodium salt) is soluble in methanol.

Description

1-Arachidoyl LPA is an agonist of lysophosphatidic acid receptor 1 (LPA₁) and a glycerophospholipid containing arachidic acid (Item Nos. 9000339 | 21906) at the *sn*-1 position.² It induces calcium mobilization in primary human lung fibroblasts (EC₅₀ = 3.6 μM), which endogenously express LPA₁ but not LPA₂-LPA₆. 1-Arachidoyl LPA (2.5 μM) also binds to the ligand-binding domain of peroxisome proliferator-activated receptor γ (PPARγ) in a cell-free assay.² It has been found in human urine.³

References

1. Sattikar, A., Dowling, M.R., and Rosethorne, E.M. Endogenous lysophosphatidic acid (LPA₁) receptor agonists demonstrate ligand bias between calcium and ERK signalling pathways in human lung fibroblasts. *Br. J. Pharmacol.* **174**(3), (2017).
2. Tsukahara, T., Tsukahara, R., Yasuda, S., *et al.* Different residues mediate recognition of 1-O-oleyl-lysophosphatidic acid and risoglitazone in the ligand binding domain of peroxisome proliferator-activated receptor γ. *J. Biol. Chem.* **281**(6), 3398-3407 (2006).
3. Lim, S., Byeon, S.K., Lee, J.Y., *et al.* Computational approach to structural identification of phospholipids using raw mass spectra from nanoflow liquid chromatography-electrospray ionization-tandem mass spectrometry. *J. Mass. Spectrom.* **47**(8), 1004-1014 (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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/15/2024

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM