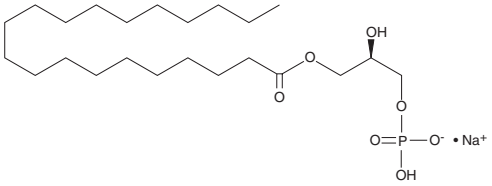
PRODUCT INFORMATION

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

Item No. 39227

Formal Name: eicosanoic acid, (2R)-2-hydroxy-3-(phosphonooxy)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: $C_{23}H_{46}O_7P \bullet Na$
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 (LPA_1) 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 (EC_{50} = 3.6 µM), which endogenously express LPA_1 but not LPA_2-LPA_6. 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 (LPA_1) 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 rosiglitazone 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).

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