

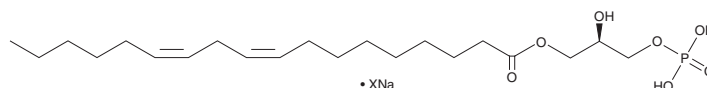
PRODUCT INFORMATION



1-Linoleoyl Lysophosphatidic Acid (sodium salt)

Item No. 38309

CAS Registry No.: 72777-86-7
Formal Name: 9Z,12Z-octadecadienoic acid, 2R-hydroxy-3-(phosphonoxy)propyl ester, sodium salt
Synonyms: 1-Linoleoyl LPA,
1-Linoleoyl Lysophosphatidic Acid,
LPA 18:2, 18:2 LPA,
1-Octadecadienoyl-2-hydroxy-*sn*-glycero-3-phosphate, PA(18:2/0:0)
MF: C₂₁H₃₉O₇P • XNa
FW: 434.5
Purity: ≥95% (mixture of isomers)
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-Linoleoyl-2-hydroxy-*sn*-glycero-3-PA (1-linoleoyl LPA) (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the 1-linoleoyl LPA (sodium salt) in the solvent of choice, which should be purged with an inert gas. 1-linoleoyl LPA (sodium salt) is soluble in the organic solvent methanol.

Description

1-linoleoyl LPA is an agonist of the LPA₂ receptor and a glycerophospholipid containing linoleic acid (Item Nos. 90150 | 90150.1 | 21909) at the *sn*-1 position.¹ It is the most abundant LPA in mouse and human plasma.^{2,3} 1-Linoleoyl LPA selectively increases intracellular calcium levels in LPA₂ receptor-expressing Sf9 cells (EC₅₀ = ~10 nM) over LPA₁ and LPA₃ receptor-expressing Sf9 cells (EC₅₀s = ~200 and ~80 nM, respectively).¹ Serum levels of 1-linoleoyl LPA are increased in mice bearing NCTC clone 2472 tumors.⁴ Plasma 1-linoleoyl LPA levels are decreased in patients with primary progressive, but not relapsing-remitting, multiple sclerosis and are negatively correlated with neurological deficit severity.⁵

References

1. 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).
2. Baker, D.L., Desiderio, D.M., Miller, D.D., *et al.* Direct quantitative analysis of lysophosphatidic acid molecular species by stable isotope dilution electrospray ionization liquid chromatography-mass spectrometry. *Anal. Biochem.* **292(2)**, 287-295 (2001).
3. Kano, K., Matsumoto, H., Kono, N., *et al.* Suppressing postcollection lysophosphatidic acid metabolism improves the precision of plasma LPA quantification. *J. Lipid Res.* **62**, 100029 (2021).
4. Khasabova, I.A., Khasabov, S.G., Johns, M., *et al.* Exosome-associated lysophosphatidic acid signaling contributes to cancer pain. *Pain* (2023).
5. Amatruda, M., Petracca, M., Wentling, M., *et al.* Retrospective unbiased plasma lipidomic of progressive multiple sclerosis patients-identifies lipids discriminating those with faster clinical deterioration. *Sci. Rep.* **10(1)**, 15644 (2020).

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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