

# Produktinformation



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# Product Information



### 1-Octadecyl Lysophosphatidic Acid (sodium salt)

Item No. 10010291

Formal Name:	1-O-octadecyl-2-hydroxy <i>-sn-</i> glycero- 3-phosphate, monosodium salt	ОН
Synonym:	1-Octadecyl LPA	
MF:	$C_{21}H_{44}O_6P \bullet Na$	
FW:	446.5	Ŏ
Purity:	≥95%	
Stability:	≥2 years at -20°C	O≡P—O <sup>-</sup> •Na <sup>+</sup>
Supplied as:	A crystalline solid	о́н

#### Laboratory Procedures

For long term storage, we suggest that 1-octadecyl lysophosphatidic acid (sodium salt) (1-octadecyl LPA (sodium salt)) be stored as supplied at -20°C. It should be stable for at least two years.

1-Octadecyl LPA (sodium salt) is supplied as a crystalline solid. 1-Octadecyl LPA (sodium salt) is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

1-Octadecyl LPA (sodium salt) is a LPA analog containing stearyl alcohol at the sn-1 position. LPA binds to one of five different G protein-linked receptors to mediate a variety of biological responses including cell proliferation, smooth muscle contraction, platelet aggregation, neurite retraction, and cell motility.<sup>1,2</sup> Alkyl ether-linked LPA derivatives have a higher platelet aggregating activity than the acyl derivatives, most likely stemming from an alkyl-specific LPA receptor. For example, 1-octadecyl LPA has platelet aggregating activity with an EC<sub>50</sub> value of 9 nM versus an EC<sub>50</sub> value of 177 nM for 1-octadecanoyl LPA.3

#### References

- 1. Noguchi, K., Ishii, S., and Shimizu, T. Identification of p2y9/GPR23 as a novel G protein-coupled receptor for lysophosphatidic acid, structurally distant from the Edg family. J. Biol. Chem. 278(28), 25600-25606 (2003).
- 2. Moolenaar, W.H. LPA: A novel lipid mediator with diverse biological actions. Trends Cell Biol. 4, 213-219 (1994).
- Tokumura, A., Sinomiya, J., Kishimoto, S., et al. Human platelets respond differentially to lysophosphatidic acids 3. having a highly unsaturated fatty acyl group and alkyl ether-linked lysophosphatidic acids. Biochem J. 365, 617-628 (2002).

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This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all. of the information required for the safe and proper use of this material. Before use, the user <u>must</u> review the <u>complete</u> Material Safety Data Sheet, which has been sent via e mail to uri institution.

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