

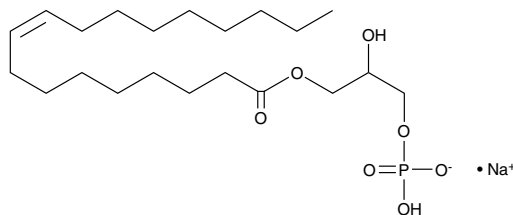
# Product Information



## 1-Oleoyl Lysophosphatidic Acid (sodium salt)

Item No. 62215

**CAS Registry No.:** 22556-62-3  
**Formal Name:** 1-O-9Z-octadecenoyl-*sn*-glyceryl-3-phosphoric acid, sodium salt  
**Synonym:** Oleoyl-*sn*-3-glycerophosphate  
**MF:** C<sub>21</sub>H<sub>40</sub>O<sub>7</sub>P • Na  
**FW:** 458.5  
**Purity:** ≥95%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that 1-Oleoyl lysophosphatidic acid (sodium salt) be stored as supplied at -20°C. It will be stable for at least one year.

1-Oleoyl lysophosphatidic acid (sodium salt) is supplied as a crystalline solid. 1-Oleoyl lysophosphatidic acid (sodium salt) is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of 1-Oleoyl lysophosphatidic acid (sodium salt) be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of 1-Oleoyl lysophosphatidic acid (sodium salt) in PBS, pH 7.2, is approximately 8.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

1-Oleoyl lysophosphatidic acid is a species of lysophosphatidic acid (LPA) containing oleic acid at the *sn*-1 position. Phosphatidic acid is produced either directly through the action of PLD or through a two step process involving liberation of DAG by PLC followed by phosphorylation of DAG by diglycerol kinase.<sup>1</sup> Hydrolysis of the fatty acid at the *sn*-2 position by PLA<sub>2</sub> yields bioactive LPA. LPA binds to four different G-protein linked receptors<sup>2</sup> to mediate a variety of biological responses including cell proliferation, smooth muscle contraction, platelet aggregation, neurite retraction, and cell motility.<sup>1</sup> 1-Oleoyl lysophosphatidic acid is the most potent of the LPA analogs for calcium mobilization in A431 cells<sup>3</sup> and for growth stimulation of a variety of cell lines.<sup>4</sup>

### References

1. Moolenaar, W.H. LPA: A novel lipid mediator with diverse biological actions. *Trends Cell Biol.* **4**, 213-219 (1994).
2. Chun, J., Goetzl, E.J., Hla, T., *et al.* International union of pharmacology. XXXIV. Lysophospholipid receptor nomenclature. *Pharmacol. Rev.* **54**, 265-269 (2002).
3. Jalink, K., Hengeveld, T., Mulder, S., *et al.* Lysophosphatidic acid-induced Ca<sup>2+</sup> mobilization in human A4431 cells: Structure-activity analysis. *Biochem. J.* **307**, 609-616 (1995).
4. van Corven, E.J., van Rijswijk, A., Jalink, K., *et al.* Mitogenic action of lysophosphatidic acid and phosphatidic acid on fibroblasts. Dependence on acyl-chain length and inhibition by suramin. *Biochem. J.* **281**, 163-169 (1992).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/62215](http://www.caymanchem.com/catalog/62215)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

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