

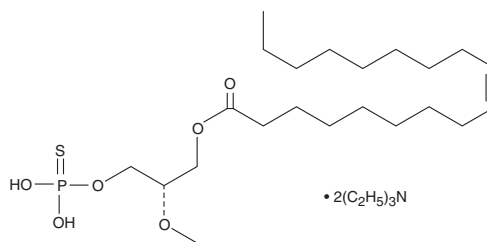
# Product Information



## (2S)-OMPT

Catalog No. 10005707

**Formal Name:** (2S)-3-[(hydroxymercaptophosphinyl)oxy]-2-methoxypropyl ester, 9Z-octadecenoic acid, triethyl ammonium salt  
**MF:** C<sub>22</sub>H<sub>34</sub>O<sub>6</sub>PS • 2(C<sub>2</sub>H<sub>5</sub>)<sub>3</sub>N  
**FW:** 655.0  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A solution in ethanol:chloroform (1:1)



### Laboratory Procedures

For long term storage, we suggest that (2S)-OMPT be stored as supplied at -20°C. It will be stable for at least one year.

(2S)-OMPT is supplied in a (1:1) solution of ethanol:chloroform. To change the solvent, simply evaporate the ethanol:chloroform under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of (2S)-OMPT in these solvents is at least 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of (2S)-OMPT is needed, it can be prepared by evaporating the ethanol:chloroform and directly dissolving the neat oil in aqueous buffers. The solubility of (2S)-OMPT in PBS (pH 7.2) is at least 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Lysophosphatidic acid (LPA) is a potent lipid mediator that elicits its effect through four distinct receptors - LPA<sub>1</sub>/EDG-2, LPA<sub>2</sub>/EDG-4, LPA<sub>3</sub>/EDG-7 and LPA<sub>4</sub>/GPR23.<sup>1,2</sup> OMPT is a selective agonist of the LPA<sub>3</sub> receptor. It exhibits EC<sub>50</sub> values of 68 nM and ≥6.8 μM for calcium mobilization in LPA<sub>3</sub> and LPA<sub>2</sub>-expressing Sf9 cells, respectively.<sup>3</sup> The (2S)-OMPT enantiomer is 5- to 20-fold more active than (2R)-OMPT in calcium release assays in both LPA<sub>3</sub>-transfected Sf9 and rat hepatoma Rh7777 cells.<sup>4</sup>

### References

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2. Niu, S.-L., Mitchell, D.C., and Litman, B.J. Trans fatty acid derived phospholipids show increased membrane cholesterol and reduced receptor activation as compared to their *cis* analogs. *Biochemistry* **44**, 4458-4465 (2005).
3. Hasegawa, Y., Erickson, J.R., Goddard, G.J., *et al.* Identification of a phosphothionate analogue of lysophosphatidic acid (LPA) as a selective agonist of the LPA<sub>3</sub> receptor. *J. Biol. Chem.* **278**(14), 11962-11969 (2003).
4. Qian, L., Xu, Y., Hasegawa, Y., *et al.* Enantioselective responses to a phosphorothioate analogue of lysophosphatidic acid with LPA<sub>3</sub> receptor-selective agonist activity. *J. Med. Chem.* **46**, 5575-5578 (2003).

### Related Products

Lyso-PC - Cat. No. 10172 • 1-Oleoyl Lysophosphatidic Acid (sodium salt) - Cat. No. 62215 • LPA<sub>3</sub> Polyclonal Antibody - Cat. No. 10004840 • LPA<sub>1</sub> Polyclonal Antibody - Cat. No. 10005280 • Lysophospholipase D Polyclonal Antibody - Cat. No. 10005375 • Tetradecyl Phosphonate - Cat. No. 10007565

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**WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.**

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