

## (S,S)-2,2'-Bisoleoyl-lysobisphosphatidic acid (LBPA)

Catalog number: L-B181

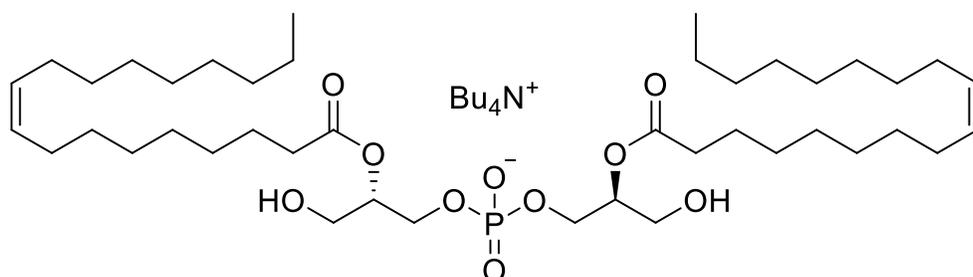
Molecular Formula:  $C_{58}H_{114}NO_{10}P$

MW: 1016.5

CAS: 288089-44-1

Alternate Name: 18:1/18:1 LBPA

Solubility: MeOH:CHCl<sub>3</sub> (1:1 v/v) > 1mg/mL



**Storage and Handling:** Store dry at -20 °C. Stock solutions should be stored frozen (-20 °C or below). Solutions/emulsions of LBPA should be dried after use or discarded. Storage in basic buffers (pH > 9.0) or acidic buffers (pH < 4.0) will cause acyl migration. Solvents used for the handling should be free of acids or bases (e.g. chloroform should be stored over anhydrous potassium bicarbonate).

**Background:** Lysobisphosphatidic acids (LBPA), known also as bis-(monoacylglycerol)phosphates (BMPs) are specialized lipids reported to play a role in intracellular protein and lipid transport in healthy cells. Their accumulation was observed in pathologic liver tissue, and they also serve as antigens for auto-antibody generation in a human autoimmune condition termed antiphospholipid syndrome. Accumulation of LBPA in intracellular, often multilamellar membranes is related to biomembrane polymorphism which may impact intracellular cholesterol transport. (S,S)-Bisoleoyl-lysobisphosphatidic acid is the naturally occurring, biologically active isomer of LPBA.

**References:** 1) Abe, A, Shayman, J.A. (2009) "The role of negatively charged lipids in lysosomal phospholipase A2 function." *Journal of Lipid Research*. 50(10): 2027-35.

2) Chevallier, J. et al. (2008) "Lysobisphosphatidic Acid Controls Endosomal Cholesterol Levels" *Journal of Biological Chemistry*. 283: 27871-27880

3) Yang, S-T. et al (2010) "Cell-Penetrating Peptide Induces Leaky Fusion of Liposomes Containing Late Endosome-Specific Anionic Lipid" *Biophysical Journal*. 8(20): 2525-2533

4) Alvira, D. et al. (2011) "Inhibition of Protein-tyrosine Phosphatase 1B (PTP1B) Mediates Ubiquitination and Degradation of Bcr-Abl Protein" *Journal of Biological Chemistry*. 286: 32313-32323.

5) Bissig, C. et al. (2013) "Viral Infection Controlled by a Calcium-Dependent Lipid-Binding Module in ALIX" *Cell*. 25(4): 364-373.

**Hazardous Properties and Cautions:** The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

**Warranty and Disclaimer:** Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.

