

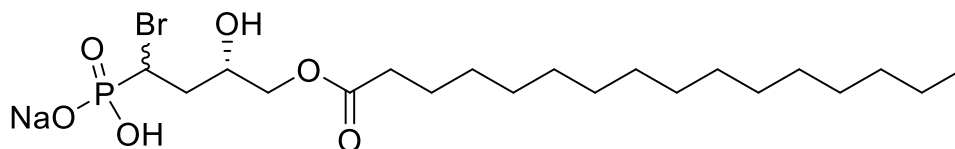
## BrP-LPA

Catalog number: L-7416

Molecular Formula:  $C_{20}H_{39}BrNaO_6P$

MW: 509.4

CAS: 944265-88-7



Alternate Name: 1-Bromo-3(S)-hydroxy-4-(palmitoyloxy)butyl]phosphonate

Solubility: DMSO: 2 mg/mL, water: <1 mg/mL

**Storage and Handling:** BrP-LPA is relatively stable at room temperature as a solid. It is best stored as a dried solid, protected from light at  $-20^{\circ}\text{C}$ . Solutions/emulsions should be kept at  $-20^{\circ}\text{C}$ . Storage in basic buffers ( $\text{pH} > 9.0$ ) or acidic buffers ( $\text{pH} < 4.0$ ) may cause decomposition.

**Background:** BrP-LPA acts as both an Autotaxin inhibitor (94% inhibition at  $10\ \mu\text{M}$ ) and pan LPA receptor antagonist ( $\text{LPA}_1$ :  $1.5\ \mu\text{M}$ ,  $\text{LPA}_2$ :  $1.4\ \mu\text{M}$ ,  $\text{LPA}_3$ :  $1.2\ \mu\text{M}$ ,  $\text{LPA}_4$ :  $0.27\ \mu\text{M}$ ). BrP-LPA inhibits the invasiveness of NIH3T3 *ras*ATX cells by 40% and decreases chemotaxis by 23%. BrP-LPA reduces the size of breast (MDA-MB-231), colon (HCT-116) and melanoma (B16F10) tumors in mouse models.  $\text{PPAR}\gamma$  is not activated by BrP-LPA

**References:** 1) Jiang, G., Y. Xu, et al. (2007). "Alpha-substituted phosphonate analogues of lysophosphatidic acid (LPA) selectively inhibit production and action of LPA." *ChemMedChem* 2(5): 679-90.

2) Zhang, H., X. Xu, et al. (2009). "Dual Activity Lysophosphatidic Acid Receptor Pan-Antagonist/Autotaxin Inhibitor Reduces Breast Cancer Cell Migration In vitro and Causes Tumor Regression In vivo." *Cancer Res* 69: 5441.

3) Schleicher, S. M., D. K. Thotala, et al. (2011). "Autotaxin and LPA Receptors Represent Potential Molecular Targets for the Radiosensitization of Murine Glioma through Effects on Tumor Vasculature." *PLoS ONE* 6(7): e22182.

4) Nikitopoulou, I., E. Kaffe, et al. (2013). "A Metabolically-Stabilized Phosphonate Analog of Lysophosphatidic Acid Attenuates Collagen-Induced Arthritis." *PLoS ONE* 8(7): e70941

**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.

