



Catalog Number:	MC11044	Product Type:	Small Molecule
Bio-Activity:	Endogenous LPA receptor agonist	CAS #:	325465-93-8
Research Categories:	Neuroscience, cell death, stem cells, cancer, heart disease, obesity	Chemical Name:	1-Oleoyl-2-hydroxy-sn-glycerol-3-phosphate, sodium
Solubility:	Soluble in DMSO (up to 1 mg/ml with warming) or in Water (up to 10 mg/ml with warming).	Molecular Formula:	C21H40O7P
Purity:	> 98%	Molecular Weight:	458.51
Format:	Powder	Ship Temp:	Refrigerated (Polar Packs)
Storage:	-20°C		

Application Notes

Description/Data:

A multifunctional intercellular bioactive phospholipid [1]. Stimulates the growth of a variety of cells including fibroblasts, vascular smooth muscle cells, endothelial cells and keratinocytes among others [1]. Acts as a proliferative and anti-apoptotic factor [2]. Agonist at LPA1 (EDG-2), LPA2 (EDG-4) and LPA3 (EDG-7) receptors [3]. LPA-primed astrocytes induce axonal outgrowth of cortical progenitors [4].

References:

- 1) Moolenaar et al. (1995), Lysophosphatidic acid, a multifunctional phospholipid messenger; J. Biol. Chem., 270 12949
- 2) Levine et al. (1997), Lysophosphatidic acid; a novel growth and survival factor for renal proximal tubular cells; Am. J. Physiol., 273 F575
- 3) Goetzl and An (1998), Diversity of cellular receptors and functions for the lysophospholipid growth factors lysophosphatidic acid and sphingosine 1-phosphate; FASEB J., 12 1589
- 4) Spohr et al. (2014), LPA-primed astrocytes induce axonal outgrowth of cortical progenitors by activating PKA signaling pathways and modulating extracellular matrix proteins; Front Cell Neurosci., 8 296

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