



## LPA (Oleyl)

## Data Sheet

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

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### 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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