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DATASHEET

1-Oleoyl lysophosphatidic acid sodium salt

Product overview

Name	1-Oleoyl lysophosphatidic acid sodium salt
Cat No	HB3373
Alternative names	LPA
Biological action	Inhibitor
Purity	>95%
Description	LPA1 and LPA2 agonist. Inhibits differentiation of neural stem cells (NSCs) into neurons.

Biological Data

Biological description	Endogenous lysophospholipid LPA1 and LPA2 receptor agonist. Inhibits differentiation of neural stem cells (NSCs) into neurons and is also commonly used for growth stimulation in a variety of cell lines.
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Solubility & Handling

Storage instructions	-20 °C
Solubility overview	Soluble in PBS (10mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

Chemical Data

Chemical name	1-O-9Z-Octadecenyl-sn-glyceryl-3-p phosphoric acid sodium salt
Molecular Weight	458.5
Chemical structure	The chemical structure shows a 18-carbon chain with a double bond at the 9th position (9Z). It is attached via an ester group (-O-) to the 2-position of a glycerol backbone. The glycerol backbone has a phosphate group (-OPO3^2-) at the 3-position, which is further esterified to a sodium cation (Na+).
Molecular Formula	C ₂₁ H ₄₀ NaO ₇ P
CAS Number	325465-93-8
PubChem identifier	44159357
SMILES	[Na+].CCCCCCCCC=C=C/CCCCCCCC(=O)OC[C@@H](O)COP(O)([O-])=O
InChiKey	XGRLSUFWELJJAB-JGSYTFBMSA-M

References

Rho/ROCK pathway is essential to the expansion, differentiation, and morphological rearrangements of human neural stem/progenitor cells induced by lysophosphatidic acid

Pebay et al (2013) J Lipd Res. 54(5)

PubMedID [23463731](#)

Lysophosphatidic Acid Receptor Is a Functional Marker of Adult Hippocampal Precursor Cells

Kempermann et al (2016) Stem Cell Reports 6(4)

PubMedID [27050949](#)

The Role of Lysophosphatidic Acid in Adult Stem Cells

Kim et al (2020) Int J Stem Cells. 13(2)

PubMedID

32587135
