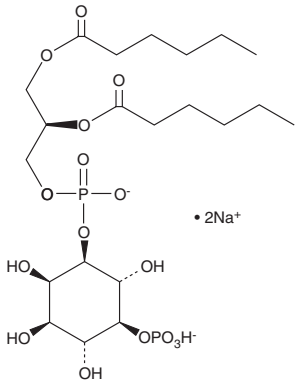
PRODUCT INFORMATION

PtdIns-(5)-P_1 (1,2-dihexanoyl) (sodium salt)

Item No. 10008050



CAS Registry No.:	1582283-67-7
Formal Name:	1-(1,2-dihexanoylphosphatidyl) inositol-5-phosphate, disodium salt
Synonyms:	DHPI-5-P_1, Phosphatidylinositol-5-phosphate
MF:	$C_{21}H_{38}O_{16}P_2 \bullet 2Na$
FW:	654.5
Purity:	≥98%
Supplied as:	A lyophilized powder
Storage:	-20°C
Stability:	≥1 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

PtdIns-(5)-P_1 (1,2-dihexanoyl) (sodium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the PtdIns-(5)-P_1 (1,2-dihexanoyl) (sodium salt) in the solvent of choice, which should be purged with an inert gas. PtdIns-(5)-P_1 (1,2-dihexanoyl) (sodium salt) is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of PtdIns-(5)-P_1 (1,2-dihexanoyl) (sodium salt) can be prepared by directly dissolving the lyophilized powder in aqueous buffers. The solubility of PtdIns-(5)-P_1 (1,2-dihexanoyl) (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

The phosphatidylinositol (PtdIns) phosphates represent a small percentage of total membrane phospholipids. However, they play a critical role in the generation and transmission of cellular signals.[1,2] PtdIns-(5)-P_1 (1,2-dihexanoyl) is a synthetic analog of natural PtdIns containing C6:0 fatty acids at the *sn*-1 and *sn*-2 positions. The compound features the same inositol and diacylglycerol (DAG) stereochemistry as the natural compound. PtdIns-(5)-P1 can be phosphorylated to di- (PtdIns-P_2; PIP_2) and triphosphates (PtdIns-P_3; PIP_3) by phosphoinositol (PI)-specific kinases. Hydrolysis of PtdIns-(4,5)-P_2 by PI-specific phospholipase C generates inositol triphosphate (IP_3) and DAG which are key second messengers in an intricate biochemical signal transduction cascade.

References

1. Exton, J.H. Regulation of phosphoinositide phospholipases by hormones, neurotransmitters, and other agonists linked to G proteins. *Annu. Rev. Pharmacol. Toxicol.* **36**, 481-509 (1996).
2. Majerus, P.W. Inositol phosphate biochemistry. *Annu. Rev. Biochem.* **61**, 225-250 (1992).

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