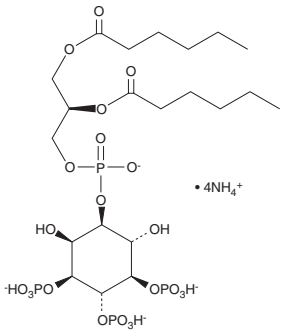
PRODUCT INFORMATION

PtdIns-(3,4,5)-P_3 (1,2-dihexanoyl) (ammonium salt)

Item No. 10008390

CAS Registry No.:	799268-62-5
Formal Name:	1-(1,2R-dihexanoylphosphatidyl)inositol-3,4,5-triphosphate, tetraammonium salt
Synonyms:	DHPI-3,4,5-P_3, Phosphatidylinositol-3,4,5-triphosphate C-6, PI(3,4,5)P_3 (6:0/6:0), PIP3[3',4',5']{6:0/6:0}, PIP3C-16
MF:	$C_{21}H_{42}O_{22}P_4 \bullet 4NH_3$
FW:	838.6
Purity:	≥98%
Supplied as:	A lyophilized powder
Storage:	-20°C
Stability:	≥5 years



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

Laboratory Procedures

PtdIns-(3,4,5)-P_3 (1,2-dihexanoyl) (ammonium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the PtdIns-(3,4,5)-P_3 (1,2-dihexanoyl) (ammonium salt) in water. The solubility of PtdIns-(3,4,5)-P_3 (1,2-dihexanoyl) (ammonium salt) in water 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-(3,4,5)-P_3, also known as PIP_3, is resistant to cleavage by PI-specific phospholipase C (PLC).[3] Thus, it is likely to function in signal transduction as a modulator in its own right, rather than as a source of inositol tetraphosphates. PIP_3 can serve as an anchor for the binding of signal transduction proteins bearing pleckstrin homology (PH) domains.[4,5] Protein binding to PIP_3 is important for cytoskeletal rearrangement and membrane trafficking.[6] PtdIns-(3,4,5)-P_3 (1,2-dihexanoyl) is a synthetic analog of natural PIP_3 with C_6:0 fatty acids at the *sn*-1 and *sn*-2 positions. The compound features the same inositol and diacylglycerol (DAG) stereochemistry as that of the natural compound. The short fatty acid chains of this analog give it different physical properties from naturally-occurring PIP_3, including higher solubility in aqueous media.

References

1. Guan, X. and Wenk, M.R. *Front. Biosci.* **13(9)**, 3239-3251 (2008).
2. Kashiwada, M., Lu, P., and Rothman, P.B. *Immunol. Res.* **39(1-3)**, 194-224 (2007).
3. Serunian, L.A., Haber, M.T., Fukui, T., *et al. J. Biol. Chem.* **264(30)**, 17809-17815 (1989).
4. Tanaka, K., Imajoh-Ohmi, S., Sawada, T., *et al. Eur. J. Biochem.* **245(2)**, 512-519 (1997).
5. Yang, X., Rudolf, M., Carew, M.A., *et al. J. Biol. Chem.* **274(27)**, 18973-18980 (1999).
6. Hamaguchi, N., Ihara, S., Ohdaira, T., *et al. Biochem. Biophys. Res. Commun.* **361(2)**, 270-275 (2007).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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