

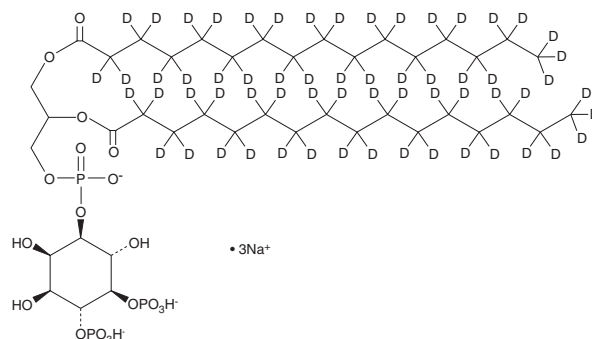
PRODUCT INFORMATION



PtdIns-(4,5)-P₂ (1,2-dipalmitoyl)-d₆₂ (sodium salt)

Item No. 10005615

Formal Name:	1-(1,2-dihexadecanoyl(2,2',3,3',4,4',5,5',6,6',7,7',8,8',9,9',10,10',11,11',12,12',13,13',14,14',15,16,16,16-d ₃₁)phosphatidyl)inositol-4,5-bisphosphate, trisodium salt
Synonyms:	DPPI-4,5-P ₂ -d ₆₂ , Phosphatidylinositol-4,5-diphosphate C16-d ₆₂ , PI(4,5)P ₂ (16:0/16:0)-d ₆₂ , PIP2[4',5'](16:0/16:0)-d ₆₂
MF:	C ₄₁ H ₁₆ D ₆₂ O ₁₉ P ₃ • 3Na
FW:	1,099.3
Chemical Purity:	≥98% PtdIns-(4,5)-P ₂ (1,2-dipalmitoyl) (sodium salt)
Deuterium Incorporation:	≥99% deuterated forms (d ₁ -d ₆₂); ≤1% d ₀
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-(4,5)-P₂ (1,2-dipalmitoyl)-d₆₂ (sodium salt) is intended for use as an internal standard for the quantification of PtdIns-(4,5)-P₂ (1,2-dipalmitoyl) (sodium salt) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

PtdIns-(4,5)-P₂ (1,2-dipalmitoyl) (sodium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the PtdIns-(4,5)-P₂ (1,2-dipalmitoyl) (sodium salt) in an organic solvent purged with an inert gas. PtdIns-(4,5)-P₂ (1,2-dipalmitoyl) (sodium salt) is soluble in organic solvent such as chloroform:methanol:water (4:3:1). The solubility of PtdIns-(4,5)-P₂ (1,2-dipalmitoyl) (sodium salt) in this solvent is at least 1 mg/ml. PtdIns-(4,5)-P₂ (1,2-dipalmitoyl) (sodium salt) will not be stable in aqueous solutions for more than 24 hours.

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-4,5-P₂-(1,2-dipalmitoyl)-d₆₂ is a synthetic analog of natural PtdIns containing deuterated C16:0 fatty acids at the sn-1 and sn-2 positions. This synthetic standard features the same inositol and diacyl glycerol (DAG) stereochemistry as that of the natural compound. The natural compound is the product of phosphatidylinositol 4-phosphate 5-kinase acting on PtdIns-(4)-P₁. Hydrolysis of PtdIns-(4,5)-P₂ by phosphoinositide (PI)-specific phospholipase C generates inositol triphosphate (IP₃) 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).

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.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM