

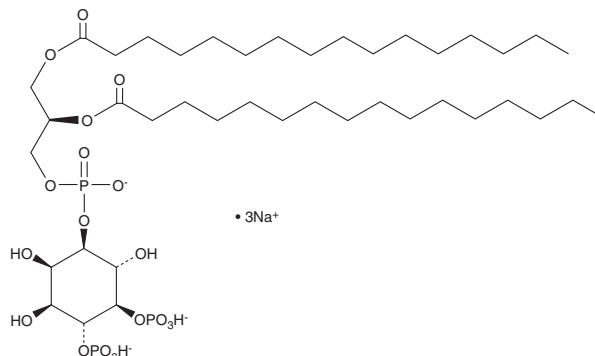
# PRODUCT INFORMATION



## PtdIns-(4,5)-P<sub>2</sub> (1,2-dipalmitoyl) (sodium salt)

Item No. 10008115

**CAS Registry No.:** 1628353-01-4  
**Formal Name:** 1-(1,2-dihexadecanoylphosphatidyl) inositol-4,5-bisphosphate, trisodium salt  
**Synonyms:** DPPI-4,5-P<sub>2</sub>, Phosphatidylinositol-4,5-diphosphate C-16, PI(4,5)P<sub>2</sub> (16:0/16:0), PIP2[4',5'](16:0/16:0)  
**MF:** C<sub>41</sub>H<sub>78</sub>O<sub>19</sub>P<sub>3</sub> • 3Na  
**FW:** 1036.9  
**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-(4,5)-P<sub>2</sub> (1,2-dipalmitoyl) (sodium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the PtdIns-(4,5)-P<sub>2</sub> (1,2-dipalmitoyl) (sodium salt) in the solvent of choice, which should be purged with an inert gas. PtdIns-(4,5)-P<sub>2</sub> (1,2-dipalmitoyl) (sodium salt) is soluble in organic solvents such as chloroform and chloroform:methanol:water (3:3:1). It is also soluble in water. The solubility of PtdIns-(4,5)-P<sub>2</sub> (1,2-dipalmitoyl) (sodium salt) in chloroform and chloroform:methanol:water (3:3:1) is approximately 0.1 and 1 mg/ml, respectively and approximately 10 mg/ml in water. 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.<sup>1,2</sup> PtdIns PtdIns-(4,5)-P<sub>2</sub> (1,2-dipalmitoyl) is a synthetic analog of natural phosphatidylinositol (PtdIns) containing C<sub>16</sub>: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. The natural compound is the product of PtdIns-4-phosphate 5-kinase acting on PtdIns-(4)-P<sub>1</sub>. Hydrolysis of PtdIns-(4,5)-P<sub>2</sub> by phosphoinositide (PI)-specific phospholipase C generates inositol triphosphate (IP<sub>3</sub>) 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 09/21/2023

#### 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](http://WWW.CAYMANCHEM.COM)