

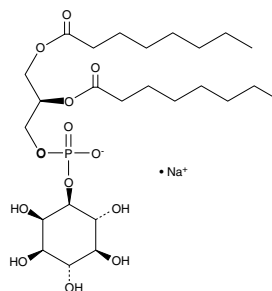
# Product Information



## PtdIns-(1,2-dioctanoyl) (sodium salt)

Item No. 10008099

**CAS Registry No.:** 899827-36-2  
**Formal Name:** 1-(1,2-dioctanoylphosphatidyl)inositol, monosodium salt  
**Synonyms:** DOPI, Phosphatidylinositol C-8  
**MF:** C<sub>25</sub>H<sub>46</sub>O<sub>13</sub>P • Na  
**FW:** 608.6  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A lyophilized powder



### Laboratory Procedures

For long term storage, we suggest that PtdIns-(1,2-dioctanoyl) (sodium salt) be stored as supplied at -20°C. It should be stable for at least one year.

PtdIns-(1,2-dioctanoyl) (sodium salt) is supplied as a lyophilized powder. PtdIns-(1,2-dioctanoyl) (sodium salt) is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that aqueous solutions of PtdIns-(1,2-dioctanoyl) (sodium salt) be prepared by directly dissolving the lyophilized powder in water. The solubility of PtdIns-(1,2-dioctanoyl) (sodium salt) in water is at least 10 mg/ml.

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-(1,2-dioctanoyl) is a synthetic analog of natural PtdIns containing C8:0 fatty acids at the *sn*-1 and *sn*-2 positions. The compound features the same inositol and diacyl glycerol (DAG) stereochemistry as that of the natural compound. The short fatty acid chains of this analog, compared to naturally-occurring PtdIns, gives it different physical properties including high solubility in aqueous media. PtdIns are phosphorylated to mono- (PtdIns-P; PIP), di- (PtdIns-P<sub>2</sub>; PIP<sub>2</sub>), and triphosphates (PtdIns-P<sub>3</sub>; PIP<sub>3</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).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10008099](http://www.caymanchem.com/catalog/10008099)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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