

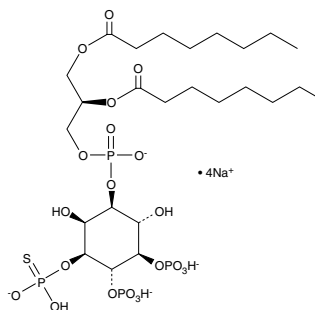
Product Information



3-PT-PtdIns-(3,4,5)-P₃ (1,2-dioctanoyl) (sodium salt)

Item No. 10009804

Formal Name: 1-(1,2-dioctanoylphosphatidyl)inositol-3-phosphorothioate-4,5-diphosphate, tetrasodium salt
Synonym: 3-Phosphorothioate-phosphatidylinositol-4,5-diphosphate C-8
MF: C₂₅H₄₆O₂₁P₄S • 4Na
FW: 930.5
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A lyophilized powder



Laboratory Procedures

For long term storage, we suggest that 3-PT-PtdIns(3,4,5)-P₃ (1,2-dioctanoyl) (sodium salt) be stored as supplied at -20°C. It should be stable for at least one year.

3-PT-PtdIns-(3,4,5)-P₃ (1,2-dioctanoyl) (sodium salt) is supplied as a lyophilized powder. 3-PT-PtdIns-(3,4,5)-P₃ (1,2-dioctanoyl) (sodium salt) is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of 3-PT-PtdIns-(3,4,5)-P₃ (1,2-dioctanoyl) (sodium salt) be prepared by directly dissolving the lyophilized powder in aqueous buffers. The solubility of 3-PT-PtdIns-(3,4,5)-P₃ (1,2-dioctanoyl) (sodium salt) in water is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

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 can be phosphorylated by phosphoinositide (PI)-3-kinase to make PtdIns(3,4,5)-P₃ which initiates an intricate signaling cascade that has been implicated in cancer.³ 3-PT-PtdIns(3,4,5)-P₃ is an analog of PtdIns-(3,4,5)-P₃ that is resistant to hydrolysis by PTEN. It has a 5-fold reduced affinity for the specific PtdIns(3,4,5)-P₃-binding protein GRP1 and increases sodium transport in A6 cell monolayers.⁴

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).
3. Vivanco, I. and Sawyers, C.L. The phosphatidylinositol 3-kinase-AKT pathway in human cancer. *Nature Reviews Cancer* **2**, 489-501 (2002).
4. Zhang, H., Markadieu, N., Beauwens, R., *et al.* Synthesis and biological activity of PTEN-resistant analogues of phosphatidylinositol 3,4,5-trisphosphate. *J. Am. Chem. Soc.* **128**, 16464-16465 (2006).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10009804

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com

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

MATERIAL 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 Material Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any **obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

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.

For further details, please refer to our **Warranty and Limitation of Remedy** located on our website and in our catalog.

Copyright Cayman Chemical Company, 02/14/2012