

Product Information



D-*myo*-Inositol-1,3,4,6-tetraphosphate (ammonium salt)

Item No. 10008442

CAS Registry No.: 142507-74-2

Formal Name: D-*myo*-inositol-1,3,4,6-tetrakis(dihydrogen phosphate), tetraammonium salt

Synonyms: Ins(1,3,4,6)-P₄, 1,3,4,6-IP₄

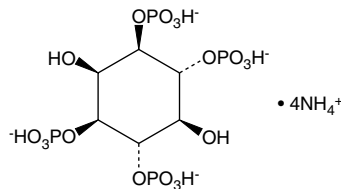
MF: C₆H₁₂O₁₈P₄ • 4NH₄⁺

FW: 568.2

Purity: ≥95%

Stability: ≥1 year at -20°C

Supplied as: A lyophilized powder



Laboratory Procedures

For long term storage, we suggest that D-*myo*-inositol-1,3,4,6-tetraphosphate (Ins(1,3,4,6)P₄) (ammonium salt) be stored as supplied at -20°C. It should be stable for at least one year.

Ins(1,3,4,6)P₄ (ammonium salt) is supplied as a lyophilized powder. Ins(1,3,4,6)P₄ (ammonium 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 Ins(1,3,4,6)P₄ (ammonium salt) be prepared by directly dissolving the lyophilized powder in water. The solubility of Ins(1,3,4,6)P₄ (ammonium salt) in water and PBS, pH 7.2, is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

The inositol phosphates (IPs) are a family of molecules produced by altering the phosphorylation status of each of the six carbons on the cyclic inositol structure. They act as second messengers, regulating a wide array of cellular functions. Ins(1,3,4,6)P₄ largely acts an intermediate, serving as a substrate for inositol-1,3,4,6-tetraphosphate 5-kinase to produce inositol-1,3,4,5,6-pentaphosphate, or inositol-1,3,4,6-tetraphosphate 2-kinase to give inositol-1,2,3,4,6-pentaphosphate.¹ These inositol pentaphosphates can be further phosphorylated to produce inositol-1,2,3,4,5,6-hexakisphosphate, or phytic acid, which serves diverse roles in eukaryotic tissues. Ins(1,3,4,6)P₄ (ammonium salt) is a poor activator of the inositol 1,4,5-trisphosphate receptor *in vitro*.² Other functions of this IP remain to be elucidated.

References

1. Raboy, V. Molecules of interest *myo*-inositol-1,2,3,4,5,6-hexakisphosphate. *Phytochem.* **64**, 1033-1043 (2003).
2. Burford, N.T., Nahorski, S.R., Chung, S.-K., *et al.* Binding and activity of the nine possible regioisomers of *myo*-inositol tetrakisphosphate at the inositol 1,4,5-trisphosphate receptor. *Cell Calcium* **21**, 301-310 (1997).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10008442

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.

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.

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, 09/30/2013