

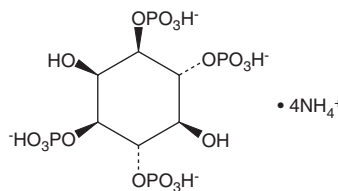
PRODUCT INFORMATION



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%
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

D-myo-inositol-1,3,4,6-tetraphosphate (Ins(1,3,4,6)P₄) (ammonium salt) 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.

Description

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 as 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).

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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