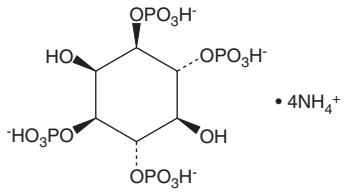
PRODUCT INFORMATION

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)-P_4, 1,3,4,6-IP_4
MF: $C_6H_{12}O_{18}P_4 \cdot 4NH_4$
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)P_4) (ammonium salt) Ins(1,3,4,6)P_4 (ammonium salt) is supplied as a lyophilized powder. Ins(1,3,4,6)P_4 (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)P_4 (ammonium salt) be prepared by directly dissolving the lyophilized powder in water. The solubility of Ins(1,3,4,6)P_4 (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)-P_4 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)-P_4 (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).

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