

Product Information



D-myoinositol-1,3,4,6-tetraphosphate (ammonium salt)

Item No. 10008442

CAS Registry No.: 142507-74-2

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

Synonyms: Ins(1,3,4,6)P₄, 1,3,4,6-IP₄

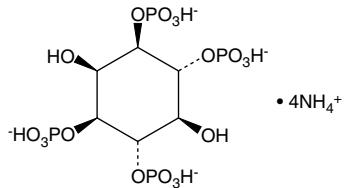
MF: C₆H₁₂O₁₈P₄ • 4NH₄⁺

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-myoinositol-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 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).

Related Products

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

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