

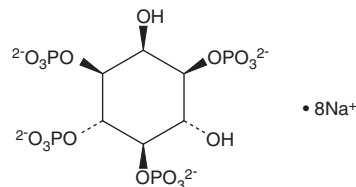
PRODUCT INFORMATION



D-*myo*-Inositol-1,3,4,5-tetraphosphate (sodium salt)

Item No. 60980

CAS Registry No.: 210488-61-2
Formal Name: D-*myo*-inositol-1,3,4,5-tetrakis(dihydrogen phosphate), octasodium salt
Synonyms: Ins(1,3,4,5)-P₄, 1,3,4,5-IP₄
MF: C₆H₈O₁₈P₄ • 8Na
FW: 675.9
Purity: ≥98%
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-1,3,4,5-tetraphosphate (sodium salt) (Ins(1,3,4,5)-P₄ (sodium salt)) is supplied as a lyophilized powder. Ins(1,3,4,5)-P₄ (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 Ins(1,3,4,5)-P₄ (sodium salt) can be prepared by directly dissolving the lyophilized powder in aqueous buffers. The solubility of Ins(1,3,4,5)-P₄ (sodium salt) in PBS (pH 7.2) is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ins(1,3,4,5)-P₄ is a polyphosphoinositide which may be involved in extracellular signalling. Ins(1,3,4,5)-P₄ is formed by the phosphorylation of Ins(1,4,5)-P₃ by inositol 1,4,5-triphosphate 3-kinase.^{1,2} Ins(1,3,4,5)-P₄ increases intracellular calcium levels by two distinct mechanisms: opening calcium channels on both the endoplasmic reticulum to release calcium from internal stores and on the plasma membrane to allow the influx of calcium from outside the cell.³

References

1. Billington, D.C., Baker, R., Kulagowski, J.J., *et al.* Synthesis of *myo*-inositol 1-phosphate and 4-phosphate, and their individual enantiomers. *J. Chem. Soc., Chem. Commun.* 314-316 (1987).
2. Communi, D., Vanweyenbergh, V., and Erneux, C. Purification and biochemical properties of a high-molecular-mass inositol 1,4,5-trisphosphate 3-kinase isoenzyme in human platelets. *Biochem. J.* **298**, 669-673 (1994).
3. Lückhoff, A. and Clapham, D.E. Inositol 1,3,4,5-tetrakisphosphate activates an endothelial Ca²⁺-permeable channel. *Nature* **355**, 356-358 (1992).

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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