

PRODUCT INFORMATION

D-myo-Inositol-3,4,5,6-tetraphosphate (sodium salt)

Item No. 10007782

Formal Name: D-myo-inositol-3,4,5,6-tetra(hydrogen phosphate), tetrasodium salt

Synonyms: Ins(3,4,5,6)-P₄, 3,4,5,6-IP₄

MF: C₆H₁₂O₁₈P₄ • 4Na

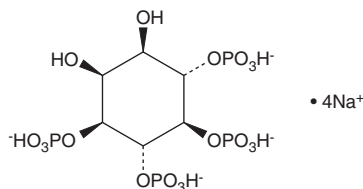
FW: 588.0

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-3,4,5,6-tetraphosphate (sodium salt) (Ins(3,4,5,6)-P₄) is supplied as a lyophilized powder. Ins(3,4,5,6)-P₄ is practically insoluble in organic solvents. For biological experiments, we suggest that aqueous solutions of Ins(3,4,5,6)-P₄ be prepared by directly dissolving the lyophilized powder in water. The solubility of Ins(3,4,5,6)-P₄ in water is at least 50 mg/ml.

Description

Ins(3,4,5,6)-P₄ is one of several different inositol oligophosphate isomers implicated in signal transduction. It almost completely inhibits calcium-activated chloride channels at a concentration of 8-10 μM.¹ Related inositol oligophosphates Ins(1,3,4,5)-P₄, Ins(1,3,4,6)-P₄, Ins(1,4,5,6)-P₄, and Ins(1,3,4,5,6)-P₅ do not inhibit the calcium channel at concentrations up to 100 μM.¹ Ins(1,3,4)-P₃-mediated inhibition of Ins(3,4,5,6)-P₄ 1-kinase increases the cellular level of Ins(3,4,5,6)-P₄, thus regulating channel inhibition.² Ins(3,4,5,6)-P₄ was found to be inactive when analyzed for Ca²⁺-releasing potency in *Xenopus* oocytes.³

References

1. Xie, W., Kaetzel, M.A., Bruzik, K.S., *et al.* Inositol 3,4,5,6-tetrakisphosphate inhibits the calmodulin-dependent protein kinase II-activated chloride conductance in T84 colonic epithelial cells. *J. Biol. Chem.* **271**(24), 14092-14097 (1996).
2. Yang, X., Rudolf, M., Carew, M.A., *et al.* Inositol 1,3,4-trisphosphate acts *in vivo* as a specific regulator of cellular signaling by inositol 3,4,5,6-tetrakisphosphate. *J. Biol. Chem.* **274**, 18973-18980 (1999).
3. DeLisle, S., Radenberg, T., Wintermantel, M.R., *et al.* Second messenger specificity of the inositol trisphosphate receptor: Reappraisal based on novel inositol phosphates. *Am. J. Physiol. Cell Physiol.* **35**, C429-C436 (1994).

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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