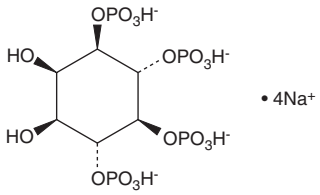
PRODUCT INFORMATION

D-*myo*-Inositol-1,4,5,6-tetraphosphate (sodium salt)

Item No. 10007783

CAS Registry No.: 157542-47-7
Formal Name: D-*myo*-inositol-1,4,5,6-tetra(hydrogen phosphate), tetrasodium salt
Synonyms: Ins(1,4,5,6)-P_4, 1,4,5,6-IP_4
MF: $C_6H_{12}O_{18}P_4$ • 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-1,4,5,6-tetraphosphate (sodium salt) (Ins(1,4,5,6)-P_4) is supplied as a lyophilized powder. Ins(1,4,5,6)-P_4 is practically insoluble in organic solvents. For biological experiments, we suggest that aqueous solutions of Ins(1,4,5,6)-P_4 be prepared by directly dissolving the lyophilized powder in water. The solubility of Ins(1,4,5,6)-P_4 in water is at least 50 mg/ml.

Description

Ins(1,4,5,6)-P_4 is one of several different inositol oligophosphate isomers implicated in signal transduction. Production of Ins(1,4,5,6)-P_4 by intestinal epithelial cells increases approximately 2-14 fold, depending on the strain and incubation time, following infection with *Salmonella*.[1] Ins(1,4,5,6)-P_4 antagonizes epidermal growth factor (EGF) signalling through the phosphatidylinositol 3-kinase pathway.[1] Ins(1,4,5,6)-P_4 (tested as the D/L racemic mixture) is ~1,000-fold less potent than Ins(1,4,5)-P_3 at initiating Ca^{2+} release when injected into *Xenopus* oocytes.[2]

References

1. Eckmann, L., Rudolf, M.T., Ptasznik, A., *et al.* D-*myo*-Inositol 1,4,5,6-tetrakisphosphate produced in human intestinal epithelial cells in response to salmonella invasion inhibits phosphoinositide 3-kinase signaling pathways. *Proc. Natl. Acad. Sci. USA* **94**, 14456-14460 (1997).
2. 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).

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