

PRODUCT INFORMATION



D-myo-Inositol-1,3,5-triphosphate (sodium salt)

Item No. 10007781

Formal Name: D-myo-inositol-1,3,5-tris(hydrogen phosphate), trisodium salt

Synonyms: Ins(1,3,5)P₃ (sodium salt), 1,3,5-IP₃ (sodium salt)

MF: C₆H₁₂O₁₅P₃ • 3Na

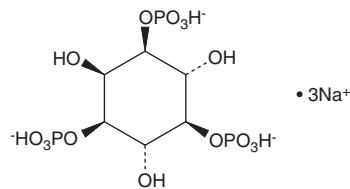
FW: 486.0

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-1,3,5-triphosphate (sodium salt) (Ins(1,3,5)P₃) is supplied as a lyophilized powder. Ins(1,3,5)P₃ is practically insoluble in organic solvents. For biological experiments, we suggest that aqueous solutions of Ins(1,3,5)P₃ be prepared by directly dissolving the lyophilized powder in water. The solubility of Ins(1,3,5)P₃ in water is at least 50 mg/ml.

Description

Ins(1,3,5)P₃ is a member of the inositol phosphate (InsP) family of second messengers that play a critical role in the transmission of cellular signals.^{1,2} The most studied InsP, Ins(1,4,5)P₃ is a second messenger produced in cells by phospholipase C (PLC)-mediated hydrolysis of phosphatidylinositol-4,5-bisphosphate.^{3,4} Binding of Ins(1,4,5)P₃ to its receptor on the endoplasmic reticulum results in opening of the calcium channels and an increase in intracellular calcium.^{4,5} Ins(1,3,5)P₃ (tested as the meso compound) is 50-fold less potent than Ins(1,4,5)P₃ at initiating Ca²⁺ release when injected into *Xenopus* oocytes.⁶

References

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4. Yoshida, Y. and Imai, S. Structure and function of inositol 1,4,5-triphosphate receptor. *Jpn. J. Pharmacol.* **74(2)**, 125-137 (1997).
5. Exton, J.H. Regulation of phosphoinositide phospholipases by hormones, neurotransmitters, and other agonists linked to G proteins. *Annu. Rev. Pharmacol. Toxicol.* **36**, 481-509 (1996).
6. 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(2 Pt. 1)**, 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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