

PRODUCT INFORMATION

D-myo-Inositol-2,3,5-triphosphate (ammonium salt)

Item No. 10008423

Formal Name: D-myo-inositol-2,3,5-tris(dihydrogen phosphate), triammonium salt

Synonyms: Ins(2,3,5)P₃ (ammonium salt), 2,3,5-IP₃ (ammonium salt)

MF: C₆H₁₂O₁₅P₃ • 3NH₄

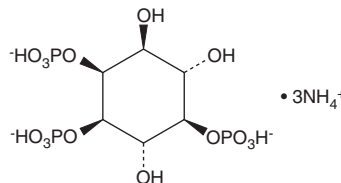
FW: 471.2

Purity: ≥98%

Supplied as: A lyophilized powder

Storage: -20°C

Stability: ≥1 year



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

D-myo-Inositol-2,3,5-triphosphate (ammonium salt) (Ins(2,3,5)P₃ (ammonium salt)) is supplied as a lyophilized powder. Aqueous solutions of Ins(2,3,5)P₃ (ammonium salt) can be prepared by directly dissolving the lyophilized powder in aqueous buffers. The solubility of Ins(2,3,5)P₃ (ammonium salt) in PBS (pH 7.2) and water is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ins(2,3,5)P₃ (ammonium salt) 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 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(2,3,5)P₃ (ammonium salt) (tested as a racemic mixture) is 500-fold less potent than Ins(1,4,5)-P₃ at initiating Ca²⁺ release when injected into *Xenopus* oocytes.⁶

References

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2. Majerus, P.W. Inositol phosphate biochemistry. *Annu. Rev. Biochem.* **61**, 225-250 (1992).
3. Streb, H., Irvine, R.F., Berridge, M.J., et al. Release of Ca²⁺ from a nonmitochondrial intracellular store in pancreatic acinar cells by inositol-1,4,5-trisphosphate. *Nature* **306**(5938), 67-69 (1983).
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.* **266**(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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