

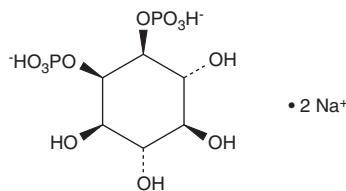
PRODUCT INFORMATION



D-myo-Inositol-1,2-diphosphate (sodium salt)

Item No. 10008439

CAS Registry No.: 208584-51-4
Formal Name: D-myo-inositol-1,2-bis(dihydrogen phosphate), disodium salt
Synonyms: Ins(1,2)P₂ (sodium salt), 1,2-IP₂ (sodium salt)
MF: C₆H₁₂O₁₂P₂ • 2Na
FW: 384.1
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-1,2-diphosphate (Ins(1,2)P₂) (sodium salt) is supplied as a lyophilized powder. Ins(1,2)P₂ (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(1,2)P₂ (sodium salt) be prepared by directly dissolving the lyophilized powder in aqueous buffers. The solubility of Ins(1,2)P₂ (sodium salt) in water is approximately 5 mg/ml. We do not recommend storing the aqueous solutions for more than one day.

Description

Ins(1,2)P₂ (sodium salt) is one of the many inositol phosphate (InsP) isomers that could act as small, soluble second messengers in the transmission of cellular signals.¹⁻³ 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.^{4,5} 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.^{5,6} Ins(1,2)P₂ (tested as the D/L racemic mixture) is ~1,000-fold less potent than Ins(1,4,5)P₃ at initiating Ca²⁺ release when injected into *Xenopus oocytes*.⁷

References

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3. Shears, S.B. The versatility of inositol phosphates as cellular signals. *Biochim. Biophys. Acta* **1436**, 49-67 (1998).
4. 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**, 67-69 (1983).
5. Yoshida, Y. and Imai, S. Structure and function of inositol 1,4,5-trisphosphate receptor. *Jpn. J. Pharmacol.* **74**, 125-137 (1997).
6. 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).
7. 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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