

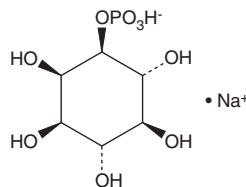
PRODUCT INFORMATION



D-myo-Inositol-1-phosphate (sodium salt)

Item No. 10007777

Formal Name: D-myo-inositol-1-hydrogen phosphate, monosodium salt
Synonyms: Ins(1)P₁ (sodium salt), 1-IP₁ (sodium salt)
MF: C₆H₁₂O₉P • Na
FW: 282.1
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-phosphate (sodium salt) (Ins(1)P₁) is supplied as a lyophilized powder. Ins(1)P₁ is sparingly soluble in organic solvents. For biological experiments, we suggest that aqueous solutions of Ins(1)P₁ be prepared by directly dissolving the lyophilized powder in water. The solubility of Ins(1)P₁ in water is approximately 50 mg/ml.

Description

Ins(1)P₁ is a member of the inositol phosphate (InsP) molecular 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 phosphatidyl inositol-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)P₁ can be formed by PLC hydrolysis of phosphatidylinositol or by dephosphorylation of polyphosphate inositols such as Ins(1,3)P₂ by inositol polyphosphate 3-phosphatase.¹

References

1. Majerus, P.W. Inositol phosphate biochemistry. *Annu. Rev. Biochem.* **61**, 225-250 (1992).
2. Berridge, M.J. Inositol trisphosphate and calcium signalling. *Nature* **361**, 315-325 (1993).
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**, 67-69 (1983).
4. Yoshida, Y. and Imai, S. Structure and function of inositol 1,4,5-triphosphate receptor. *Jpn. J. Pharmacol.* **74**, 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).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 07/11/2023

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM