

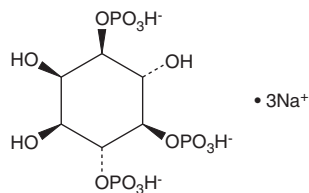
PRODUCT INFORMATION



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

Item No. 10008205

CAS Registry No.: 141611-10-1
Formal Name: D-*myo*-inositol-1,4,5-tris(hydrogen phosphate), trisodium salt
Synonyms: Ins(1,4,5)P₃, 1,4,5-IP₃
MF: C₆H₁₂O₁₅P₃ • 3Na
FW: 486.0
Purity: ≥98%
Supplied as: A lyophilized solid
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-triphosphate (Ins(1,4,5)IP₃) (sodium salt) is supplied as a lyophilized solid. Ins(1,4,5)IP₃ (sodium salt) is practically insoluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that aqueous solutions of Ins(1,4,5)IP₃ (sodium salt) be prepared by directly dissolving the lyophilized powder in aqueous buffers. The solubility of Ins(1,4,5)IP₃ (sodium salt) in PBS (pH 7.2) is at least 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

D-*myo*-Inositol-1,4,5-triphosphate (Ins(1,4,5)P₃) is a second messenger produced in cells by phospholipase C mediated hydrolysis of phosphatidyl inositol-4,5-bisphosphate.^{1,2} It binds to one of several Ins(1,4,5)P₃ receptors, each containing a calcium channel domain. Binding of Ins(1,4,5)P₃ to the receptor results in opening of the calcium channels and an increase in intracellular calcium.^{2,3}

References

1. 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).
2. Yoshida, Y. and Imai, S. Structure and function of inositol 1,4,5-triphosphate receptor. *Jpn. J. Pharmacol.* **74**, 125-137 (1997).
3. 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, 07/12/2023

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