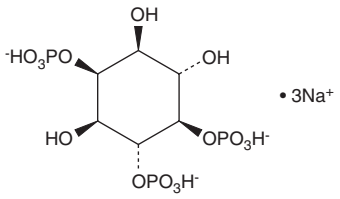
PRODUCT INFORMATION

D-*myo*-Inositol-2,4,5-triphosphate (sodium salt)

Item No. 10007779

Formal Name:	D-*myo*-inositol-2,4,5-tris(hydrogen phosphate), trisodium salt
Synonyms:	Ins(2,4,5)P_3 (sodium salt), 2,4,5-IP_3 (sodium salt)
MF:	$C_6H_{12}O_{15}P_3$ • 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-2,4,5-triphosphate (sodium salt) (Ins(2,4,5)P_3) is supplied as a lyophilized powder. Ins(2,4,5)P_3 is practically insoluble in organic solvents. For biological experiments, we suggest that aqueous solutions of Ins(2,4,5)P_3 be prepared by directly dissolving the lyophilized powder in water. The solubility of Ins(2,4,5)P_3 in water is at least 50 mg/ml.

Description

The inositol phosphates (InsP) play a critical role as small, soluble second messengers in the transmission of cellular signals.[1,2] The most studied InsP, Ins(1,4,5)P_3, more commonly referred to as IP_3, is a second messenger produced in cells by phospholipase C (PLC)-mediated hydrolysis of phosphatidylinositol-4,5-biphosphate.[3,4] Binding of Ins(1,4,5)P_3 to its receptor on the endoplasmic reticulum results in opening of the calcium channels and an increase in intracellular calcium.[4,5] Ins(2,4,5)P_3 is a metabolically stable analog of Ins(1,4,5)P_3 that is commonly used to study Ca^{2+} signaling pathways. Ins(2,4,5)P_3 acts as a partial agonist at rat hepatic IP_3 receptors, exhibiting 65% of the maximal Ca^{2+} response obtained with Ins(1,4,5)P_3.[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**, 125-137 (1997).
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