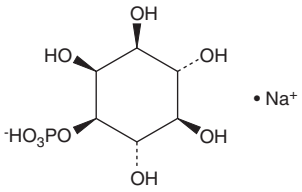
PRODUCT INFORMATION

D-*myo*-Inositol-3-phosphate (sodium salt)

Item No. 10007778

Formal Name:	D-*myo*-inositol-3-hydrogen phosphate, monosodium salt
Synonyms:	Ins(3)P_1 (sodium salt), 3-IP_1 (sodium salt)
MF:	$C_6H_{12}O_9P$ • 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-3-phosphate (Ins(3)P_1) (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the Ins(3)P_1 (sodium salt) in water. The solubility of Ins(3)P_1 (sodium salt) in water is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ins(3)P_1 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)P_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(3)P_1 can be formed by the dephosphorylation of polyphosphate inositols such as Ins(3,4)P_2 by inositol polyphosphate 4-phosphatase.[1]

References

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3. Streb, H., Irvine, R.F., Berridge, M.J., *et al.* Release of Ca^{2+} 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).

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