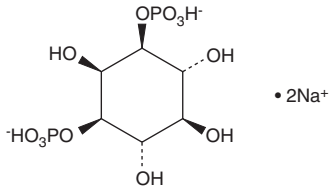
PRODUCT INFORMATION

D-*myo*-Inositol-1,3-diphosphate (sodium salt)

Item No. 10008443

CAS Registry No.:	208584-52-5
Formal Name:	D-*myo*-inositol-1,3-*bis*(dihydrogen phosphate), disodium salt
Synonyms:	Ins(1,3)P_2 (sodium salt), 1,3-IP_2 (sodium salt)
MF:	$C_6H_{12}O_{12}P_2$ • 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-1,3-diphosphate (Ins(1,3)P_2) (sodium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the Ins(1,3)P_2 (sodium salt) in water. The solubility of Ins(1,3)P_2 (sodium salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ins(1,3)P_2 is a member of the inositol phosphate (InsP) molecular family that play critical roles as small, soluble second messengers 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(1,3)P_2 can be dephosphorylated to Ins(1)P by inositol polyphosphate 3-phosphatase and further dephosphorylated to inositol by inositol monophosphatase.[2]

References

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2. Majerus, P.W. Inositol phosphate biochemistry. *Annu. Rev. Biochem.* **61**, 225-250 (1992).
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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