

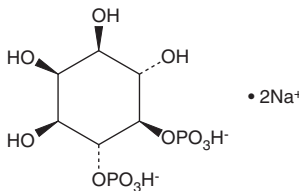
PRODUCT INFORMATION



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

Item No. 10008418

Formal Name:	D- <i>myo</i> -inositol-4,5-di(hydrogen phosphate), disodium salt
Synonyms:	Ins(4,5)-P ₂ (sodium salt), 4,5-IP ₂ (sodium salt)
MF:	C ₆ H 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-4,5-diphosphate (sodium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the D-*myo*-inositol-4,5-diphosphate (sodium salt) in the solvent of choice. D-*myo*-Inositol-4,5-diphosphate (sodium salt) is soluble in water. The solubility of D-*myo*-Inositol-4,5-diphosphate (sodium salt) in water is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

D-*myo*-Inositol-4,5-triphosphate (Ins(1,4,5)P₃) is a key second messenger produced in cells by PLC-mediated hydrolysis of phosphatidylinositol-4,5-diphosphate.^{1,2} Binding of Ins(1,4,5)P₃ to one of several Ins(1,4,5)P₃ receptors results in opening of the calcium channels and an increase in intracellular calcium.^{2,3} Ins(4,5)P₂ is a metabolite of Ins(1,4,5)P₃ that lacks a phosphate at the 1' position. Ins(4,5)P₂ formation has been reported as an intermediate in the metabolism Ins(1,4,5)P₃ in GH3 pituitary cells.⁴

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-trisphosphate 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).
4. Ruiz-Larrea, F. and Drummond, A.H. Pathways of dephosphorylation of 1-D-*myo*-inositol 1,4,5-trisphosphate in GH3 pituitary tumor cells. *Biochem. Biophys. Acta* **1178**, 63-72 (1993).

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.

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