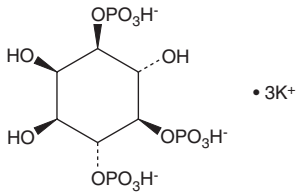
PRODUCT INFORMATION

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

Item No. 60960

CAS Registry No.: 141611-11-2
Formal Name: D-myo-inositol-1,2,5-tris(dihydrogen phosphate), tripotassium salt
Synonyms: Ins(1,4,5)-P_3, 1,4,5-IP_3
MF: $C_6H_{12}O_{15}P_3 \bullet 3K$
FW: 534.4
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

Ins(1,4,5)-P_3 (potassium salt) is supplied as a lyophilized powder. Ins(1,4,5)-P_3 (potassium salt) is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of Ins(1,4,5)-P_3 (potassium salt) can be prepared by directly dissolving the lyophilized powder in aqueous buffers. The solubility of Ins(1,4,5)-P_3 (potassium salt) in PBS (pH 7.2) is approximately 50 mg/ml; sonicate until a clear solution is obtained. We do not recommend storing the aqueous solution for more than one day.

Description

Ins(1,4,5)-P_3 is a polyphosphoinositide involved in intracellular signalling. Ins(1,4,5)-P_3 is a second messenger produced in cells by phospholipase C mediated hydrolysis of phosphatidyl inositol-4,5-biphosphate.[1,2] It binds to one of several Ins(1,4,5)-P_3 receptors, each containing a calcium channel domain. Binding of Ins(1,4,5)-P_3 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 Ca^{2+} 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).

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