

PRODUCT INFORMATION



PtdIns-(4,5)-P₂ (1,2-dihydroxy) (sodium salt)

Item No. 41883

Formal Name: (1R,2R,3S,4R,5R,6S)-4-((((R)-2,3-dihydroxypropoxy) oxidophosphoryl)oxy)-3,5,6-trihydroxycyclohexane-1,2-diyl bis(hydrogen phosphate), trisodium salt

Synonyms: Glycerophosphoinositol-4,5-diphosphate, Glycerophosphoryl-myo-inositol-4,5-bisphosphate, Glycerophosphoryl-myo-inositol-4,5-diphosphate, GPIP₂, GroPI-(4,5)-P₂, PI(4,5)P₂(0:0/0:0), PIP₂[4,5](0:0/0:0), 1,2-Dihydroxy-*sn*-glycero-3-Phosphoinositol-4',5'-bisphosphate, 0:0/0:0 PI(4,5)P₂

MF: C₉H₁₈O₁₇P₃ • 3Na

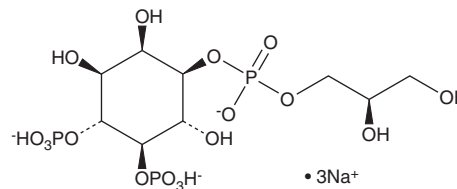
FW: 560.1

Purity: ≥95%

Supplied as: A solid

Storage: -80°C

Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

PtdIns-(4,5)-P₂ (1,2-dihydroxy) is supplied as a solid. Aqueous solutions of PtdIns-(4,5)-P₂ (1,2-dihydroxy) can be prepared by directly dissolving the solid in aqueous buffers. PtdIns-(4,5)-P₂ (1,2-dihydroxy) is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

PtdIns-(4,5)-P₂ (1,2-dihydroxy) is a glycerophosphoinositol containing no acyl chains at the *sn*-1 and *sn*-2 positions. It inhibits sodium/calcium exchange in bovine ventricular sarcolemma vesicle preparations (IC₅₀ = 2.1 μM).¹ PtdIns-(4,5)-P₂ (1,2-dihydroxy) induces intracellular calcium release in isolated permeabilized mouse lacrimal acinar cells (EC₅₀ = 4.6 μM).² However, it does not induce calcium release in the heavy fraction of sarcoplasmic reticulum isolated from bullfrog skeletal muscle when used at a concentration of 33 μM.³

References

1. Luciani, S., Antolini, M., Bova, S., *et al.* Inhibition of cardiac sarcolemmal sodium-calcium exchanger by glycerophosphoinositol 4-phosphate and glycerophosphoinositol 4-5-bisphosphate. *Biochem. Biophys. Res. Commun.* **206**(2), 674-680 (1995).
2. Bird, G.S., Obie, J.F., and Putney, J.W., Jr. Sustained Ca²⁺ signaling in mouse lacrimal acinar cells due to photolysis of "caged" glycerophosphoryl-myo-inositol 4,5-bisphosphate. *J. Biol. Chem.* **267**(25), 17722-17725 (1992).
3. Ogawa, Y. and Harafuji, H. Ca-release by phosphoinositides from sarcoplasmic reticulum of frog skeletal muscle. *J. Biochem.* **106**(5), 864-867 (1989).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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