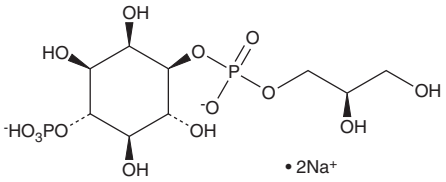
PRODUCT INFORMATION

PtdIns-(4)-P_1 (1,2-dihydroxy) (sodium salt)

Item No. 42496

Formal Name: (1R,2R,3R,4R,5R,6S)-4-((((R)-2,3-dihydroxypropoxy)oxidophosphoryl)oxy)-2,3,5,6-tetrahydroxycyclohexyl hydrogen phosphate, disodium salt

Synonyms: 1,2-Dihydroxy-*sn*-glycero-3-Phosphoinositol-4'-phosphate, Glycerophosphoinositol-4-phosphate, Glycerophosphoryl-*myo*-inositol-4-phosphate, $GPIP_1$, GroPI-(4)-P_1, PI[4](0:0/0:0), PI(4)P_1(0:0/0:0), 0:0/0:0 PI(4)P_1



MF: $C_9H_{18}O_{14}P_2$ • 2Na

FW: 458.2

Purity: ≥98%

Supplied as: solid

Storage: -80°C

Stability: ≥1 year

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

Laboratory Procedures

PtdIns-(4)-P_1 (1,2-dihydroxy) (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the PtdIns-(4)-P_1 (1,2-dihydroxy) (sodium salt) in the solvent of choice, which should be purged with an inert gas. PtdIns-(4)-P_1 (1,2-dihydroxy) (sodium salt) is soluble (≥10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of PtdIns-(4)-P_1 (1,2-dihydroxy) (sodium salt) can be prepared by directly dissolving the solid in aqueous buffers. PtdIns-(4)-P_1 (1,2-dihydroxy) (sodium salt) is soluble (≥10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

PtdIns-(4)-P_1 (1,2-dihydroxy) is a glycerophosphoinositol containing no acyl chains at the *sn*-1 and *sn*-2 positions. It is formed *via* the diacylation of membrane phosphoinositides by cytoplasmic phospholipase A_2 ($cPLA_2$).[1,2] PtdIns-(4)-P_1 (1,2-dihydroxy) (1-1,000 µM) inhibits cholera toxin- or thyrotropin-induced increases in cAMP in FRTL-5 cells.[3] Exogenous PtdIns-(4)-P_1 (1,2-dihydroxy) induces the formation of actin membrane ruffles and stress fibers in serum-starved NIH3T3 cells.[4]

References

1. Berrie, C.P., Falasca, M., Carvelli, A., *et al. Frontiers in Bioactive Lipids*. Vanderhoek, J.Y., editor (1996).
2. Varone, A., Mariggiò, S., Patheja, M., *et al. Cell Commun. Signal.* **17(1)**, 20 (2019).
3. Iacovelli, L., Falasca, M., Valitutti, S., *et al. The J. Biol. Chem.* **268(27)**, 20402-20407 (1993).
4. Mancini, R., Piccolo, E., Mariggio', S., *et al. Mol. Biol. Cell.* **14(2)**, 503-515 (2003).

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