

Product Information



PLC thio-PIP₂ (sodium salt)

Catalog No. 10007839

Formal Name: 3-(3-(1,2-dihydroxy-1,2-dihexanoyl)thiopropyl)inositol-4,5-diphosphate, trisodium salt

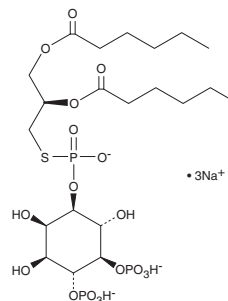
MF: C₂₁H₃₈O₁₈P₃S • 3Na

FW: 772.5

Purity: ≥98%

Stability: ≥1 year at -20°C

Supplied as: A lyophilized powder



Laboratory Procedures

For long term storage, we suggest that PLC Thio-PIP₂ be stored as supplied at -20°C. It will be stable for at least one year.

PLC Thio-PIP₂ is supplied as a lyophilized powder. PLC Thio-PIP₂ is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that aqueous solutions of PLC Thio-PIP₂ be prepared by directly dissolving the lyophilized powder in water. The solubility of PLC Thio-PIP₂ in water is approximately 10 mg/ml. PLC Thio-PIP₂ will not be stable in aqueous solutions for more than 24 hours.

Phospholipase C (PLC) catalyzes the hydrolysis of phosphatidylinositol (4,5) bisphosphate (PIP₂) on the cytoplasmic side of the cell membrane to yield diacylglycerol and inositol-1,4,5-triphosphate (IP₃).¹⁻³ This reaction initiates a well-known signal transduction pathway common to most cells. PLC thio-PIP₂ is an analog of naturally occurring PIP₂ that contains sulfur rather than oxygen at the *sn*-3 position of the glycerol backbone. Hydrolysis by PLC yields a free thiol which reacts with chromogenic reagents such as DTNB (Ellman's reagent) to allow quantitation of PLC activity.

References

1. 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).
2. Exton, J.H. Cell signalling through guanine-nucleotide-binding regulatory proteins (G proteins) and phospholipases. *Eur. J. Biochem.* **243**, 10-20 (1997).
3. Majerus, P.W. Inositol phosphate biochemistry. *Annu. Rev. Biochem.* **61**, 225-250 (1992).

Related Products

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

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