

PRODUCT INFORMATION



PtdIns-(5)-P₁ (1,2-dipalmitoyl) (ammonium salt)

Item No. 64925

Formal Name: 1-(1,2-dihexadecanoylphosphatidyl) inositol-5-phosphate, diammonium salt

Synonyms: DPPI-5-P, PI(5)P (16:0/16:0), PIP[5'](16:0/16:0)

MF: C₄₁H₇₈O₁₆P₂ • 2NH₄

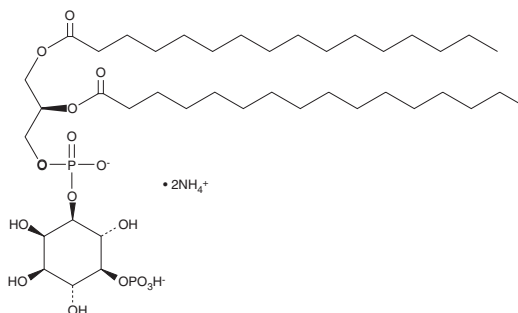
FW: 925.1

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

PtdIns-(5)-P₁ (1,2-dipalmitoyl) (ammonium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the PtdIns-(5)-P₁ (1,2-dipalmitoyl) (ammonium salt) in an organic solvent purged with an inert gas. PtdIns-(5)-P₁ (1,2-dipalmitoyl) (ammonium salt) is soluble in organic solvents such as chloroform and methanol. PtdIns-(5)-P₁ (1,2-dipalmitoyl) (ammonium salt) is sparingly soluble in aqueous buffers. PtdIns-(5)-P₁ (1,2-dipalmitoyl) (ammonium salt) can also be dissolved in a solution of chloroform:methanol:water (3:2:0.5); it will be soluble to at least 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

The phosphatidylinositol phosphates represent a small percentage of total membrane phospholipids. However, they play a critical role in the generation and transmission of cellular signals.^{1,2} PtdIns-(5)-P₁ can be further phosphorylated to give diphosphates such as PtdIns-(4,5)-P₂. These can also be cleaved by PI-specific phospholipase C (PLC) to give inositol triphosphates (IP₃). The diacyl glycerol and IP₃ generated by this PLC-cleavage are also part of a complex biochemical and signal transduction cascade which has not been entirely elucidated. For some additional reading, please see references 2-4.

References

1. Lapetina, E.G., Billah, M.M., and Cuatrecasas, P. The phosphatidylinositol cycle and the regulation of arachidonic acid production. *Nature* **292**, 367-369 (1981).
2. Majerus, P.W. Inositol phosphate biochemistry. *Annu. Rev. Biochem.* **61**, 225-250 (1992).
3. Pike, L.J. and Casey, L. Localization and turnover of phosphatidylinositol 4,5-bisphosphate in caveolin-enriched membrane domains. *J. Biol. Chem.* **271**, 26453-26456 (1996).
4. Berridge, M.J. Inositol trisphosphate and calcium signalling. *Nature* **361**, 315-325 (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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