

PRODUCT INFORMATION



PtdIns-(3,4,5)-P₃ (1,2-dipalmitoyl)-d₆₂ (sodium salt)

Item No. 9000414

Formal Name: 1-(1,2R-dihexadecanoyl (2,2',3,3',4,4',5,5', 6,6',7,7',8,8',9,9',10,10',11,11',12,12', 13,13',14,14',15,16,16,16-d₃₁) phosphatidyl)inositol-3,4,5-trisphosphate, tetrasodium salt

Synonyms: DPPPI-3,4,5-P₃-d₆₂, Phosphatidylinositol-3,4,5-trisphosphate C16-d₆₂, PI(3,4,5)P₃ (16:0/16:0)-d₆₂, PIP3[3',4',5'](16:0/16:0)-d₆₂

MF: C₄₁H₁₆D₆₂O₂₂P₄ • 4Na

FW: 1,201.3

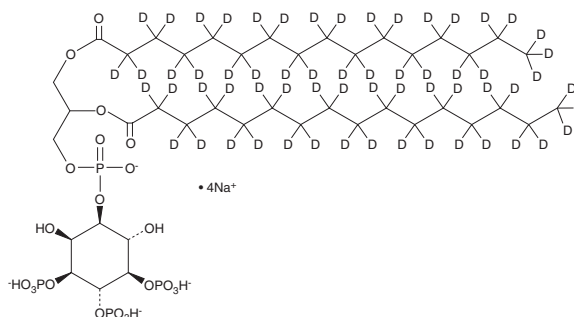
Chemical Purity: ≥98% (PtdIns-(3,4,5)-P₃ (1,2-dipalmitoyl) (sodium salt))

Deuterium Incorporation: ≥99% deuterated forms (d₁-d₆₂); ≤1% d₀

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-(3,4,5)-P₃ (1,2-dipalmitoyl)-d₆₂ (sodium salt) is intended for use as an internal standard for the quantification of PtdIns-(3,4,5)-P₃ (1,2-dipalmitoyl) (sodium salt) (Item No. 64920) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Description

The phosphatidylinositol (PtdIns) 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-(3,4,5)-P₃ can serve as an anchor for the binding of signal transduction proteins bearing pleckstrin homology (PH) domains. Centaurin α and the Akt-family of GTPase activating proteins are examples of PtdIns-(3,4,5)-P₃-binding proteins.^{3,4} Protein-binding to PtdIns-(3,4,5)-P₃ is important for cytoskeletal rearrangements and membrane trafficking. PtdIns-(3,4,5)-P₃ is resistant to cleavage by PI-specific phospholipase C (PLC). Thus, it is likely to function in signal transduction as a modulator in its own right, rather than as a source of inositol tetraphosphates. For further reading on inositol phospholipids, see references 5 and 6.

References

1. Lapetina, E.G., Billah, M.M., and Cuatrecasas, P. *Nature* **292**(5821), 367-369 (1981).
2. Majerus, P.W. *Annu. Rev. Biochem.* **61**, 225-250 (1992).
3. Tanaka, K., Imajoh-Ohmi, S., Sawada, T., et al. *Eur. J. Biochem.* **245**(2), 512-519 (1997).
4. Yang, X., Rudolf, M., Carew, M.A., et al. *J. Biol. Chem.* **274**(27), 18973-18980 (1999).
5. Pike, L.J. and Casey, L. *J. Biol. Chem.* **271**(43), 26453-26456 (1996).
6. Berridge, M.J. *Nature* **361**(6410), 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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