

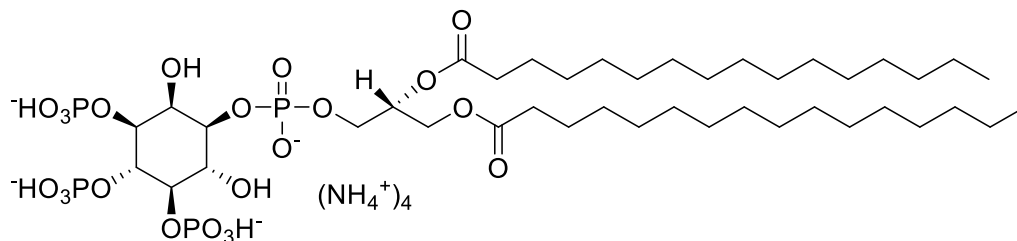
D-*myo*-Phosphatidylinositol 3,4,5-trisphosphate diC₁₆ (ammonium salt) (PtdIns(3,4,5)P₃)

Catalog number: P-3916a

Molecular Formula: C₄₁H₉₄N₄O₂₂P₄

MW: 1118.5

CAS: 165689-82-7



Alternate Name: PIP₃, PtdIns(3,4,5)P₃ (16:0/16:0)

Solubility: 8:8:3 CHCl₃:MeOH:H₂O, 0.5 mg/mL

Storage and Handling: Phosphatidylinositol polyphosphates (PtdInsP_ns) and analogs are stable for at least one year when stored as a solid, protected from moisture, at -20 °C or below. Longer-chain PtdInsP_ns should be stored in glass containers to prevent material loss due to absorption to the vessel surface. Storage in basic (pH > 9) or acidic (pH < 4) buffers may cause decomposition. Brief sonication and heating (~50 °C) can help longer chain PtdInsP_ns solubilize. After reconstitution, solutions of PtdInsP_ns should be stored at -20 °C or below. PtdInsP_ns are stable for at least three months when handled in this way. Repeated freeze/thaw cycles do not affect PtdInsP_ns. Do not store reconstituted PtdInsP_ns at 4 °C for more than 2-3 days.

Background: Phosphoinositides (PIPns) are minor components of cellular membranes but are integral signaling molecules for cellular communication. Phosphatidylinositol 3,4,5-trisphosphate (PIP₃), formed from PI(4,5)P₂ through phosphorylation by PI 3-kinase, activates numerous signaling pathways resulting in cell proliferation, growth, survival, glucose transport and protein synthesis. High PIP₃ levels from dysregulation of PI3-K have been demonstrated in cancer and inflammatory diseases. PIP₃ is hydrolyzed by the phosphatases PTEN to PI(4,5)P₂ and SHIP to PI(3,4)P₂.

References: 1) Balla, T. (2013). "Phosphoinositides: Tiny lipids with giant impact on cell regulation." *Physiol. Rev* 93(3): 1019-1137.

2) Di Paolo, G., De Camilli, P. (2006). "Phosphoinositides in cell regulation and membrane dynamics." *Nature* 443: 651-657.

3) Majerus, P.J., York, J.D. (2009). "Phosphoinositide phosphates and disease." *J. Lipid Res.* 50: S249-254.

See website for additional references

Hazardous Properties and Cautions: The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

Warranty and Disclaimer: Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.

