

Product Information



PtdIns-(1-arachidonoyl, 2-arachidonoyl-d₈) (ammonium salt)

Item No. 9000305

Formal Name: 1-eicosatetraenoyl-2R-(5Z,8Z,11Z,14Z)-eicosatetraenoyl-5,6,8,9,11,12,14,15-d₈-phosphatidyl)inositol, monoammonium salt

MF: C₄₉H₇₀D₈O₁₃P • NH₄

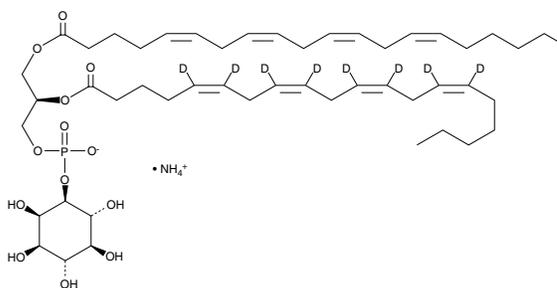
FW: 932.2

Chemical Purity: ≥95%

Deuterium Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀

Stability: ≥1 year at -20°C

Supplied as: A lyophilized powder



Laboratory Procedures

PtdIns-(1-arachidonoyl, 2-arachidonoyl-d₈) (ammonium salt) contains eight deuterium atoms at the 5, 6, 8, 9, 11, 12, 14, and 15 positions of arachidonic acid in the *sn*-2 position. It is intended for use as an internal standard for the quantification of PtdIns-(1-arachidonoyl, 2-arachidonoyl) by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that PtdIns-(1-arachidonoyl, 2-arachidonoyl-d₈) (ammonium salt) be stored as supplied at -20°C. It should be stable for at least one year.

PtdIns-(1-arachidonoyl, 2-arachidonoyl-d₈) (ammonium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the PtdIns-(1-arachidonoyl, 2-arachidonoyl-d₈) (ammonium salt) in an organic solvent purged with an inert gas. PtdIns-(1-arachidonoyl, 2-arachidonoyl-d₈) (ammonium salt) is soluble in chloroform:methanol:water (3:2:1). The solubility of PtdIns-(1-arachidonoyl, 2-arachidonoyl-d₈) (ammonium salt) in this solvent is at least 10 mg/ml. PtdIns-(1-arachidonoyl, 2-arachidonoyl-d₈) (ammonium salt) will not be stable in aqueous solutions for more than 24 hours.

PtdIns-(1-arachidonoyl, 2-arachidonoyl-d₈) is used as an internal standard for the quantification of PtdIns-(1-arachidonoyl, 2-arachidonoyl) by stable isotope dilution 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).

The phosphatidylinositols (PtdIns) 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-(1-arachidonoyl, 2-arachidonoyl-d₈) is a synthetic analog of natural PtdIns featuring deuterated C20:4 fatty acids at the *sn*-2 position. This synthetic standard compound contains the same inositol and diacyl glycerol (DAG) stereochemistry as that of the natural compound.

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. *Annu. Rev. Biochem.* **61**, 225-250 (1992).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/9000305

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

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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