

Product Information



1-Stearoyl-2-Arachidonoyl PC-d₈

Catalog No. 10009431

Formal Name: 1-octadecanoyl-2R-(5Z,8Z,11Z,14Z-eicosatetraenoyl)-sn-glycerol-3-phosphorylcholine-5,6,8,9,11,12,14,15-d₈

Synonyms: SAPC-d₈, 1-Stearoyl-2-Arachidonoyl Phosphatidylcholine-d₈

MF: C₄₆H₇₆D₈NO₈P

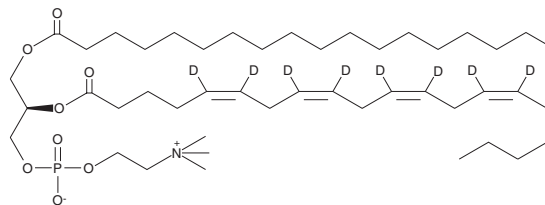
FW: 818.2

Chemical Purity: ≥98%

Deuterium Incorporation: ≤1% d₀

Stability: ≥1 year at -20°C

Supplied as: A solution in ethanol



Laboratory Procedures

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

SAPC-d₈ is supplied as a solution in ethanol. SAPC-d₈ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 1-stearoyl-2-arachidonoyl PC-d₈ should be diluted with the aqueous buffer of choice. SAPC-d₈ has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

SAPC-d₈ is used as an internal standard for the quantification of (1-stearoyl-2-arachidonoyl)-glycerophosphocholine (SAPC) 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).

Oxidation of phospholipids in low-density lipoprotein (LDL) generates pro-inflammatory and pro-thrombotic mediators that may play a crucial role in cardiovascular and inflammatory diseases.¹ SAPC is one of the major phospholipid species in LDL. Upon oxidation, SAPC has been shown to induce monocyte-endothelial interactions.²

References

1. Milne, G.L., Seal, J.R., Havrilla, C.M., *et al.* Identification and analysis of products formed from phospholipids in the free radical oxidation of human low density lipoproteins. *J. Lipid. Res.* **46**, 307-319 (2005).
2. Subbanagounder, G., Leitinger, N., Schwenke, D.C., *et al.* Determinants of bioactivity of oxidized phospholipids: Specific oxidized fatty acyl groups at the *sn*-2 position. *Arterioscler. Thromb. Vasc. Biol.* **20**, 2248-2254 (2000).

Related Products

1,2-*bis*-(heptanoylthio) Glycerophosphocholine - Cat. No. 62235 • 1-Stearoyl-2-Arachidonoyl PC - Cat. No. 10009864

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com

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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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