

PRODUCT INFORMATION



PGPC-d₆
Item No. 25746

Formal Name: (R)-2-((4-carboxybutanoyl-2,2,3,3,4,4-d₆)oxy)-3-(palmitoyloxy)propyl (2-(trimethylammonio)ethyl) phosphate

Synonym: 1-Palmitoyl-2-glutaryl Phosphatidylcholine-d₆

MF: C₂₉H₅₀D₆NO₁₀P

FW: 615.8

Chemical Purity: ≥98% (PGPC)

Deuterium

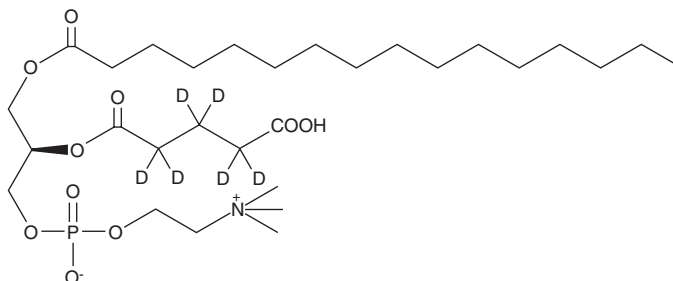
Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀

UV/Vis.: λ_{max}: 292 nm

Supplied as: A 5 mg/ml solution in ethanol

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

PGPC-d₆ is intended for use as an internal standard for the quantification of PGPC (Item No. 10044), as well as related fragmented short-chain fatty acid remnants of phospholipid oxidation, 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).

PGPC-d₆ is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. The solvent DMSO purged with an inert gas can be used. The solubility of PGPC-d₆ in DMSO is approximately 1 mg/ml.

Description

PGPC is an oxidized phospholipid that can be formed under conditions of oxidative stress.¹ It is found as a component in mildly oxidized LDL (MM-LDL) and in products formed from the oxidation of 1-palmitoyl-2-arachidonoyl-*sn*-glycero-3-phosphocholine (Ox-PAPC).² PGPC activates peroxisome proliferator-activated receptor α (PPARα) in a concentration-dependent manner in a cell-based ligand-binding assay.³ It increases VCAM1 and E-selectin expression in human aortic endothelial cells (HAECs), as well as HAEC binding by monocytes and polymorphonuclear neutrophils (PMNs), in a concentration-dependent manner.⁴ PGPC (37.5 μM) also increases total 5-lipoxygenase metabolites in murine resident peritoneal macrophages (RPMs) and induces apoptosis in A7r5 rat aortic smooth muscle cells *in vitro* when used at a concentration of 50 μM.^{5,6} PGPC levels are increased in serum, LDL, and peripheral blood mononuclear cells (PBMCs) of patients with coronary artery disease.⁷ UVA irradiation increases PGPC levels in cultured human skin fibroblasts.⁸

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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References

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