

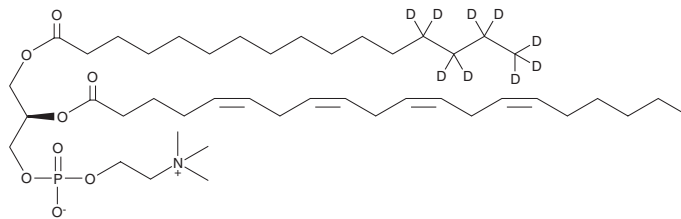
# PRODUCT INFORMATION



## 1-Palmitoyl-d<sub>9</sub>-2-Arachidonoyl-sn-glycero-3-PC

Item No. 38384

**CAS Registry No.:** 1872379-11-7  
**Formal Name:** (7R,13Z,16Z,19Z,22Z)-4-hydroxy-N,N,N-trimethyl-9-oxo-7-[[[(1-oxohexadecyl-13,13,14,14,15,15,16,16,16-d<sub>9</sub>)oxy]methyl]-4-oxide, 3,5,8-trioxa-4-phosphaoctacos-13,16,19,22-tetraen-1-aminium, inner salt  
**Synonyms:** 1-Palmitoyl-d<sub>9</sub>-2-Arachidonoyl-sn-glycero-3-Phosphocholine, PAPC-d<sub>9</sub>, PC(16:0-d<sub>9</sub>/20:4)  
**MF:** C<sub>44</sub>H<sub>71</sub>D<sub>9</sub>NO<sub>8</sub>P  
**FW:** 791.1  
**Chemical Purity:** ≥95% (1-Palmitoyl-2-Arachidonoyl-sn-glycero-3-PC)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>9</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

1-Palmitoyl-d<sub>9</sub>-2-arachidonoyl-sn-glycero-3-PC (PAPC-d<sub>9</sub>) is intended for use as an internal standard for the quantification of PAPC (Item No. 25658) 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

PAPC is a phospholipid containing palmitic acid (16:0) (Item No. 10006627) and arachidonic acid (20:4) (Item No. 90010) at the sn-1 and sn-2 positions, respectively, that is found in biological membranes.<sup>1</sup> PAPC is oxidized *in vivo*, and its oxidation products are involved in chronic inflammation and vascular disease.<sup>1-3</sup> PAPC has been used to study signaling of oxidized phospholipids. Levels of PAPC are decreased in isolated human multiple myeloma cells.<sup>4</sup>

### References

1. Bretscher, P., Egger, J., Shamshiev, A., *et al.* Phospholipid oxidation generates potent anti-inflammatory lipid mediators that mimic structurally related pro-resolving eicosanoids by activating Nrf2. *EMBO Mol. Med.* 1-15 (2015).
2. Miller, Y.I. and Shyy, J.Y.-J. Context-dependent role of oxidized lipids and lipoproteins in inflammation. *Trends Endocrinol. Metab.* **28(2)**, 143-152 (2017).
3. Gugiu, B.G., Mouiflesseaux, K., Duong, V., *et al.* Protein targets of oxidized phospholipids in endothelial cells. *J. Lipid Res.* **49**, 510-520 (2008).
4. Hossen, M.A., Nagata, Y., Waki, M., *et al.* Decreased level of phosphatidylcholine (16:0/20:4) in multiple myeloma cells compared to plasma cells: A single-cell MALDI-IMS approach. *Anal. Bioanal. Chem.* **407(18)**, 5273-5280 (2015).

#### 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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