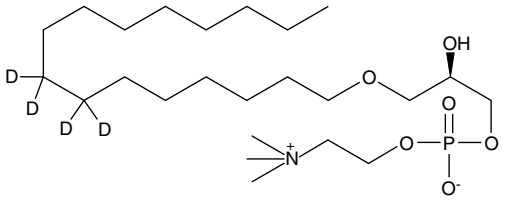
Product Information

Lyso-PAF C-16-d_4

Item No. 360906

CAS Registry No.: 201216-37-7
Formal Name: 1-O-hexadecyl-(7,7,8,8-d_4)-*sn*-glycero-3-phosphocholine
MF: $C_{24}H_{52}D_4NO_6P$
FW: 485.7
Chemical Purity: ≥98%
Deutrium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

Lyso-PAF C-16-d_4 contains four deuterium atoms at the 7, 7', 8, and 8' positions of the hexadecyl moiety. It is intended for use as an internal standard for the quantification of lyso-PAF C-16 by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that lyso-PAF C-16-d_4 be stored as supplied at -20°C. It will be stable for at least one year.

Lyso-PAF C-16-d_4 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. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of lyso-PAF C-16-d_4 in is these solvents is approximately 10 mg/ml.

Lyso-PAF C-16-d_4 is used as an internal standard for the quantification of lyso-PAF C-16-d_4 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).

Lyso-PAF C-16 can be formed by either the action of PAF-AH on PAF C-16,[1] or by the action of a CoA-independent transacylase on 1-O-hexadecyl-2-acyl-glycerophosphocholine.[2,3] Lyso-PAF C-16 is a substrate for either PAF C-16 formation by the remodeling pathway[4] or selective acylation with arachidonic acid by a CoA-independent transacylase.[5]

References

1. Stafforini, D.M., Prescott, S.M., and McIntyre, T.M. Human plasma platelet-activating factor acetylhydrolase. *J. Biol. Chem.* **262**, 4223-4230 (1987).
2. Uemura, Y., Lee, T., and Snyder, F. A coenzyme A-independent transacylase is linked to the formation of platelet-activating factor (PAF) by generating the lyso-PAF intermediate in the remodeling pathway. *J. Biol. Chem.* **266**, 8268-8272 (1991).
3. Venable, M.E., Nieto, M.L., Schmitt, J.D., *et al.* Conversion of 1-O-[^{3}H]alkyl-2-arachidonoyl-*sn*-glycero-3-phosphorylcholine to lyso platelet-activating factor by the CoA-independent transacylase in membrane fractions of human neutrophils. *J. Biol. Chem.* **266**, 18691-18698 (1991).
4. Huber, M., Müller, J., Leier, I., *et al.* Metabolism of cysteinyl leukotrienes in monkey and man. *Eur. J. Biochem.* **194**, 309-315 (1990).
5. Venable, M.E., Olson, S.C., Nieto, M.L., *et al.* Enzymatic studies of lyso platelet-activation factor acylation in human neutrophils and changes upon stimulation. *J. Biol. Chem.* **268**, 7965-7975 (1993).

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