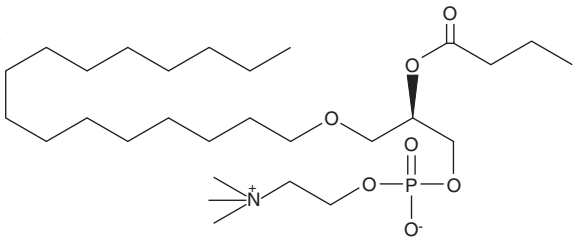
PRODUCT INFORMATION

Butanoyl PAF

Item No. 60928

CAS Registry No.: 85405-03-4
Formal Name: 1-O-hexadecyl-2-O-butanoyl-*sn*-glyceryl-3-phosphocholine
MF: $C_{28}H_{58}NO_7P$
FW: 551.7
Purity: ≥98%
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

Butanoyl PAF 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 butanoyl PAF in these solvents is approximately 30, 12, and 14 mg/ml, respectively.

Butanoyl PAF is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of butanoyl PAF should be diluted with the aqueous buffer of choice. The solubility of butanoyl PAF in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Oxidized low-density lipoprotein (oxLDL) particles contain low molecular weight species which promote the differentiation of monocytes and activate polymorphonuclear leukocytes.[1] One of these substances was recently isolated and purified from oxLDL, and identified as azelaoyl PC.[2] Butanoyl PAF is a closely related compound which retains at least 10% of the agonist potency of platelet-activating factor (PAF) itself.[3]Further, butanoyl PAF is present in oxLDL in amounts more than 100 times greater than enzymatically generated PAF. Butanoyl PAF is therefore one of the important signalling molecules present in oxLDL.

References

1. Tontonoz, P., Nagy, L., Alvarez, J.G.A., *et al.* PPARγ promotes monocyte/macrophage differentiation and uptake of oxidized LDL. *Cell* **93(2)**, 241-252 (1998).
2. Davies, S.S., Pontsler, A.V., Marathe, G.K., *et al.* Oxidized alkyl phospholipids are specific, high affinity peroxisome proliferator-activated receptor γ ligands and agonists. *J. Biol. Chem.* **276(19)**, 16015-16023 (2001).
3. Marathe, G.K., Davies, S.S., Harrison, K.A., *et al.* Inflammatory platelet-activating factor-like phospholipids in oxidized low density lipoproteins are fragmented alkyl phosphatidylcholines. *J. Biol. Chem.* **274(40)**, 28395-28404 (1999).

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