Product Data Sheet

Product Name: Butenoyl PAF
Cat. No.: GC11584

Chemical Properties

Cas. No.	474944-25-7		
Chemical Name	1-O-hexadecyl-2-O-(2E-butenoyl)-*sn*-glyceryl-3-phosphocholine		
SMILES	O=C(/C=C/C)O[C@@H](COP([O-])(OCC[N+](C)(C)C)=O)COCCCCCCCCCCCCCCCC		
Formula	$C_{28}H_{56}NO_7P$	M.Wt	549.7
Solubility	DMF: 10 mg/ml,DMSO: .5 mg/ml,Ethanol: Miscible,PBS (pH 7.2): 5 mg/ml	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Butenoyl PAF		

Background

Butenoyl PAF is a PAF receptor agonist [1].

Platelet activating factor (PAF), a phospholipid mediator of inflammation, is secreted by several cell types including arterial endothelial cells, and can activate polymorphonuclear leucocytes and monocytes via specific cell surface receptors. PAF also stimulates the production of active oxygen species by human monocyte - derived macrophages. PAF play important roles in a variety of pathophysiological states including acute allergy, inflammation, asthma, gastrointestinal ulceration, and toxic shock [1][2].

Butanoyl-PAF and Butenoyl PAF are both products of the oxidative decomposition of 2-arachidonoyl phospholipids. Although Butenoyl PAF is 10-fold less potent than PAF as a PAF receptor agonist and ligand, it is 100-fold more abundant in oxidized LDL than PAF.

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Therefore, oxidation products of LDL phospholipids were physiologically relevant bioactive PAF-like molecules [1].

References:
[1]. Marathe GK, Davies SS, Harrison KA, et al. Inflammatory platelet-activating factor-like phospholipids in oxidized low density lipoproteins are fragmented alkyl phosphatidylcholines. J Biol Chem. 1999 Oct 1;274(40):28395-404.
[2]. Davies SS, Pontsler AV, Marathe GK, et al. Oxidized alkyl phospholipids are specific, high affinity peroxisome proliferator-activated receptor gamma ligands and agonists. J Biol Chem. 2001 May 11;276(19):16015-23.

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