Product Data Sheet

Product Name: Methyl α-Linolenyl Fluorophosphonate
Cat. No.: GC13953

Chemical Properties

Cas. No.			
Chemical Name	9Z,12Z,15Z-octadecatrienyl-phosphonofluoridic acid, methyl ester		
SMILES	CC/C=C\C/C=C\C/C=C\CCCCCCCCP(=O)(F)OC		
Formula	$C_{19}H_{34}FO_2P$	M.Wt	344.4
Solubility	≤5mg/ml in ethanol;5mg/ml in DMSO;5mg/ml in dimethyl formamide	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			

Background

Methyl α-Linolenyl Fluorophosphonate is an inhibitor of phospholipases.

Methyl α-linolenyl fluorophosphonate (MLnFP), an analog of methyl arachidonyl fluorophosphonate (MAFP), has not been completely investigated for its pharmacological activity.

In vitro: Methyl arachidonyl fluorophosphonate (MAFP) was reported to be a selective, active-site directed, irreversible inhibitor of cytosolic phospholipase A2 (cPLA2). MAFP could also potently inhibit the Ca2+-independent cytosolic phospholipase A2 (iPLA2) in a concentration-dependent manner. Such inhibition was not reversed upon extensive dilution of the enzyme into the assay mixture. Preincubation of iPLA2 with MAFP led to a linear and time-dependent inactivation of enzyme activity, and the enzyme was protected from inactivation by the reversible inhibitor. The ability of MAFP to inhibit the iPLA 2 indicated that this enzyme proceeded via an acyl-enzyme intermediate. Further

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testing showed that MAFP could not inhibit the CoA-dependent acyltransferase, arachidonoyl-CoA synthetase, or CoA-independent transacylase activities. Therefore, MAFP was not a general inhibitor for enzymes acting on arachidonoyi substrates [1].

In vivo: Up to now, there is no animal in vivo data reported.

Clinical trial: So far, no clinical study has been conducted.

Reference:
[1] Lio, Y. C.,Reynolds, L.J.,Balsinde, J., et al. Irreversible inhibition of Ca2+-independent phospholipase A2 by methyl arachidonyl fluorophosphonate. Biochimica et Biophysica Acta 1302, 55-60 (1996).