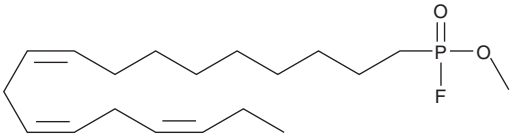
PRODUCT INFORMATION

Methyl α-Linolenyl Fluorophosphonate

Item No. 70662

Formal Name:	9Z,12Z,15Z-octadecatrienyl-phosphonofluoridic acid, methyl ester
Synonym:	MLnFP
MF:	$C_{19}H_{34}FO_2P$
FW:	344.4
Purity:	≥98%
Supplied as:	A 10 mg/ml solution in methyl acetate
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Methyl α-linolenyl fluorophosphonate (MLnFP) is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate 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 MLnFP in these solvents is approximately 6, 8, and 5 mg/ml, respectively.

MLnFP is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of MLnFP should be diluted with the aqueous buffer of choice. The solubility of MLnFP in PBS (pH 7.2) is approximately <0.5 mg/ml (colloidal suspension). Further dilutions of the organic solvent solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Store aqueous solutions of MLnFP on ice and use within 12 hours of preparation. Although the aqueous solutions of MLnFP may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

Description

MLnFP is an analog of methyl arachidonyl fluorophosphonate (MAFP; Item No. 70660), which has been widely studied as an inhibitor of phopholipases, FAAH, and as a CB receptor ligand.[1-3] The pharmacology of the α-linolenyl analog of MAFP has not been completely investigated.

References

1. Huang, Z., Liu, S., Street, I., *et al.* Methyl arachidonyl fluorophosphonate, a potent irreversible $cPLA_2$ inhibitor, blocks the mobilization of arachidonic acid in human platelets and neutrophils. *Mediators Inflamm.* **3**, 307-308 (1994).
2. Deutsch, D.G., Omeir, R., Arreaza, G., *et al.* Methyl arachidonyl fluorophosphonate: A potent irreversible inhibitor of anandamide amidase. *Biochem. Pharmacol.* **53**, 255-260 (1997).
3. Lio, Y.-C., Reynolds, L.J., Balsinde, J., *et al.* Irreversible inhibition of Ca^{2+}-independent phospholipase A_2 by methyl arachidonyl fluorophosphonate. *Biochim. Biophys. Acta* **1302**, 55-60 (1996).

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