

## MAFP

## Chemical Properties

CAS No. : 188404-10-6

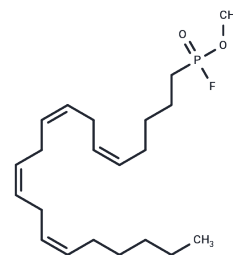
Formula: C<sub>21</sub>H<sub>36</sub>F<sub>2</sub>O<sub>2</sub>P

Molecular Weight: 370.48

Store at low temperature

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	MAFP (Methyl Arachidonyl Fluorophosphonate) is an effective, active-site directed irreversible inhibitor of anandamide amidase, cPLA <sub>2</sub> , and iPLA <sub>2</sub> .
Targets(IC <sub>50</sub> )	Phospholipase
In vitro	In a concentration-dependent manner after a 5 min preincubation at 40°C in P388D1 cells, MAFP inhibits iPLA <sub>2</sub> (IC <sub>50</sub> : 5 μM). MAFP is also an inhibitor of anandamide amidase and as a ligand for the CB <sub>1</sub> cannabinoid receptor. MAFP shows selectivity towards anandamide amidase for which it is approximately 3000 and 30000-fold more potent than it is towards chymotrypsin and trypsin, respectively. cPLA is a phospholipid hydrolase using the hydroxyl of serine-228 residue as its catalytic nucleophile[1]. MAFP displaces [3H]CP-55940 binding to the CB <sub>1</sub> cannabinoid receptor with an IC <sub>50</sub> of 20 nM vs 40 nM for anandamide[2].

## Solubility Information

Solubility	Methyl Acetate: 9 mg/mL (24.29 mM),Sonication is recommended. DMSO: 90 mg/mL (242.93 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.6992 mL	13.496 mL	26.992 mL
5 mM	0.5398 mL	2.6992 mL	5.3984 mL
10 mM	0.2699 mL	1.3496 mL	2.6992 mL
50 mM	0.054 mL	0.2699 mL	0.5398 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Lio YC, et al. Irreversible inhibition of Ca(2+)-independent phospholipase A2 by methyl arachidonyl fluorophosphonate. *Biochim Biophys Acta*. 1996 Jul 12;1302(1):55-60.

Deutsch DG, et al. Methyl arachidonyl fluorophosphonate: a potent irreversible inhibitor of anandamide amidase. *Biochem Pharmacol*. 1997 Feb 7;53(3):255-60.

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