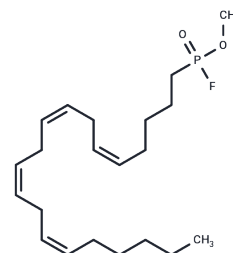


## MAFP

### Chemical Properties

|                   |                                                          |
|-------------------|----------------------------------------------------------|
| CAS No. :         | 188404-10-6                                              |
| Formula:          | C <sub>21</sub> H <sub>36</sub> FO <sub>2</sub> P        |
| Molecular Weight: | 370.48                                                   |
| Appearance:       | no data available                                        |
| Storage:          | store at low temperature                                 |
|                   | Powder: -20°C for 3 years   In solvent: -80°C for 1 year |



### Biological Description

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description   | MAFP (Methyl Arachidonyl Fluorophosphonate) is an effective irreversible inhibitor of anandamide amidase. MAFP is an active-site directed and irreversible inhibitor of cPLA2 and iPLA2.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Targets(IC50) | Phospholipase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| In vitro      | In a concentration-dependent manner after a 5 min preincubation at 40°C in P388D1 cells, MAFP inhibits iPLA2 (IC50: 5 µM). MAFP is also an inhibitor of anandamide amidase and as a ligand for the CB1 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 CB1 cannabinoid receptor with an IC50 of 20 nM vs 40 nM for anandamide[2]. |

### Solubility Information

|            |                                                                                                                                        |
|------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Solubility | Methyl Acetate: 9.0 mg/mL (24.3 mM),<br>DMSO: 90.0 mg/mL (242.9 mM)<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|----------------------------------------------------------------------------------------------------------------------------------------|

### Preparing Stock Solutions

|       | 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 |

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.

Reference

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

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

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