

Certificate of Analysis

www.tocris.com

Product Name: MAFP

Catalog No.: 1421

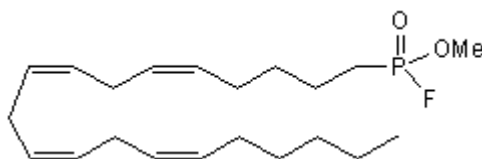
Batch No.: 7

CAS Number: 188404-10-6

IUPAC Name: (5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenyl-methyl ester phosphonofluoridic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₂₁ H ₃₆ FO ₂ P
Batch Molecular Weight:	370.49
Physical Appearance:	Colourless liquid
Solubility:	Soluble in methyl acetate (supplied pre-dissolved -10mg/ml)
Storage:	Desiccate at -80°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

TLC:	R _f = 0.5 (Dichloromethane:Acetic Acid [100:0.1])
Mass Spectrum:	Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

Product Name: MAFP

Catalog No.: 1421

Batch No.: 7

CAS Number: 188404-10-6

IUPAC Name: (5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenyl-methyl ester phosphonofluoridic acid

Description:

Potent, irreversible inhibitor of fatty acid amide hydrolase (FAAH, anandamide amidase), the enzyme responsible for anandamide hydrolysis ($IC_{50} = 2.5$ nM). Also binds irreversibly to CB_1 receptors ($IC_{50} = 20$ nM).

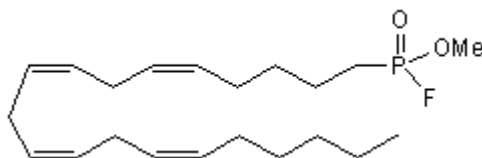
Physical and Chemical Properties:

Batch Molecular Formula: $C_{21}H_{36}FO_2P$

Batch Molecular Weight: 370.49

Physical Appearance: Colourless liquid

Batch Molecular Structure:



Storage: Desiccate at $-80^{\circ}C$

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

Soluble in methyl acetate (supplied pre-dissolved -10mg/ml)

This compound is supplied pre-dissolved in Methyl acetate (10mg/ml). To change the solvent, evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the chosen solvent (preferably purged with nitrogen beforehand). The solubility of MAFP is greater than 5mM in both DMSO and Ethanol. We do not recommend storing aqueous solutions for more than a day.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a $45-60^{\circ}C$ water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at $-20^{\circ}C$ or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

De Petrocellis et al (1997) Novel inhibitors of brain, neuronal, and basophilic anandamide amidohydrolase. *Biochem.Biophys.Res.Commun.* **231** 82. PMID: 9070224.

Deutsch et al (1997) Methyl arachidonyl fluorophosphate: a potent irreversible inhibitor of anandamide amidase. *Biochem.Pharmacol.* **53** 255. PMID: 9065728.

Martin et al (2000) Cannabinoid properties of methylfluorophosphonate analogs. *J.Pharmacol.Exp.Ther.* **294** 1209. PMID: 10945879.

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956