

PRODUCT INFORMATION



IDFP

Item No. 10215

CAS Registry No.: 615250-02-7

Formal Name: P-dodecyl-phosphonofluoridic acid,
1-methylethyl ester

Synonym: Isopropyl Dodecylfluorophosphonate

MF: $C_{15}H_{32}FO_2P$

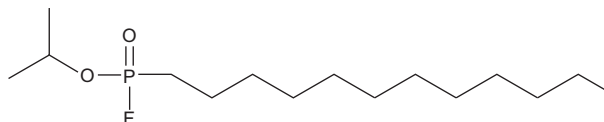
FW: 294.4

Purity: $\geq 98\%$

Supplied as: A solution in methyl acetate

Storage: $-20^{\circ}C$

Stability: ≥ 2 years



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

Laboratory Procedures

IDFP 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 (DMF) purged with an inert gas can be used. The solubility of IDFP in ethanol and DMF is approximately 10 mg/ml and approximately 12 mg/ml in DMSO.

Description

The endocannabinoids, 2-arachidonoyl glycerol (2-AG) and arachidonoyl ethanolamide (AEA), are biologically active lipids that regulate diverse neurological and metabolic functions by activating the cannabinoid receptors, central cannabinoid (CB_1) and peripheral cannabinoid (CB_2). Monoacylglycerol lipase (MAGL) and fatty acid amide hydrolase (FAAH) hydrolyze 2-AG and AEA, respectively, thus terminating their biological function. IDFP is an organophosphorus compound that dually inhibits MAGL and FAAH with IC_{50} values of 0.8 and 3 nM, respectively.¹ At 10 mg/kg, IDFP elevates brain levels of 2-AG and AEA more than 10-fold, and decreases levels of arachidonic acid by a similar magnitude.¹

Reference

1. Nomura, D.K., Blankman, J.L., Simon, G.M., *et al.* Activation of the endocannabinoid system by organophosphorus nerve agents. *Nat. Chem. Bio.* **4**(6), 373-378 (2008).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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