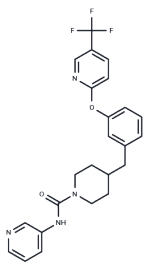
Data Sheet (Cat.No.T6043)

TargetMol

PF-3845

Chemical Properties



CAS No. : 1196109-52-0

Formula: C24H23F3N4O2

Molecular Weight: 456.46

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	PF-3845 is a potent, selective, and irreversible FAAH inhibitor with a Ki of 230 nM, exhibiting negligible activity against FAAH2.
Targets(IC50)	FAAH,Autophagy
In vitro	PF-3845 selectively inhibits FAAH by carbamylating FAAH's serine nucleophile. [1]
In vivo	PF-3845 treated mice (10 mg/kg, i.p.) shows rapid and complete inactivation of FAAH in the brain, as judged by competitive activity-based protein profiling (ABPP) with the serine hydrolase-directed probe fluorophosphonate (FP)-rhodamine. PF-3845 shows a long duration of action up to 24 hour. PF-3845-treated mice also shows dramatic (>10-fold) elevation in brain levels of AEA and other NAEs (N-pamitoyl ethanolamine [PEA] and N-oleoyl ethanolamine [OEA]). FAAH is AEA-degrading enzyme fatty acid amide hydrolase. PF-3845 (1-30 mg/kg, oral administration [p.o.]) causes a dose dependent inhibition of mechanical allodynia with a minimum effective dose (MED) of 3 mg/kg (rats are analyzed at 4 hour post dosing with PF-3845). At higher doses (10 and 30 mg/kg), PF-3845 inhibits pain responses to an equivalent, if not greater, degree than the nonsteroidal anti-inflammatory drug naproxen (10 mg/kg, p.o.). [1] PF-3845 (10 mg/kg, i.p.) significantly reverses LPS-induced tactile allodynia, but doesn't modify paw withdrawal thresholds in the saline-injected paw. [2]

Solubility Information

Solubility	DMSO: 100 mg/mL (219.08 mM),Sonication is recommended. Ethanol: 22.8 mg/mL (49.95 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (8.76 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1908 mL	10.9539 mL	21.9077 mL
5 mM	0.4382 mL	2.1908 mL	4.3815 mL
10 mM	0.2191 mL	1.0954 mL	2.1908 mL
50 mM	0.0438 mL	0.2191 mL	0.4382 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.

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

Ahn K et al, Chem Biol, 2009,16(4), 411-20.
Booker L, et al, Br J Pharmacol, 2012, 165(8), 2485-2496.