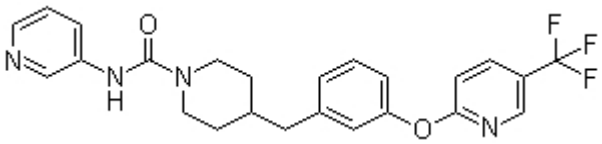
Product Introduction

PF-3845

PF-3845 is a potent, selective and irreversible **FAAH** inhibitor with **Ki** of 230 nM, showing negligible activity against FAAH2.

Technical Data:

Molecular Weight (MW):	456.46	
Formula:	C24H23F3N4O2	
Solubility (25°C) * <1 mg/ml means slightly soluble or insoluble:	DMSO 91 mg/mL	
	Water <1 mg/mL	
	Ethanol 91 mg/mL	
Purity:	>98%	
Storage:	3 years -20℃Powder	
	6 months-80℃in DMSO	
CAS No.:	1196109-52-0	

Biological Activity

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 (10mg/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]

References

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

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