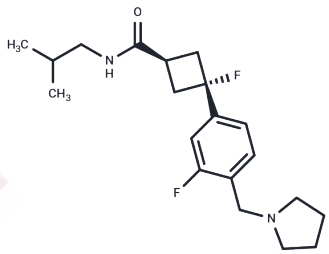
Data Sheet (Cat.No.T61213)

PF-03654764

Chemical Properties



CAS No. : 935840-35-0

Formula: C20H28F2N2O

Molecular Weight: 350.45

Storage: Store at low temperature
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-03654764 is an orally active, potent, and selective histamine H3 receptor antagonist with Ki values of 1.2 nM for human H3 and 7.9 nM for rat H3. It is often co-administered with Fexofenadine for the treatment of allergic rhinitis.
Targets(IC50)	Histamine Receptor
In vitro	In a whole cell assay, PF-03654764 exhibits pKi values of 8.98 and 8.10 for human H3 and rat H3, respectively. In HEK-293 cells, PF-03654764 demonstrates pKi values of 8.84 and 7.73, as well as Ki values of 1.4 nM and 19 nM for human H3 and rat H3, respectively. Notably, PF-03654764 displays >1000-fold selectivity for the H3 receptor over the other histamine receptor subtypes[1].Regarding its pharmacokinetics, PF-03654764 has a half-life (T1/2) of 120 minutes in human liver microsomes (HLM) and a clearance (CLh) of less than 5 mL/min•kg in HLM[2].
In vivo	In Sprague-Dawley rats, PF-03654764 administered orally at a dose of 10 mL/kg for 14 days results in a Cmax of 8057 ng/mL and an AUC0-24 of 67400 ng•h/mL[2]. Similarly, in beagle dogs, oral administration of PF-03654764 at a dose of 1 mL/kg for 7 days yields a Cmax of 6302 ng/mL and an AUC0-24 of 18175 ng•h/mL[2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8535 mL	14.2674 mL	28.5347 mL
5 mM	0.5707 mL	2.8535 mL	5.7069 mL
10 mM	0.2853 mL	1.4267 mL	2.8535 mL
50 mM	0.0571 mL	0.2853 mL	0.5707 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

Michelle L North, et al. Add-on histamine receptor-3 antagonist for allergic rhinitis: a double blind randomized crossover trial using the environmental exposure unit. Allergy Asthma Clin Immunol. 2014 Jul 3;10(1):33.
Wager TT,et al. Discovery of two clinical histamine H(3) receptor antagonists: trans-N-ethyl-3-fluoro-3-[3-fluoro-4-(pyrrolidinylmethyl)phenyl]cyclobutanecarboxamide (PF-03654746) and trans-3-fluoro-3-[3-fluoro-4-(pyrrolidin-1-ylmethyl)phenyl]-N-(2-methylpropyl)cyclobutanecarboxamide (PF-03654764). J Med Chem. 2011 Nov 10;54(21):7602-20.