

ATC 0175

Chemical Properties

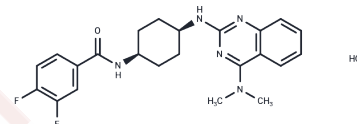
CAS No. : 510733-97-8

Formula: C₂₃H₂₆ClF₂N₅O

Molecular Weight: 461.93

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	ATC 0175 hydrochloride is an orally active melanocyte concentrating hormone 1 receptor antagonist that is potent and selective. ATC 0175 hydrochloride has affinity for MCH1R, MCH2R, MCH1, 5-HT2B receptors and 5-HT1A receptors with IC ₅₀ s of 13.5 nM, >10,000 nM, 13 nM, 9.66 nM and 16.9 nM, respectively. ATC 0175 hydrochloride exhibits antidepressant and anxiolytic effects in animal models. ATC 0175 can be used to study depression and/or anxiety disorders.
Targets(IC ₅₀)	5-HT Receptor, Melanin-concentrating Hormone Receptor (MCHR), GPCR
In vitro	In vitro, assays showed that this compound is a potent antagonist with a high affinity for MCH1R. The receptor binding and the functional assay (MCH-induced increase in [Ca ²⁺]) indicated that ATC0175 is a noncompetitive antagonist at MCH1Rs.[1]
In vivo	ATC0175 (1, 3, 10 mg/kg; p.o.) demonstrated antidepressant effects in the forced swimming test and exhibited anxiolytic effects across various animal models of anxiety, including the social interaction test, elevated plus-maze test, maternal separation-induced vocalization, and stress-induced hyperthermia. [2]

Solubility Information

Solubility	Ethanol: 22.5 mg/mL (48.71 mM), Sonication is recommended. DMSO: 9 mg/mL (19.48 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1648 mL	10.8242 mL	21.6483 mL
5 mM	0.433 mL	2.1648 mL	4.3297 mL
10 mM	0.2165 mL	1.0824 mL	2.1648 mL
50 mM	0.0433 mL	0.2165 mL	0.433 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

Semple G, et al. Pyrimidine-based antagonists of h-MCH-R1 derived from ATC0175: in vitro profiling and in vivo evaluation. *Bioorg Med Chem Lett.* 2009 ; 19(21):6166-6171.

Chaki S, et al. ATC0175: an orally active melanin-concentrating hormone receptor 1 antagonist for the potential treatment of depression and anxiety. *CNS Drug Rev.* 2005 ; 11(4):341-352.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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