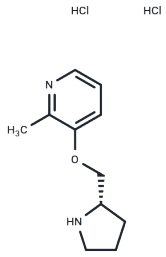
Data Sheet (Cat.No.T12525)

TargetMol

Pozanicline dihydrochloride

Chemical Properties



CAS No. : 161416-61-1

Formula: C11H18Cl2N2O

Molecular Weight: 265.18

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	Pozanicline dihydrochloride (ABT-089 dihydrochloride) is an orally bioavailable agonist of the nicotinic acetylcholine receptor (nAChR) with a Ki of 16.7 nM.
Targets(IC50)	AChR
In vitro	Pozanicline is a partial agonist at α4β2 nAChR. Moreover, one α6β2 nAChR subtype is particularly sensitive to Pozanicline (EC50 of 0.11 μM)[2]. Pozanicline shows high selectivity for α6β2 and α4α5β2 nAChR subtypes[3].
In vivo	ABT-089, a partial agonist of α4β2*, and ABT-107, an α7 nicotinic acetylcholine receptor agonist, for amelioration of cognitive deficits induced by withdrawal from chronic nicotine in mice.?Mice underwent chronic nicotine administration (12.6 mg/kg/day or saline for 12 days), followed by 24 h of withdrawal.?At the end of withdrawal, mice received 0.3 or 0.6 mg/kg ABT-089 or 0.3 mg/kg ABT-107 (doses were determined through initial dose-response experiments and prior studies) and were trained and tested for CFC.?Nicotine withdrawal produced deficits in CFC that were reversed by acute ABT-089, but not ABT-107.?Cued conditioning was not affected.?modulation of hippocampal learning and memory using ABT-089 may be an effective component of novel therapeutic strategies for nicotine addiction[3].

Solubility Information

Solubility	H2O: 100 mg/mL (377.1 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.771 mL	18.8551 mL	37.7102 mL
5 mM	0.7542 mL	3.771 mL	7.542 mL
10 mM	0.3771 mL	1.8855 mL	3.771 mL
50 mM	0.0754 mL	0.3771 mL	0.7542 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

Yildirim E, et al. ABT-089, but not ABT-107, ameliorates nicotine withdrawal-induced cognitive deficits in C57BL6/J mice. Behav Pharmacol. 2015 Apr;26(3):241-8.
Marks MJ, et al. Selectivity of ABT-089 for α4β2 and α6β2 nicotinic acetylcholine receptors in brain. Biochem Pharmacol. 2009 Oct 1;78(7):795-802.
Lin NH, et al. Structure-activity studies on 2-methyl-3-(2(S)-pyrrolidinylmethoxy) pyridine (ABT-089): an orally bioavailable 3-pyridyl ether nicotinic acetylcholine receptor ligand with cognition-enhancing properties. J Med Chem. 1997 Jan 31;40(3):385-90.