

Pozanicline hydrochloride

Chemical Properties

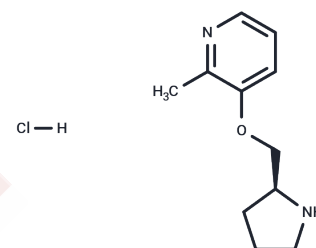
CAS No. :

Formula: C₁₁H₁₇ClN₂O

Molecular Weight: 228.72

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 hydrochloride is an orally bioavailable nicotinic acetylcholine receptor (nAChR) agonist with a K_i of 16.7 nM for binding to [3H]cytisine sites[1]. Pozanicline hydrochloride is an $\alpha 4\beta 2$ -selective nAChR agonist, which binds to rat brain $\alpha 4\beta 2$ nAChR with a K_i of 17 nM while binding to $\alpha 7$ nAChR is insignificant[2].
Targets(IC50)	AChR
In vitro	Pozanicline hydrochloride is a partial agonist at $\alpha 4\beta 2$ nAChR. Moreover, one $\alpha 6\beta 2$ nAChR subtype is particularly sensitive to Pozanicline with an EC_{50} of 0.11 μ M[2]. Pozanicline hydrochloride shows high selectivity for $\alpha 6\beta 2$ and $\alpha 4\alpha 5\beta 2$ nAChR subtypes
In vivo	Pozanicline hydrochloride (0.3 mg/kg and 0.6 mg/kg) reverses nicotine withdrawal-induced deficits in contextual fear conditioning[3].

Solubility Information

Solubility	DMSO: 55 mg/mL (240.47 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	4.3722 mL	21.8608 mL	43.7216 mL
5 mM	0.8744 mL	4.3722 mL	8.7443 mL
10 mM	0.4372 mL	2.1861 mL	4.3722 mL
50 mM	0.0874 mL	0.4372 mL	0.8744 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

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.

Marks MJ, et al. Selectivity of ABT-089 for $\alpha 4\beta 2$ and $\alpha 6\beta 2$ nicotinic acetylcholine receptors in brain. *Biochem Pharmacol.* 2009 Oct 1;78(7):795-802.

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.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481