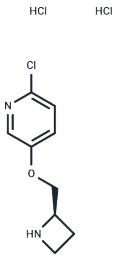
Data Sheet (Cat.No.T60474)

TargetMol

Tebanicline dihydrochloride

Chemical Properties



CAS No. : 209326-19-2

Formula: C9H13Cl3N2O

Molecular Weight: 271.57

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	Tebanicline dihydrochloride (Ebanicline dihydrochloride) is a nAChR modulator with effective oral analgesic activity, inhibiting cytisine binding to α4β2 neuronal nAChRs with a Ki of 37 pM [1].
Targets(IC50)	Others,AChR
In vitro	Tebanicline is a novel and effective cholinergic nAChR ligand with analgesic properties and preferential selectivity for neuronal nAChRs. Tebanicline inhibits the binding of cytisine to α4β2 neuronal nAChRs with a Ki of 37 pM. Tebanicline is functionally an agonist. At the transfected human alpha 4 beta 2 neuronal nAChR (K177 cells), with increased 86Rb+ efflux as a measure of cation efflux, Tebanicline had an EC50 value of 140 nM with an intrinsic activity (IA) compared with (-)-nicotine of 130%; at the nAChR subtype expressed in IMR-32 cells (sympathetic ganglion-like), an EC50 of 340 nM (IA = 126%); at the F11 dorsal root ganglion cell line (sensory ganglion-like), an EC50 of 1220 nM (IA = 71%); and via direct measurement of ion currents, an EC50 value of 56,000 nM (IA = 83%) at the human alpha 7 homooligimeric nAChR produced in oocytes.
In vivo	Tebanicline is a potent analgesic with full efficacy in models of acute and persistent pain and these effects are primarily mediated by an action at central neuronal nAChRs [2]. Tebanicline produces significant analgesic effects in mice in response to acute noxious thermal stimulation. ABT-594 is orally active, but 10-fold less potent by this route than after intraperitoneal injection. The analgesic effect of ABT-594 is blocked, but not reversed, by the noncompetitive neuronal nicotinic acetylcholine receptor antagonist [3]. Tebanicline has analgesic effects in rat models of acute thermal, persistent chemical, and neuropathic pain. Injection of tebanicline directly into the nucleus raphe magnus (NRM) is antinociceptive in a thermal threshold test and disruption of serotonergic neurons in the NRM attenuates the effect of systemic

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6823 mL	18.4115 mL	36.8229 mL
5 mM	0.7365 mL	3.6823 mL	7.3646 mL
10 mM	0.3682 mL	1.8411 mL	3.6823 mL
50 mM	0.0736 mL	0.3682 mL	0.7365 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.