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## Product Data Sheet

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Product Name: Pozanicline dihydrochloride

Cat. No.: GC38940

### Chemical Properties

Cas. No. 161416-61-1

SMILES [H]Cl.[H]Cl.CC(N=CC=C1)=C1OC[C@@H]2CCCN2

Formula C<sub>11</sub>H<sub>18</sub>Cl<sub>2</sub>N<sub>2</sub>O M.Wt 265.18

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

### Background

Pozanicline dihydrochloride (ABT-089 dihydrochloride) 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 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].

Pozanicline (ABT-089) 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  $\mu$ M[2]. Pozanicline (ABT-089) shows high selectivity for  $\alpha 6\beta 2$  and  $\alpha 4\alpha 5\beta 2$  nAChR subtypes[3].

Pozanicline (ABT-089; 0.3 mg/kg and 0.6 mg/kg) reverses nicotine withdrawal-induced deficits in contextual fear conditioning[3]. Animal Model: Adult male C57BL6/J mice at 8-12 weeks of age[3].

[1]. 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. [2].

Marks MJ, et al. Selectivity of ABT-089 for  $\alpha 4\beta 2$  and  $\alpha 6\beta 2$  nicotinic acetylcholine

**Caution: Product has not been fully validated for medical applications. For research use only.**

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receptors in brain. *Biochem Pharmacol.* 2009 Oct 1;78(7):795-802. [3]. 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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