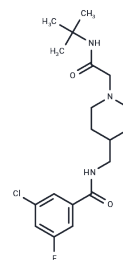


Z944

Chemical Properties

CAS No. : 1199236-64-0
 Formula: C₁₉H₂₇ClFN₃O₂
 Molecular Weight: 383.89
 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	Z944 is a T-type calcium channel blocker. Z944 delays the progression of seizures in the amygdala kindling model. Z944 disrupts prepulse inhibition in both epileptic and non-epileptic rats.
Targets(IC50)	Calcium Channel
In vivo	Z944 dose dependently (1, 3, 10mg/kg; i.p.) altered CMOR memory in GAERS compared to the non-epileptic control (NEC) strain. GAERS demonstrated recognition memory deficits in the visual and crossmodal variations of the CMOR task that were reversed by the highest dose of Z944. Electroencephalogram recordings determined that deficits in CMOR memory in GAERS were not the result of seizures during task performance. In contrast, NEC showed a decrease in CMOR memory following Z944 treatment[2].

Solubility Information

Solubility DMSO: 13 mg/mL (33.86 mM),Sonication is recommended.
 (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6049 mL	13.0246 mL	26.0491 mL
5 mM	0.521 mL	2.6049 mL	5.2098 mL
10 mM	0.2605 mL	1.3025 mL	2.6049 mL
50 mM	0.0521 mL	0.2605 mL	0.521 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

Marks WN, Greba Q, Cain SM, Snutch TP, Howland JG. The T-type calcium channel antagonist Z944 disrupts prepulse inhibition in both epileptic and non-epileptic rats. *Neuroscience*. 2016 Sep 22;332:121-9. doi: 10.1016/j.neuroscience.2016.06.035. PubMed PMID: 27365170.

Marks WN, Cain SM, Snutch TP, Howland JG. The T-type calcium channel antagonist Z944 rescues impairments in crossmodal and visual recognition memory in Genetic Absence Epilepsy Rats from Strasbourg. *Neurobiol Dis*. 2016 Oct;94:106-15. doi: 10.1016/j.nbd.2016.06.001. PubMed PMID: 27282256.

LeBlanc BW, Lii TR, Huang JJ, Chao YC, Bowary PM, Cross BS, Lee MS, Vera-Portocarrero LP, Saab CY. T-type calcium channel blocker Z944 restores cortical synchrony and thalamocortical connectivity in a rat model of neuropathic pain. *Pain*. 2016 Jan;157(1):255-63. doi: 10.1097/j.pain.0000000000000362. PubMed PMID: 26683108.

Matschke LA, Bertoune M, Roeper J, Snutch TP, Oertel WH, Rinné S, Decher N. A concerted action of L- and T-type Ca(2+) channels regulates locus coeruleus pacemaking. *Mol Cell Neurosci*. 2015 Sep;68:293-302. doi: 10.1016/j.mcn.2015.08.012. PubMed PMID: 26319746.

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