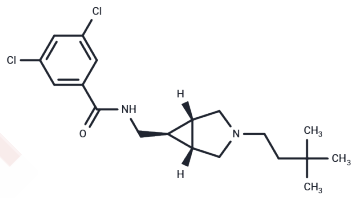
Data Sheet (Cat.No.T12076L)

TargetMol

ML218

Chemical Properties



CAS No. : 1346233-68-8

Formula: C19H26Cl2N2O

Molecular Weight: 369.33

Storage: Store at low temperature
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	ML218 is an orally active, selective, potent, and blood-brain barrier-crossing inhibitor of T-type Ca2+ channels (Cav3.1, Cav3.2, Cav3.3) (IC50 for Cav3.2 and Cav3.3 is 310 nM and 270 nM, respectively).ML218 inhibits the burst activity of neurons in the subthalamic nucleus (STN).
Targets(IC50)	Calcium Channel
In vitro	In a voltage clamp experiment, bath application of 3 μM ML218 significantly reduced the T-type Ca2+ current by 45%[1].
In vivo	In Male Sprague-Dawley rats (275-299 g) induced by haloperidol,ML218 (0.03 mg/kg, 0.1 mg/kg, 0.3 mg/kg, 1 mg/kg, 3 mg/kg, 10 mg/kg, 30 mg/kg; Oral administration; once) treatment reversed cataleptic behavior in rats induced by a 0.75 mg/kg dose of haloperidol[1].

Solubility Information

Solubility	DMSO: 100 mg/mL (270.76 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 5 mg/mL (13.54 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7076 mL	13.538 mL	27.0761 mL
5 mM	0.5415 mL	2.7076 mL	5.4152 mL
10 mM	0.2708 mL	1.3538 mL	2.7076 mL
50 mM	0.0542 mL	0.2708 mL	0.5415 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

Xiang Z, et al. The Discovery and Characterization of ML218: A Novel, Centrally Active T-Type Calcium Channel Inhibitor with Robust Effects in STN Neurons and in a Rodent Model of Parkinson's Disease. ACS Chem Neurosci. 2011 Dec 21;2(12):730-742.