Data Sheet (Cat.No.T6765)

TargetMol

Atipamezole hydrochloride

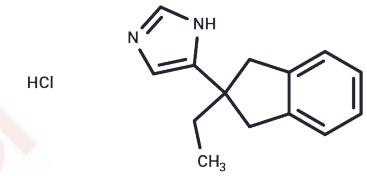
Chemical Properties

CAS No. : 104075-48-1

Formula: C14H16N2·HCl

Molecular Weight: 248.75

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	Atipamezole is a synthetic α2 adrenergic receptor antagonist. It has also been researched in humans as a potential anti-Parkinsonian drug. Atipamezole hydrochloride (MPV-1248 hydrochloride) is hydrochloride form of atipamezole.
Targets(IC50)	Adrenergic Receptor
In vitro	The affinity of atipamezole for α2-adrenoceptors and its α2/α1 selectivity ratio are considerably higher than yohimbine. Atipamezole is not selective for subtypes of α2-adrenoceptors. It has negligible affinity for 5-HT1, 5-HT2 and I2 bindings sites[1].
In vivo	Atipamezole has been found to be well tolerated in rodents and displays only modest cardiovascular effects at dosages ranging from 0.01–1 mg/kg, administered intravenously, in anesthetized, normotensive rats. This compound is frequently utilized by veterinarians to reverse sedation or anesthesia in animals. Additionally, it has been observed to enhance sexual activity in both rats and monkeys. In situations of sustained nociception, atipamezole augments pain-related responses by inhibiting the noradrenergic feedback mechanism that normally suppresses pain. Furthermore, at low doses, atipamezole positively affects several cognitive functions in experimental animals, including alertness, selective attention, planning, learning, and recall, though its impact on short-term working memory remains unclear.

Solubility Information

Solubility	DMSO: 16.67 mg/mL (67.02 mM),Sonication is recommended. H2O: 24.9 mg/mL (100.1 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (8.04 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	4.0201 mL	20.1005 mL	40.201 mL
5 mM	0.804 mL	4.0201 mL	8.0402 mL
10 mM	0.402 mL	2.0101 mL	4.0201 mL
50 mM	0.0804 mL	0.402 mL	0.804 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

Pertovaara A, et al.Pharmacological properties, central nervous system effects, and potential therapeutic applicationsof atipamezole, a selective alpha2-adrenoceptor antagonist. CNS Drug Rev. 2005 Autumn;11(3):273-88.