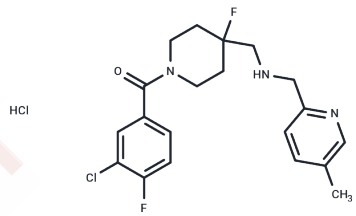
Data Sheet (Cat.No.T62385)

TargetMol

Befiradol hydrochloride

Chemical Properties



CAS No. :	2436760-81-3
Formula:	C20H23Cl2F2N3O
Molecular Weight:	430.32
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	Befiradol hydrochloride (NLX-112 hydrochloride) is a selective 5-hydroxytryptamine 1A (5-HT1A) receptor agonist with anxiolytic properties and inhibits mutant ATXN3 aggregation.
Targets(IC50)	5-HT Receptor
In vivo	Befiradol hydrochloride (F13640 hydrochloride; NLX-112 hydrochloride) decreases the activity of dorsal raphe serotonergic neurons when administered intravenously at doses ranging from 0.2 to 18.2 μg/kg, with an effective dose (ED50) of 0.69 μg/kg, i.v. At the same dosage range, it enhances the firing rate of 80% of the medial prefrontal cortex (mPFC) pyramidal neurons, with an ED50 of 0.62 μg/kg, i.v.[1] Befiradol hydrochloride (0.04-0.63 mg/kg; i.p.) dose-dependently decreases extracellular 5-HT in the hippocampus and mPFC.[1] Befiradol hydrochloride (0.01-2.5 mg/kg; i.p.) dose-dependently increases extracellular DA in mPFC, an effect dependent on the activation of postsynaptic 5-HT1A receptors in mPFC. Local perfusion of Befiradol hydrochloride in mPFC (1-1000 μM) also increases extracellular DA in a concentration-dependent manner.[1]

Solubility Information

Solubility	DMSO: 43.03 mg/mL (100 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 (4.65 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	2.3239 mL	11.6193 mL	23.2385 mL
5 mM	0.4648 mL	2.3239 mL	4.6477 mL
10 mM	0.2324 mL	1.1619 mL	2.3239 mL
50 mM	0.0465 mL	0.2324 mL	0.4648 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

Lladó-Pelfort L, et al. In vivo electrophysiological and neurochemical effects of the selective 5-HT1A receptor agonist, F13640, at pre- and postsynaptic 5-HT1A receptors in the rat. Psychopharmacology (Berl). 2012 May;221 (2):261-72.