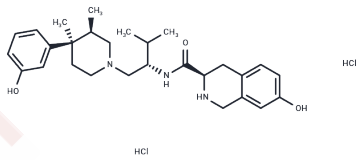
Data Sheet (Cat.No.T11721L)

TargetMol

JDTic Dihydrochloride

Chemical Properties



CAS No. :	785835-79-2
Formula:	C28H41Cl2N3O3
Molecular Weight:	538.55
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	JDTic Dihydrochloride is a high-affinity and selective κ-opioid receptor (KOR) antagonist that blocks dynorphin-KOR signalling, exhibiting antidepressant, anxiolytic, and anti-relapse effects against cocaine and nicotine.
Targets(IC50)	Opioid Receptor
In vivo	**Methods**: In a hangover-induced anxiety rat model, JDTic Dihydrochloride was administered via intraperitoneal injection at 3 mg/kg to assess anxiety-like behavior and at 10 mg/kg to evaluate alcohol-related behaviors, with a 2-hour pretreatment period. **Results**: JDTic Dihydrochloride (3 mg/kg, ip) significantly reversed anxiety-like behavior in hangover rats; the 10 mg/kg dose reduced alcohol self-administration, suppressed cue-induced reinstatement of alcohol seeking, and specifically blocked the effects of KOR agonists after 2 hours of pretreatment. [2]

Solubility Information

Solubility	DMSO: 80 mg/mL (148.55 mM),Sonication is recommended. H2O: 40 mg/mL (74.27 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8568 mL	9.2842 mL	18.5684 mL
5 mM	0.3714 mL	1.8568 mL	3.7137 mL
10 mM	0.1857 mL	0.9284 mL	1.8568 mL
50 mM	0.0371 mL	0.1857 mL	0.3714 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

Jackson KJ, et al. Effect of the selective kappa-opioid receptor antagonist JDTic on nicotine antinociception, reward, and withdrawal in the mouse. Psychopharmacology (Berl). 2010 Jun;210(2):285-94.
Schank JR, et al. The kappa opioid receptor antagonist JDTic attenuates alcohol seeking and withdrawal anxiety. Addict Biol. 2012 May;17(3):634-47. doi: 10.1111/j.1369-1600.2012.00455.x.
Beardsley PM, et al. Effectiveness of analogs of the kappa opioid receptor antagonist (3R)-7-hydroxy-N-((1S)-1-{[(3R,4R)-4-(3-hydroxyphenyl)-3,4-dimethyl-1-piperidinyl]methyl}-2-methylpropyl)-1,2,3,4-tetrahydro-3-isoquinolinecarboxamide (JDTic) to reduce