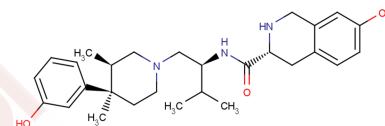


JDTic

Chemical Properties

CAS No. : 361444-66-8
 Formula: C₂₈H₃₉N₃O₃
 Molecular Weight: 465.63
 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	JDTic, a 4-phenylpiperidine derivative distantly related to analgesics like meperidine and ketobemidone and more closely to the mu opioid antagonist alvimopan, exhibits a notably long duration of action, maintaining effects in animals for weeks following a single dose. This duration is not due to irreversible binding to the kappa opioid receptor but rather to altered activity of c-Jun N-terminal kinases. As a highly selective antagonist for the κ -opioid receptor, without influencing the μ - or δ -opioid receptors, JDTic has shown potential in animal studies for producing antidepressant and anxiolytic effects. It also demonstrates promise in treating addiction to substances such as cocaine and morphine, distinguishing itself structurally from other kappa antagonists like norbinaltorphimine.
Targets(IC50)	Opioid Receptor,JAK

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1476 mL	10.7381 mL	21.4763 mL
5 mM	0.4295 mL	2.1476 mL	4.2953 mL
10 mM	0.2148 mL	1.0738 mL	2.1476 mL
50 mM	0.043 mL	0.2148 mL	0.4295 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

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Beardsley PM, Pollard GT, Howard JL, Carroll FI. 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-isoquinoline

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Wu H, Wacker D, Mileni M, Katritch V, Han GW, Vardy E, Liu W, Thompson AA, Huang XP, Carroll FI, Mascarella SW, Westkaemper RB, Mosier PD, Roth BL, Cherezov V, Stevens RC. Structure of the human κ -opioid receptor in complex with JD_{Tic}. *Nature*. 2012 Mar

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