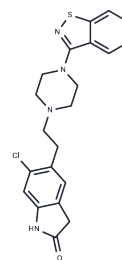


Ziprasidone

Chemical Properties

CAS No. :	146939-27-7
Formula:	C ₂₁ H ₂₁ ClN ₄ O ₅
Molecular Weight:	412.94
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Ziprasidone (Geodon) is a united 5-HT (serotonin) and dopamine receptor antagonist which shows potent effects of antipsychotic activity.
Targets(IC50)	5-HT Receptor, Adrenergic Receptor, Norepinephrine, Histamine Receptor, Dopamine Receptor
In vitro	Ziprasidone demonstrates the ability to inhibit the significant increase in food intake induced by olanzapine in rats, indicating an intrinsic protective mechanism against drug-induced hyperphagia. Furthermore, Ziprasidone significantly enhances the immunoreactivity of NGF and ChAT in the dentate gyrus, CA1, and CA3 regions of the rat hippocampus. In anesthetized rats, Ziprasidone exhibits a dose-dependent reduction in the activity of midline thalamic neurons, similar to atypical antipsychotic drugs such as clozapine (ED ₅₀ = 250 mg/kg i.v.) and olanzapine (ED ₅₀ = 1000 mg/kg i.v.), with an ED ₅₀ value of 300 mg/kg i.v. Additionally, Ziprasidone has a relatively low blocking effect on the wild-type hERG current in <i>Xenopus</i> oocytes, with an IC ₅₀ of 2.8 mM.
In vivo	Ziprasidone selectively blocks wild-type hERG currents in stably transfected HEK-293 cells in a voltage and concentration-dependent manner with an IC ₅₀ of 120nM. It demonstrates minimal torsadogenic risk as evidenced by minimal hERG current blockade during depolarized voltages (-20 or +30mV) or assessed via envelope of tails experiments at +30mV. Ziprasidone significantly prolongs the deactivation time constant of hERG currents at -50mV. It acts as a 5-HT(1A) receptor agonist and antagonizes 5-HT (2A), 5-HT(2C), and 5-HT(1B/1D) receptors. The compound's potency in inhibiting neuronal uptake of 5-HT and norepinephrine is similar to that of the antidepressant imipramine. Ziprasidone also exhibits high affinity for human 5-HT receptors and human dopamine D(2) receptors.

Solubility Information

Solubility	DMSO: 13.5 mg/mL (32.69 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4217 mL	12.1083 mL	24.2166 mL
5 mM	0.4843 mL	2.4217 mL	4.8433 mL
10 mM	0.2422 mL	1.2108 mL	2.4217 mL
50 mM	0.0484 mL	0.2422 mL	0.4843 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.

Reference

Seeger TF, et al. J Pharmacol Exp Ther. 1995 Oct;275(1):101-13.

Xu Z, Guo L, Yu J, et al. Ligand recognition and G protein coupling of trace amine receptor TAAR1. Nature. 2023: 1-3.

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