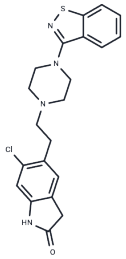
# Data Sheet (Cat.No.T0031L2)

TargetMol

## Ziprasidone

### Chemical Properties



CAS No. : 146939-27-7

Formula: C21H21ClN4OS

Molecular Weight: 412.94

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 | 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 (ED50 = 250 mg/kg i.v.) and olanzapine (ED50 = 1000 mg/kg i.v.), with an ED50 value of 300 mg/kg i.v. Additionally, Ziprasidone has a relatively low blocking effect on the wild-type hERG current in Xenopus oocytes, with an IC50 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.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (2.42 mM),Sonication is recommended.<br>*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* |

| | |
|---|---|
| In vivo Formulation | *vary and should be modified based on specific experimental conditions.* |

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.

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

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.