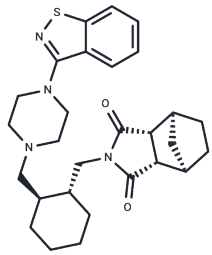
Data Sheet (Cat.No.T21337)

TargetMol

Lurasidone

Chemical Properties



CAS No. :	367514-87-2
Formula:	C28H36N4O2S
Molecular Weight:	492.68
Storage:	Store under nitrogen Powder: -20°C for 3 years Actual storage temperature shall be subject to the COA.

Biological Description

Description	Lurasidone (SM-13496) is an antagonist of dopamine D2 and 5-HT7 receptors (IC50 = 1.68 and 0.495 nM, respectively) and a partial agonist of the 5-HT1A receptor (IC50 = 6.75 nM).
Targets(IC50)	5-HT Receptor,Dopamine Receptor
In vitro	Lurasidone is administered once daily within the range of 40-160 mg/day for schizophrenia and 20-120 mg/day for bipolar depression, and its pharmacokinetic profile requires administration with food.?In adult healthy subjects and patients, a 40 mg dose results in peak plasma concentrations in 1-3 h, a mean elimination half-life of 18 h (mostly eliminated in the feces), and apparent volume of distribution of 6173 L;?it is approximately 99 % bound to serum plasma proteins.?Lurasidone's pharmacokinetics are approximately dose proportional in healthy adults and clinical populations within the approved dosing range, and this was also found in a clinical study of children and adolescents.?Lurasidone is principally metabolized by cytochrome P450 (CYP) 3A4 with minor metabolites and should not be coadministered with strong CYP3A4 inducers or inhibitors.?Lurasidone does not significantly inhibit or induce CYP450 hepatic enzymes [2].
In vivo	In addition to its principal antagonist activity at dopamine D2 and serotonin 5-HT2A receptors, lurasidone has distinctive 5-HT7 antagonistic activity, and displays partial agonism at 5-HT1A receptors, as well as modest antagonism at noradrenergic α2A and α2C receptors.?Lurasidone is devoid of antihistaminic and anticholinergic activities[1].

Solubility Information

Solubility	DMSO: 17.83 mg/mL (36.19 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 1.5 mg/mL (3.04 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	2.0297 mL	10.1486 mL	20.2972 mL
5 mM	0.4059 mL	2.0297 mL	4.0594 mL
10 mM	0.203 mL	1.0149 mL	2.0297 mL
50 mM	0.0406 mL	0.203 mL	0.4059 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

Greenberg W M , Citrome L . Pharmacokinetics and Pharmacodynamics of Lurasidone Hydrochloride, a Second-Generation Antipsychotic: A Systematic Review of the Published Literature[J]. Clinical Pharmacokinetics, 2016.
Danek P J, Wójcikowski J, Daniel W A. Asenapine and iloperidone decrease the expression of major cytochrome P450 enzymes CYP1A2 and CYP3A4 in human hepatocytes. A significance for drug-drug interactions during combined therapy. Toxicology and Applied Pharmacology. 2020, 406: 115239
Danek P J, Daniel W A.The Novel Atypical Antipsychotic Lurasidone Affects Cytochrome P450 Expression in the Liver and Peripheral Blood Lymphocytes.International Journal of Molecular Sciences.2023, 24(23): 16796.
Maurizio, Pompili, Claudio,et al. Lurasidone: efficacy and safety in the treatment of psychotic and mood disorders [J]. Expert Opinion on Drug Safety, 2017.
Danek P J, Wójcikowski J, Daniel W A. Asenapine and iloperidone decrease the expression of major cytochrome P450 enzymes CYP1A2 and CYP3A4 in human hepatocytes. A significance for drug-drug interactions during combined therapy[J]. Toxicology and Applied Pharmacology. 2020, 406: 115239.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481