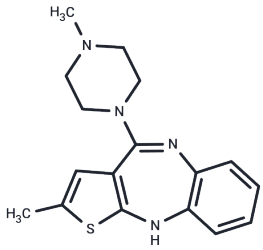
Data Sheet (Cat.No.T1567)

TargetMol

Olanzapine

Chemical Properties



CAS No. : 132539-06-1

Formula: C17H20N4S

Molecular Weight: 312.43

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	Olanzapine (LY170053) is an atypical antipsychotic that is used currently in the treatment of schizophrenia and bipolar illness.
Targets(IC50)	Apoptosis,Mitophagy,5-HT Receptor,Adrenergic Receptor,AChR,Autophagy,Dopamine Receptor
In vitro	Olanzapine is a potent antagonist of DA and 5-HT receptors, which elevates the extracellular levels of DA metabolites, such as DOPAC, and the DA metabolite 3-methoxytyramine, in the prefrontal cortex, nucleus accumbens, and striatum of rats. Subcutaneous injections of Olanzapine (0.5-10 mg/kg) increase the levels of dopamine (DA) and norepinephrine (NE) in these regions in a dose-dependent manner. Additionally, Olanzapine significantly inhibits insulin, leading to the onset of obesity.
In vivo	Olanzapine interacts with several key receptors associated with schizophrenia, demonstrating nanomolar affinity for dopamine, serotonin, alpha-1 adrenergic, and cholinergic receptors. Specifically, Olanzapine selectively targets striatal dopamine in the limbic and cortical regions of the brain, exhibiting no selectivity towards dopamine receptor subtypes.

Solubility Information

Solubility	DMSO: 240 mg/mL (768.17 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (16 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	3.2007 mL	16.0036 mL	32.0072 mL
5 mM	0.6401 mL	3.2007 mL	6.4014 mL
10 mM	0.3201 mL	1.6004 mL	3.2007 mL
50 mM	0.064 mL	0.3201 mL	0.6401 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

Bymaster FP, et al. J Clin Psychiatry, 1997, 58, 28-36.
Partyka A, Górecka K, Gdula-Argasińska J, et al.Selective 5-HT6 Receptor Ligands (Agonist and Antagonist) Show Different Effects on Antipsychotic Drug-Induced Metabolic Dysfunctions in Rats.Pharmaceuticals.2023, 16(2): 154.
Zhang W, et al. Neuropsychopharmacology, 2000, 23(3), 250-262.
Li XM, et al. Psychopharmacology (Berl), 1998, 136(2), 153-161.
Dorph-Petersen KA, et al. Neuropsychopharmacology, 2005, 30(9), 1649-1661.
Ader M, et al. Diabetes, 2005, 54(3), 862-871.