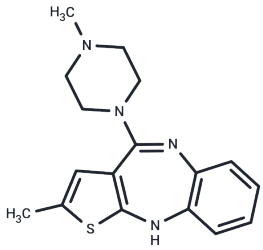
Data Sheet (Cat.No.T1567)

TargetMol

Olanzapine

Chemical Properties



CAS No. : 132539-06-1

Formula: C17H20N4S

Molecular Weight: 312.43

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Olanzapine (LY170053) is an atypical antipsychotic that is used currently in the treatment of schizophrenia and bipolar illness.
Targets(IC50)	5-HT Receptor,Adrenergic Receptor,AChR,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: 31.2 mg/mL (99.86 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

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.

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.