Olanzapine
Item No. 11937

CAS Registry No.: 132539-06-1
Formal Name: 2-methyl-4-(4-methyl-1-piperazinyl)-10H-thieno[2,3-b][1,5]benzodiazepine
Synonym: Zyprexa®
MF: C17H20N4S
FW: 312.4
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis: λ_max: 226, 272 nm

Laboratory Procedures

For long term storage, we suggest that olanzapine be stored as supplied at -20°C. It should be stable for at least two years.

Olanzapine is supplied as a crystalline solid. A stock solution may be made by dissolving the olanzapine in the solvent of choice. Olanzapine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of olanzapine in these solvents is approximately 1, 16, and 20 mg/ml, respectively.

Olanzapine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, olanzapine should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Olanzapine has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Olanzapine is an antipsychotic, thienobenzodiazepine compound that has been approved for use in the treatment of schizophrenia and bipolar disorder (formulated for human use under the name Zyprexa®). Olanzapine binds as an antagonist/Inverse agonist to dopamine D1 (Ki = 31 nM), dopamine D2 (Ki = 11 nM), dopamine D4 (Ki = 27 nM), serotonin 5-HT2A (Ki = 4 nM), serotonin 5-HT2C (Ki = 11 nM), serotonin 5-HT3 (Ki = 57 nM), muscarinic M1 (Ki = 2 nM), α1-adrenergic (Ki = 19 nM), and histamine H1 (Ki = 7 nM) receptors. 1 Olanzapine has a high affinity for dopamine D2 and D3 receptors (IC50s = 25 and 10 nM, respectively) in human striatal tissue and for 5-HT2A, 5-HT2C, muscarinic M1, and α1-adrenergic receptors (IC50s = 7, 71, 2, and 70 nM, respectively) in human frontal cortex. 1 This product is intended for research purposes only.

Reference

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/11937