

Certificate of Analysis

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Product Name: Olanzapine

Catalog No.: 4349

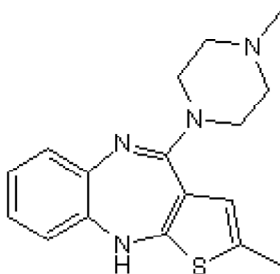
Batch No.: 2

CAS Number: 132539-06-1

IUPAC Name: 2-Methyl-4-(4-methyl-1-piperazinyl)-10H-thieno[2,3-b][1,5]benzodiazepine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₂₀N₄S
Batch Molecular Weight: 312.43
Physical Appearance: Yellow solid
Solubility: DMSO to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 192 - 196°C
HPLC: Shows 99.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	65.35	6.45	17.92
Found	65.13	6.64	18.25

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

bio-techne.com

info@bio-techne.com
techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors
Tel: +1 612 379 2956

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Description:

Olanzapine is an antagonist of 5-HT_{2A} and dopamine D₂ receptors (K_i values are 4 and 11 nM respectively). Also displays affinity for a range of other receptors including D₁ and D₄, 5-HT_{2C}, α₁, H₁ and M₁₋₄ receptors (K_i values range between 1.9 and 31 nM). Atypical antipsychotic. Displays anticholinergic properties. Also a highly potent activator of hM₄D_i DREADDs (EC₅₀ values are 5 nM in vitro and 7 nM in vivo).

Physical and Chemical Properties:

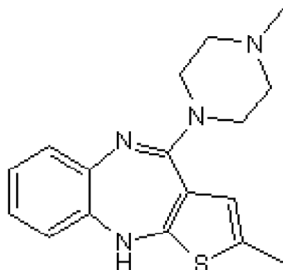
Batch Molecular Formula: C₁₇H₂₀N₄S

Batch Molecular Weight: 312.43

Physical Appearance: Yellow solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Tollefson and Taylor (2000) Olanzapine: preclinical and clinical profiles of a novel antipsychotic agent. *CNS Drug Reviews* **6** 303.

Bymaster et al (1996) Radioreceptor binding profile of the atypical antipsychotic olanzapine. *Neuropsychopharmacology* **14** 87. PMID: 8822531.

Moore et al (1992) The behavioral pharmacology of olanzapine, a novel "atypical" antipsychotic agent. *J.Pharmacol.Exp.Ther.* **262** 545. PMID: 1354253.

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