

## Certificate of Analysis

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**Product Name:** Olanzapine

**Catalog No.:** 4349

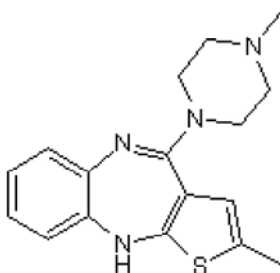
**Batch No.:** 2

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:** C<sub>17</sub>H<sub>20</sub>N<sub>4</sub>S  
**Batch Molecular Weight:** 312.43  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 100 mM  
 1eq. HCl to 100 mM  
 ethanol to 10 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**Melting Point:** Between 192 - 196°C  
**HPLC:** Shows 99.9% purity  
<sup>1</sup>H 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

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CAS Number: 132539-06-1

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

**Description:**

Antagonist of 5-HT<sub>2A</sub> and dopamine D<sub>2</sub> receptors (K<sub>i</sub> values are 4 and 11 nM respectively). Also displays affinity for a range of other receptors including D<sub>1</sub> and D<sub>4</sub>, 5-HT<sub>2C</sub>, α<sub>1</sub>, H<sub>1</sub> and M<sub>1-4</sub> receptors (K<sub>i</sub> values range between 1.9 and 31 nM). Atypical antipsychotic. Displays anticholinergic properties. Also a highly potent activator of hM<sub>4</sub>D<sub>i</sub> DREADDs (EC<sub>50</sub> values are 5 nM in vitro and 7 nM in vivo).

**Physical and Chemical Properties:**

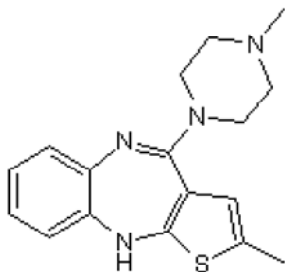
Batch Molecular Formula: C<sub>17</sub>H<sub>20</sub>N<sub>4</sub>S

Batch Molecular Weight: 312.43

Physical Appearance: Yellow solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**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.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 100 mM  
1eq. HCl to 100 mM  
ethanol to 10 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. Our standard recommendations are:

**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.

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