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## DATASHEET

Olanzapine

### Product overview

<b>Name</b>	Olanzapine
<b>Cat No</b>	HB1786
<b>Alternative names</b>	OZP
<b>Biological action</b>	Antagonist
<b>Purity</b>	>99%
<b>Description</b>	5-HT <sub>2A</sub> and D <sub>2</sub> antagonist. Potent DREADD agonist. Atypical antipsychotic.

### Biological Data

**Biological description** 5-HT<sub>2A</sub> and D<sub>2</sub> antagonist (K<sub>i</sub> values are 4 and 11 nM respectively). Also shows affinity at many other receptors e.g. 5-HT<sub>2C</sub>, D<sub>1</sub> / D<sub>4</sub>, α<sub>1</sub>, H<sub>1</sub> and M<sub>1-4</sub> receptors.

Also a potent hM4Di DREADD receptor agonist (EC<sub>50</sub> = ~5 nM *in vitro*).

Atypical antipsychotic which also shows anticholinergic properties.

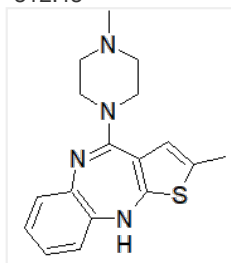
### Solubility & Handling

<b>Storage instructions</b>	+4 °C
<b>Solubility overview</b>	Soluble in DMSO (100mM) or water (100mM, 1eq. HCl)
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

### Chemical Data

**Chemical name** 2-Methyl-4-(4-methyl-1-piperazinyl) -10H-thieno[2,3-b][1,5]benzodiazepine  
**Molecular Weight** 312.43

**Chemical structure**



**Molecular Formula** C<sub>17</sub>H<sub>20</sub>N<sub>4</sub>S  
**CAS Number** 132539-06-1  
**PubChem identifier** 4585  
**SMILES** CC1=CC2=C(NC3=CC=CC=C3N=C2S1)N4CCN(CC4)C  
**InChi** InChI=1S/C17H20N4S/c1-12-11-13-16(21-9-7-20(2)8-10-21)18-14-5-3-4-6-15(14)19-17(13)22-12/h3-6,11,18H,7-10H2,1-2H3  
**InChiKey** WXPNDRBBWZMPQG-UHFFFAOYSA-N  
**MDL number** MFCD00866702  
**Appearance** Yellow solid

## References

### The behavioral pharmacology of olanzapine, a novel atypical" antipsychotic agent"

Moore NA *et al* (1992) *J Pharmacol Exp Ther* 262(2)

**PubMedID** [1354253](#)

### Radioreceptor binding profile of the atypical antipsychotic olanzapine

Bymaster FP *et al* (1996) *Neuropsychopharmacology* 14(2)

**PubMedID** [8822531](#)

### Olanzapine: A potent agonist at the hM4D(Gi) DREADD amenable to clinical translation of chemogenetics

Weston M *et al* (2019) *Sci Adv* 5(4)

**PubMedID** [31001591](#)

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