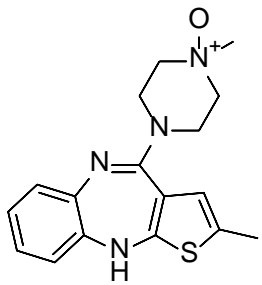


Product data sheet



MedKoo Cat#: 581003 Name: Olanzapine N-Oxide CAS: 174794-02-6 Chemical Formula: C ₁₇ H ₂₀ N ₄ OS Exact Mass: 328.1358 Molecular Weight: 328.434	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Olanzapine N-oxide is a metabolite of Olanzapine. Olanzapine (originally branded Zyprexa) is an antipsychotic medication used to treat schizophrenia and bipolar disorder.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.04 mL	15.22 mL	30.45 mL
5 mM	0.61 mL	3.04 mL	6.09 mL
10 mM	0.30 mL	1.52 mL	3.04 mL
50 mM	0.06 mL	0.30 mL	0.61 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Vucicevic L, Misirkic-Marjanovic M, Paunovic V, Kravic-Stevovic T, Martinovic T, Ciric D, Maric N, Petricevic S, Harhaji-Trajkovic L, Bumbasirevic V, Trajkovic V. Autophagy inhibition uncovers the neurotoxic action of the antipsychotic drug olanzapine. *Autophagy*. 2014;10(12):2362-78. doi: 10.4161/15548627.2014.984270. PMID: 25551567; PMCID: PMC4502661.

2. Karpel-Massler G, Kast RE, Westhoff MA, Dwucet A, Welscher N, Nonnenmacher L, Hlavac M, Siegelin MD, Wirtz CR, Debatin KM, Halatsch ME. Olanzapine inhibits proliferation, migration and anchorage-independent growth in human glioblastoma cell lines and enhances temozolomide's antiproliferative effect. *J Neurooncol*. 2015 Mar;122(1):21-33. doi: 10.1007/s11060-014-1688-7. Epub 2014 Dec 19. PMID: 25524815.

In vivo study

1. Liu X, Zhang H, Zhang S, Mao W, Liu L, Deng C, Hu CH. Olanzapine-induced decreases of FGF21 in brown adipose tissue via histone modulations drive UCPI-dependent thermogenetic impairment. *Prog Neuropsychopharmacol Biol Psychiatry*. 2023 Mar 2;122:110692. doi: 10.1016/j.pnpbp.2022.110692. Epub 2022 Dec 9. PMID: 36509252.

2. Coccorello R, Caprioli A, Ghirardi O, Conti R, Ciani B, Daniele S, Bartolomucci A, Moles A. Chronic administration of olanzapine induces metabolic and food intake alterations: a mouse model of the atypical antipsychotic-associated adverse effects. *Psychopharmacology (Berl)*. 2006 Jul;186(4):561-71. doi: 10.1007/s00213-006-0368-5. Epub 2006 May 13. PMID: 16758241.

Product data sheet



7. Bioactivity

Biological target:

Olanzapine N-oxide is a metabolite of Olanzapine.

In vitro activity

This study's initial hypothesis that olanzapine may enhance temozolomide's anti-tumor activity could be confirmed in U87MG and A172 glioblastoma cell lines. Moreover, treatment with olanzapine alone resulted in a marked anti-proliferative effect on U87MG, A172 and two glioma stem-like cells with IC50 values ranging from 25 to 79.9 μ M. In U87MG cells, anchorage-independent growth was dose-dependently inhibited.

Reference: J Neurooncol. 2015 Mar;122(1):21-33. <https://pubmed.ncbi.nlm.nih.gov/25524815/>

In vivo activity

In experiment 1, the highest dose of chronically administered olanzapine (3 mg/kg) induced significant weight gain accompanied by augmentation of periuterine fat depots, with no changes in locomotor activity. In experiment 2, chronic administration did not alter energy expenditure, whereas, decreased respiratory quotient (RQ). In experiment 3, subcutaneously infused olanzapine evidenced a dose and time-dependent increase of body weight and HF-HS diet consumed.

Reference: Psychopharmacology (Berl). 2006 Jul;186(4):561-71. <https://pubmed.ncbi.nlm.nih.gov/16758241/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.