

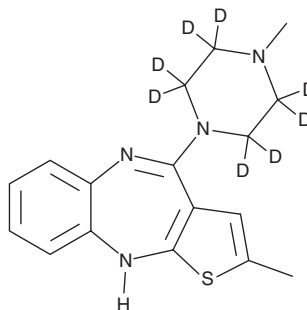
PRODUCT INFORMATION



Olanzapine-d₈

Item No. 25447

CAS Registry No.: 1093380-13-2
Formal Name: 2-methyl-4-(4-methyl-1-piperazinyl-2,2,3,3,5,5,6,6-d₈)-10H-thieno[2,3-b][1,5]benzodiazepine
MF: C₁₇H₁₂D₈N₄S
FW: 320.5
Chemical Purity: ≥98% (Olanzapine)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Olanzapine-d₈ is intended for use as an internal standard for the quantification of olanzapine (Item No. 11937) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Olanzapine-d₈ is supplied as a solid. A stock solution may be made by dissolving the olanzapine-d₈ in the solvent of choice. Olanzapine-d₈ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of olanzapine-d₈ in these solvents is approximately 1, 16, and 20 mg/ml, respectively.

Description

Olanzapine is an atypical antipsychotic that binds to dopamine D₁, D₂, and D₄ receptors (K_is = 31, 11, and 27 nM, respectively) as well as the serotonin (5-HT) receptor subtypes 5-HT_{2A}, 5-HT_{2C}, and 5-HT₃ (K_is = 4, 11, and 57 nM, respectively).¹ It also binds to M₁ muscarinic acetylcholine, α₁-adrenergic, and histamine H₁ receptors (K_is = 2, 19, and 7 nM, respectively). Olanzapine (0.5 mg/kg, i.p.) decreases immobility time in the forced swim test in non-stressed and prenatally-stressed rats, indicating antidepressant-like activity.² It also decreases the number of avoidances made in the conditioned avoidance response test in rats when administered at doses of 0.5 and 1 mg/kg.³ Formulations containing olanzapine have been used in the treatment of schizophrenia and bipolar disorder.

References

1. Bymaster, F.P., Calligaro, D.O., Falcone, J.F., *et al.* Radioreceptor binding profile of the atypical antipsychotic olanzapine. *Neuropsychopharmacology* **14**(2), 87-96 (1996).
2. Nowakowska, E., Kus, K., Ratajczak, P., *et al.* The influence of aripiprazole, olanzapine and enriched environment on depressant-like behavior, spatial memory dysfunction and hippocampal level of BDNF in prenatally stressed rats. *Pharmacol. Rep.* **66**(3), 404-411 (2014).
3. Ashby, D.M., Lapish, C.C., and Phillips, A.G. Stability of avoidance behaviour following repeated intermittent treatment with clozapine, olanzapine or D,L-gavadine. *Behav. Pharmacol.* **26**(1-2), 133-138 (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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