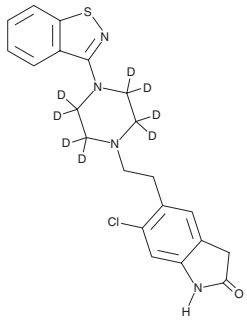
PRODUCT INFORMATION

Ziprasidone-d_8

Item No. 30737

CAS Registry No.:	1126745-58-1
Formal Name:	5-[2-[4-(1,2-benzisothiazol-3-yl)-1-piperazinyl-2,2,3,3,5,5,6,6-d_8]ethyl]-6-chloro-1,3-dihydro-2H-indol-2-one
Synonym:	CP-88,059-d_8
MF:	$C_{21}H_{13}D_8ClN_4OS$
FW:	421.0
Chemical Purity:	≥98% (Ziprasidone)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_8); ≤1% d_0
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

Ziprasidone-d_8 is intended for use as an internal standard for the quantification of ziprasidone (Item No. 15031) 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).

Ziprasidone-d_8 is supplied as a solid. A stock solution may be made by dissolving the ziprasidone-d_8 in the solvent of choice, which should be purged with an inert gas. Ziprasidone-d_8 is slightly soluble in DMSO and methanol.

Description

Ziprasidone is an atypical antipsychotic.[1] It is an agonist of the serotonin (5-HT) receptor subtype 5-HT_{1A} (EC_{50} = 36.31 nM for inhibition of forskolin-induced adenylate cyclase activity in HeLa cells expressing human receptors), as well as an inverse agonist of 5-HT_{1D} receptors (IC_{50} = 2.69 nM) and a partial agonist of 5-HT_{1B} receptors (EC_{50} = 6.17 nM) in [^{35}S]GTPγS binding assays.[2,3] Ziprasidone is an antagonist at 5-HT_{2A} and dopamine D_2 receptors (K_is = 1.15 and 1.29 nM, respectively) in cell-based assays.[4] It inhibits d-amphetamine-induced hyperactivity and apomorphine-induced stereotypy in rats (ID_{50}s = 1.53 and 2.43 mg/kg, respectively). Formulations containing ziprasidone have been used in the treatment of schizophrenia and bipolar I disorder.

References

1. Seeman, P. Atypical antipsychotics: Mechanism of action. *Can. J. Psychiatry* **47(1)**, 27-38 (2002).
2. Schmidt, A.W., Lebel, L.A., Howard, H.R., Jr., *et al.* Ziprasidone: A novel antipsychotic agent with a unique human receptor binding profile. *Eur. J. Pharmacol.* **425(3)**, 197-201 (2001).
3. Audinot, V., Newman-Tancredi, A., Cussac, D., *et al.* Inverse agonist properties of antipsychotic agents at cloned, human (h) serotonin (5-HT)$_{1B}$ and h5-HT_{1D} receptors. *Neuropsychopharmacology* **25(3)**, 410-422 (2001).
4. Seeger, T.F., Seymour, P.A., Schmidt, A.W., *et al.* Ziprasidone (CP-88,059): A new antipsychotic with combined dopamine and serotonin receptor antagonist activity. *J. Pharmacol. Exp. Ther.* **275(1)**, 101-113 (1995).

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