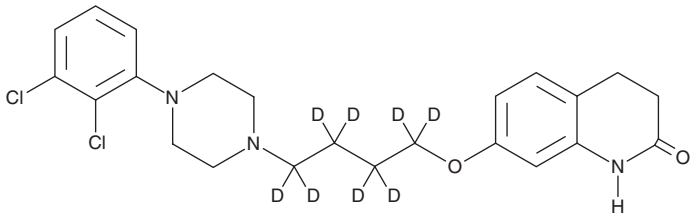
PRODUCT INFORMATION

Aripiprazole-d_8

Item No. 28487

CAS Registry No.: 1089115-04-7
Formal Name: 7-[4-[4-(2,3-dichlorophenyl)-1-piperazinyl]butoxy-1,1,2,2,3,3,4,4-d_8]-3,4-dihydro-2(1H)-quinolinone
MF: $C_{23}H_{19}Cl_2D_8N_3O_2$
FW: 456.4
Chemical Purity: ≥98% (Aripiprazole)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_8); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Aripiprazole-d_8 is intended for use as an internal standard for the quantification of aripiprazole (Item No. 19989) 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).

Aripiprazole-d_8 is supplied as a solid. A stock solution may be made by dissolving the aripiprazole-d_8 in the solvent of choice, which should be purged with an inert gas. Aripiprazole-d_8 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of aripiprazole-d_8 in these solvents is approximately 1, 25, and 30 mg/ml, respectively.

Description

Aripiprazole is an atypical antipsychotic.[1] It is a partial agonist at dopamine D_2, D_{2L}, and D_3 receptors (K_is = 3.3, 0.74, 9.7 nM, respectively), a partial agonist of the serotonin (5-HT) receptor subtype 5-HT_{1A} (K_i = 5.6 nM), and an inverse agonist of 5-HT_{2B} receptors (K_i = 0.36 nM). It is functionally selective at the dopamine D_2 receptor with cell-type- and function-selective activities. Aripiprazole inhibits disruptions in prepulse inhibition induced by phencyclidine in mice when administered at doses of 5 and 10 mg/kg.[2] Formulations containing aripiprazole have been used in the treatment of schizophrenia, bipolar mania or mixed episodes, and Tourette's disorder.

References

1. Shapiro, D.A., Renock, S., Arrington, E., *et al.* Aripiprazole, a novel atypical antipsychotic drug with a unique and robust pharmacology. *Neuropsychopharmacology* **28(8)**, 1400-1411 (2003).
2. Fejgin, K., Safonov, S., Pålsson, E., *et al.* The atypical antipsychotic, aripiprazole, blocks phencyclidine-induced disruption of prepulse inhibition in mice. *Psychopharmacology (Berl.)* **191(2)**, 377-385 (2007).

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