Aripiprazole

Cat. No.: HY-14546

CAS No.: 129722-12-9

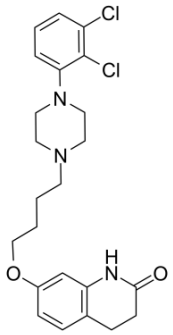
Molecular Formula: $C_{23}H_{27}Cl_2N_3O_2$

Molecular Weight: 448.39

Target: 5-HT Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMF : 50 mg/mL (111.51 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2302 mL	11.1510 mL	22.3020 mL
	5 mM	0.4460 mL	2.2302 mL	4.4604 mL
	10 mM	0.2230 mL	1.1151 mL	2.2302 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMF >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (5.58 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMF >> 90% corn oil
   Solubility: 2.5 mg/mL (5.58 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Aripiprazole (OPC-14597) is a human 5-HT1A receptor partial agonist with a Ki of 4.2 nM.

IC_{50} & Target

$5\text{-}HT_{1A}$ Receptor
4.2 nM (Ki)

In Vitro

Aripiprazole (OPC-14597) is an atypical antipsychotic medication used for the treatment of schizophrenia. Aripiprazole (OPC-14597) appears to mediate its antipsychotic effects primarily by partial agonism at the D2 receptor. In addition to partial agonist activity at the D2 receptor, Aripiprazole (OPC-14597) is also a partial agonist at the 5-HT1A receptor, and like the other atypical antipsychotics, aripiprazole displays an antagonist profile at the 5-HT2A receptor. Aripiprazole (OPC-14597) has moderate affinity for histamine and alpha adrenergic receptors, and no appreciable affinity for cholinergic muscarinic receptors.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Chemosphere. 2019 Jun;225:378-387.
- Int J Pharmaceut. 2020 Jun 15;583:119361.
- Korean J Physiol Pharmacol. 2020 Nov 1;24(6):545-553.

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REFERENCES

[1]. Stip E, Tourjman V. et al. Aripiprazole in schizophrenia and schizoaffective disorder: A review. Clin Ther. 2010;32 Suppl 1:S3-20.

[2]. Burris KD, Molski TF, Xu C et al. Aripiprazole, a novel antipsychotic, is a high-affinity partial agonist at human dopamine D2 receptors. J Pharmacol Exp Ther. 2002 Jul;302(1):381-9.

[3]. Swainston Harrison T, Perry CM. Aripiprazole: a review of its use in schizophrenia and schizoaffective disorder. Drugs. 2004;64(15):1715-36.

[4]. Nagasaka Y, Oda K, Iwatsubo T, Kawamura A, Usui T.Nagasaka Y, Oda K, Iwatsubo T, Kawamura A, Usui T.Effects of aripiprazole and its active metabolite dehydroaripiprazole on the activities of drug efflux transporters expressed both in the intestine and at the blood-brain barrier.Biopharm Drug Dispos. 2012 Jul 27. doi: 10.1002/bdd.1801.

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