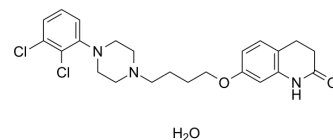


Aripiprazole monohydrate

Cat. No.:	HY-14546A
CAS No.:	851220-85-4
Molecular Formula:	C ₂₃ H ₂₉ Cl ₂ N ₃ O ₃
Molecular Weight:	466.4
Target:	5-HT Receptor; Dopamine Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Aripiprazole (OPC-14597) monohydrate, an atypical antipsychotic, is a potent and high-affinity dopamine D2 receptor partial agonist. Aripiprazole monohydrate is an inverse agonist at 5-HT _{2B} and 5-HT _{2A} receptors and displays partial agonist actions at 5-HT _{1A} , 5-HT _{2C} , D ₃ , and D ₄ receptors. Aripiprazole monohydrate can be used for the research of schizophrenia and COVID19 ^{[1][2][3][4]} .			
IC₅₀ & Target	5-HT _{1A} Receptor	5-HT _{2A} Receptor	5-HT _{2B} Receptor	5-HT _{2C} Receptor
	D ₂ Receptor	D ₃ Receptor	D ₄ Receptor	
In Vitro	Aripiprazole monohydrate potently activates D2 receptor-mediated inhibition of cAMP accumulation ^[1] . Aripiprazole monohydrate shows a greater anti-inflammatory effect on TNF-α, IL-13, IL-17α and fractalkine ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			
In Vivo	Aripiprazole monohydrate (0-3 mg/kg, IP, daily) shows some anxiolytic properties ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			
	Animal Model:	WAG/Rij rats (N = 6 per dose, 6 months, administration of a mixture of tiletamine/zolazepam) ^[4]		
	Dosage:	0, 0.3, 1, 3 mg/kg		
	Administration:	IP, 1 mL/kg, every day at 5 p.m. until the end of the experiments		
	Result:	Showed some anxiolytic properties with the 1 mg/kg dose being the most active.		

CUSTOMER VALIDATION

- Nat Neurosci. 2021 Dec 9.
- Chemosphere. 2019 Jun;225:378-387.
- Acta Pharmacol Sin. 2021 May 11.

- 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]. Burris KD, 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.
- [2]. Davies MA, et al. Aripiprazole: a novel atypical antipsychotic drug with a uniquely robust pharmacology. CNS Drug Rev. 2004 Winter;10(4):317-36.
- [3]. Crespo-Facorro B, et al. Aripiprazole as a Candidate Treatment of COVID-19 Identified Through Genomic Analysis. Front Pharmacol. 2021 Mar 2;12:646701.
- [4]. Russo E, et al. Ameliorating effects of aripiprazole on cognitive functions and depressive-like behavior in a genetic rat model of absence epilepsy and mild-depression comorbidity. Neuropharmacology. 2013 Jan;64:371-9.
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Caution: Product has not been fully validated for medical applications. For research use only.

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