Adoprazine

Cat. No.: HY-14782

CAS No.: 222551-17-9

Molecular Formula: $C_{24}H_{24}FN_3O_2$

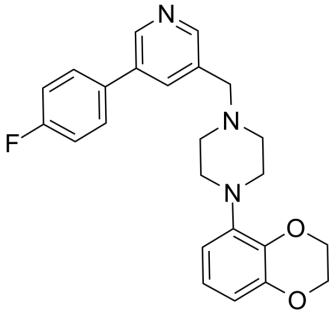
Molecular Weight: 405.46

Target: 5-HT Receptor; Dopamine Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (123.32 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4663 mL	12.3317 mL	24.6633 mL
	5 mM	0.4933 mL	2.4663 mL	4.9327 mL
	10 mM	0.2466 mL	1.2332 mL	2.4663 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 30 mg/mL (73.99 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 3 mg/mL (7.40 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Adoprazine (SLV313) is a full 5-HT_{1A} receptor agonist with a pEC_{50} of 9 at cloned h5-HT_{1A} receptors. Adoprazine (SLV313) is a full D_2 and D_3 receptor antagonist with pA_2s of 9.3 and 8.9 at hD_2 and hD_3 receptors, respectively. Adoprazine (SLV313) has the characteristics of atypical antipsychotics[1].

IC_{50} & Target

5-HT_{1A} Receptor 9 (pEC50)	D_2 Receptor 9.3 (pA2)	D_3 Receptor 8.9 (pA2)	D_4 Receptor 8.0 (pKi)
5-HT_7 Receptor 7.2 (pKi)	5-HT_{1A} Receptor 9.1 (pKi)	D_2 Receptor 8.4 (pKi)	D_3 Receptor 8.4 (pKi)

In Vitro	Adoprazine (SLV313) has high affinity at human recombinant D_2, D_3, D_4, 5-HT_{2B}, and 5-HT_{1A} receptors, with pK_is of 8.4, 8.4, 8.0, 7.9 and 9.1, respectively[1]. Adoprazine (SLV313) acts as a high potency dopamine D_2 receptor antagonist and an efficacious serotonin 5-HT_{1A} receptor agonist, with E_{max} value (% effect of 10 μM 5-HT) of 73 and pK_B value of 8.5 [2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Adoprazine (SLV313) (0.1-10 mg/kg; p.o.; single) is sufficient to reduce extracellular 5-HT and increase dopamine levels in the nucleus accumbens in a dose- and time-dependent manner[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar rats (275-350 g) [1]
Dosage:	0.1 mg/kg, 0.3 mg/kg, 1 mg/kg, 3 mg/kg, 10 mg/kg
Administration:	p.o.; single
Result:	Led to a dose- and time-dependent increase in extracellular levels of DA, DOPAC, and HVA. In contrast, led to a reduction in 5-HT levels and no change in 5-HIAA levels.

REFERENCES

[1]. Andrew C McCreary, et al. SLV313 (1-(2,3-dihydro-benzo[1,4]dioxin-5-yl)-4- [5-(4-fluoro-phenyl)-pyridin-3-ylmethyl]-piperazine monohydrochloride): a novel dopamine D2 receptor antagonist and 5-HT1A receptor agonist potential antipsychotic drug. Neuropsych

[2]. Liesbeth A Bruins Slot, et al. Differential profile of antipsychotics at serotonin 5-HT1A and dopamine D2S receptors coupled to extracellular signal-regulated kinase. Eur J Pharmacol. 2006 Mar 18;534(1-3):63-70.

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