SUVN-911

Cat. No.: HY-136146

CAS No.: 2414674-71-6

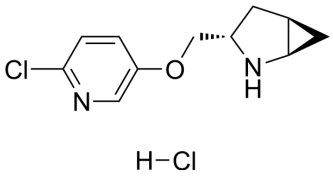
Molecular Formula: $C_{11}H_{14}Cl_2N_2O$

Molecular Weight: 261.15

Target: nAChR

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (478.65 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.8292 mL	19.1461 mL	38.2922 mL
	5 mM	0.7658 mL	3.8292 mL	7.6584 mL
	10 mM	0.3829 mL	1.9146 mL	3.8292 mL

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

BIOLOGICAL ACTIVITY

Description

SUVN-911 is a potent, selective, brain penetrated and orally bioavailable neuronal nicotinic acetylcholine α4β2 receptor antagonist, with a K_i of 1.5 nM. SUVN-911 has antidepressant activity[1].

IC_{50} & Target

Ki: 1.5 nM (α4β2 receptor)[1]

In Vitro

SUVN-911 displays high selectivity for α4β2 over α3β4 nAChR[1].
SUVN-911 shows good selectivity against over 70 receptors which includes GPCRs, ion channels, enzymes, peptides, steroids, second messengers, growth factors and prostaglandins[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

SUVN-911 is devoid of cardiovascular and gastrointestinal side effects[1].
SUVN-911 (1.0-10.0 mg/kg; p.o.; daily; for 3 days) shows significant antidepressant effects[1].
SUVN-911 shows metabolic stability in rats[1].
SUVN-911 (3 mg/kg; p.o.) has shown high oral exposures, longer half-lives and adequate brain penetration in Wistar rats[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar rats (180-230 g)[1]
Dosage:	1 mg/kg, 3 mg/kg, 10.0 mg/kg
Administration:	Oral administration, daily, for 3 days
Result:	Showed antidepressant like activity with no signs of tachyphylaxis.

Animal Model:	Male Wistar rats (225 ± 25 g)[1]
Dosage:	3 mg/kg (Pharmacokinetic Analysis)
Administration:	Oral administration
Result:	AUC=3507 ng*h/mL, $T_{1/2}$=3.34 hours.

REFERENCES

[1]. Ramakrishna Nirogi, et al. Discovery and Development of 3-(6-Chloropyridine-3-yloxymethyl)-2-azabicyclo[3.1.0]hexane Hydrochloride (SUVN-911): A Novel, Potent, Selective, and Orally Active Neuronal Nicotinic Acetylcholine α4β2 Receptor Antagonist for the Treatment of Depression. J Med Chem. 2020 Mar 26;63(6):2833-2853.

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