SR 57227A

Cat. No.: HY-102064

CAS No.: 77145-61-0

Molecular Formula: $C_{10}H_{15}Cl_2N_3$

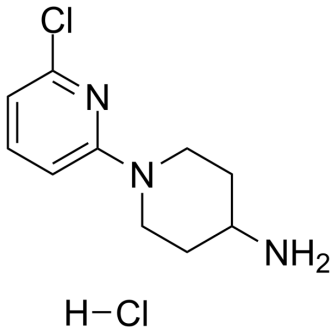
Molecular Weight: 248.15

Target: 5-HT Receptor

Pathway: GPCR/G Protein; 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

H_2O : 33.33 mg/mL (134.31 mM; Need ultrasonic)

DMSO : 8.33 mg/mL (33.57 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.0298 mL	20.1491 mL	40.2982 mL
5 mM	0.8060 mL	4.0298 mL	8.0596 mL
10 mM	0.4030 mL	2.0149 mL	4.0298 mL

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

In Vivo

1. Add each solvent one by one: PBS

Solubility: 10 mg/mL (40.30 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description

SR 57227A is a potent, orally active and selective 5-HT3 receptor agonist, with ability to cross the blood brain barrier. SR 57227A has affinities (IC_{50}) varying between 2.8 and 250 nM for 5-HT3 receptor binding sites in rat cortical membranes and on whole NG 108-15 cells or their membranes. Anti-depressant effects[1][2].

In Vitro

SR 57227A binds to 5-HT3 receptors labelled with [3H]S-zacopride with an affinity (K_i) of 115 nM in rat cerebral cortex, 150 nM in NG 108-15 cell membranes and 103 nM in whole NG 108-15 cell[1].

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

In Vivo

SR 57227A (1-30 mg/kg; i.p.) dose-dependently reduces immobility time in the forced swimming test with an ED_{50} value for this effect of 14.2 mg/kg[2].

In the forced swimming test, SR 57227A dose-dependently reduces the duration of immobility in rats after i.p. administration. (ED_{50}=7.6 mg/kg i.p. in rats.) SR 57227A is also active in both species after oral administration. In a time-course study in mice, SR 57227A (20 mg/kg p.o.) produces a significant effect lasting 6 hours. SR 57227A (1 and 3 mg/kg i.p.)

reduces the elevation of the escape failures in the learned helplessness model in rats by 50-60% on the last two days of the avoidance task, and reduces isolation-induced aggressivity in mice by 50 to 85%, an effect which is antagonised by Zacopride (1 mg/kg i.p.)[2].

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

REFERENCES

[1]. Poncelet M, et al, Le Fur G. Antidepressant-like effects of SR 57227A, a 5-HT3 receptor agonist, in rodents. J Neural Transm Gen Sect. 1995;102(2):83-90.

[2]. Bachy A, et al. SR 57227A: a potent and selective agonist at central and peripheral 5-HT3 receptors in vitro and in vivo. Eur J Pharmacol. 1993;237(2-3):299-309.

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