Naloxonazine dihydrochloride

Cat. No.: HY-101011

CAS No.: 880759-65-9

Molecular Formula: $C_{38}H_{44}Cl_2N_4O_6$

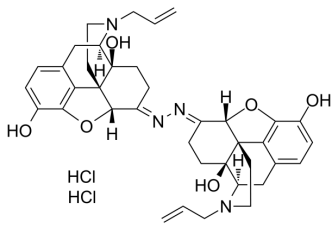
Molecular Weight: 723.69

Target: Opioid 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 : ≥ 25 mg/mL (34.55 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.3818 mL	6.9090 mL	13.8181 mL
5 mM	0.2764 mL	1.3818 mL	2.7636 mL
10 mM	0.1382 mL	0.6909 mL	1.3818 mL

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

BIOLOGICAL ACTIVITY

Description

Naloxonazine dihydrochloride is a specific μ-opioid receptor antagonist with an IC_{50} of 5.4 nM. Naloxonazine dihydrochloride also shows anti-leishmanial activity[1][2][3].

IC_{50} & Target

μ Opioid Receptor/MOR

5.4 nM (IC_{50})

In Vitro

Naloxonazine is relatively stable in solution[2].

Naloxonazine (72 h) is active against the intracellular amastigote stage of Leishmania donovani with a half maximal inhibitory concentration (GI_{50}) of 3.45 μM[3].

Naloxonazine (10 μM; 0-72 h) is active at early stages of Leishmania donovani infection[3].

Naloxonazine affects acidic compartments of the host cell which in turn limit L. donovani intracellular growth[3].

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

In Vivo

Naloxonazine (20 mg/kg; i.p.; once) attenuates the increment of locomotor activity induced by acute methamphetamine in mice[1]

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Animal Model:	Male ICR mice, methamphetamine (METH)-induced locomotor activity model[1]
Dosage:	20 mg/kg
Administration:	Intraperitoneal injection, once, 60 min before injecting saline (i.p.) or METH (1 mg/kg, i.p.)
Result:	Significantly attenuated the acute METH-induced increase in locomotor activity and phosphor-Thr75 DARPP-32 levels.

REFERENCES

[1]. Chien CC, et al. Naloxonazine, a specific mu-opioid receptor antagonist, attenuates the increment of locomotor activity induced by acute methamphetamine in mice. Toxicol Lett. 2012 Jul 7;212(1):61-5.

[2]. Hahn EF, et al. Naloxonazine, a potent, long-lasting inhibitor of opiate binding sites. Life Sci. 1982 Sep 20-27;31(12-13):1385-8.

[3]. De Muylder G, et al. Naloxonazine, an Amastigote-Specific Compound, Affects Leishmania Parasites through Modulation of Host-Encoded Functions. PLoS Negl Trop Dis. 2016 Dec 30;10(12):e0005234.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA