Cyamemazine

Cat. No.: HY-14264

CAS No.: 3546-03-0

Molecular Formula: $C_{19}H_{21}N_3S$

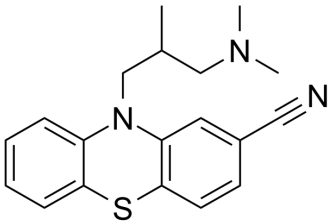
Molecular Weight: 323.46

Target: 5-HT Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (309.16 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.0916 mL	15.4579 mL	30.9157 mL
5 mM	0.6183 mL	3.0916 mL	6.1831 mL
10 mM	0.3092 mL	1.5458 mL	3.0916 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (7.73 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (7.73 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.73 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Cyamemazine is a neuroleptic agent that contains the phenothiazine chromophore. Cyamemazine is often used as an anxiolytic. Cyamemazine is a potent 5-HT_3 (K_i of 12 nM), 5-HT_{2A} (K_i = 1.5 nM) and 5-HT_{2C} (K_i of 75 nM) receptors antagonist with antipsychotic activity[1][2].

IC_{50} & Target

5-HT_{2A} Receptor	5-HT_{2C} Receptor	5-HT_3 Receptor
1.5 nM (Ki)	12 nM (Ki)	75 nM (Ki)

In Vitro	Cyamemazine exhibits a high affinity for dopamine receptors, which is consistent with its antipsychotic activity. The antagonist activity of Cyamemazine at muscarinic receptors is consistent with its affinity for M_1 (K_i = 13 nM), M_2 (K_i = 42 nM), M_3 (K_i = 321 nM), M_4 (K_i = 12 nM), and M_5 (K_i = 35 nM) receptors[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Cyamemazine behaves as an antagonist at the 5-HT_3, 5-HT_{2C}, and 5-HT_{2A} receptors in 5-HT_3-dependent contraction of isolated guinea pig ileum and bradycardic responses in rats, in 5-HT_{2C}-dependent phospholipase C stimulation in the rat brain membrane, and in 5-HT_{2A}-dependent contraction of isolated rat aorta rings and isolated guinea pig trachea. Cyamemazine antagonizes 5-HT_3 and 5-HT_{2C} receptors and that this effect is partially involved in its therapeutic activity in anxiety disorders. Acute administration of low doses of Cyamemazine can reduces extracellular dopamine and metabolite concentrations in rat striatum[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Bourin M, et al. Preclinical and clinical pharmacology of cyamemazine: anxiolytic effects and prevention of alcohol and benzodiazepine withdrawal syndrome. CNS Drug Rev. 2004 Fall;10(3):219-29.

[2]. Vendrell-Criado V, et al. Photobehavior of the antipsychotic drug cyamemazine in a supramolecular gel protective environment. J Photochem Photobiol B. 2020 Jan;202:111686.

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