Chlorprothixene

Cat. No.: HY-B0274

CAS No.: 113-59-7

Molecular Formula: $C_{18}H_{18}ClNS$

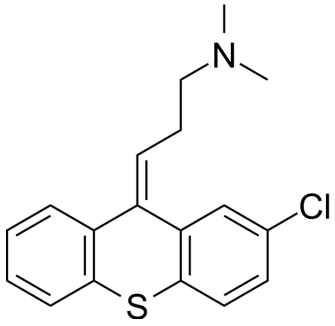
Molecular Weight: 315.86

Target: Dopamine Receptor; Bacterial; Histamine Receptor

Pathway: GPCR/G Protein; Neuronal Signaling; Anti-infection; Immunology/Inflammation

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 : 33.33 mg/mL (105.52 mM; Need ultrasonic)

H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.1660 mL	15.8298 mL	31.6596 mL
5 mM	0.6332 mL	3.1660 mL	6.3319 mL
10 mM	0.3166 mL	1.5830 mL	3.1660 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 (7.91 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.91 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Chlorprothixene is a dopamine and histamine receptors antagonist with K_is of 18 nM, 2.96 nM, 4.56 nM, 9 nM and 3.75 nM for hD1, hD2, hD3, hD5 and hH1 receptors, respectively. Antipsychotic activity[1].

IC_{50} & Target

Human D_1 Receptor 18 nM (Ki)	Human D_2 Receptor 2.96 nM (Ki)	Human D_3 Receptor 4.56 nM (Ki)	Human D_5 Receptor 9 nM (Ki)
Human H_1 Receptor 3.75 nM (Ki)			

In Vitro	Chlorprothixene binds to 5-HT receptors with pK_is of 8.3, 8.5, and 9.4 for 5-HT7, 5-HT6 and 5-HT2, respectively[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Y von Coburg, et al. Potential utility of histamine H3 receptor antagonist pharmacophore in antipsychotics. Bioorg Med Chem Lett. 2009 Jan 15;19(2):538-42.

[2]. B L Roth, et al. Binding of typical and atypical antipsychotic agents to 5-hydroxytryptamine-6 and 5-hydroxytryptamine-7 receptors. J Pharmacol Exp Ther. 1994 Mar;268(3):1403-10.

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