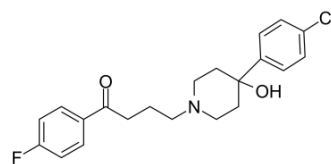


Haloperidol

Cat. No.:	HY-14538		
CAS No.:	52-86-8		
Molecular Formula:	C ₂₁ H ₂₃ ClFNO ₂		
Molecular Weight:	375.86		
Target:	Dopamine 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 : 16.67 mg/mL (44.35 mM; Need ultrasonic)
 H₂O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.6606 mL	13.3028 mL	26.6057 mL
	5 mM	0.5321 mL	2.6606 mL	5.3211 mL
	10 mM	0.2661 mL	1.3303 mL	2.6606 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 1.67 mg/mL (4.44 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: 1.67 mg/mL (4.44 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 1.67 mg/mL (4.44 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Haloperidol is a potent **dopamine D2 receptor** antagonist, widely used as an antipsychotic.

In Vivo

Haloperidol (1 mg) intra-arterially attenuates the dopamine-induced pancreatic secretion. Haloperidol (3 mg) completely inhibits the action of 10 μg of dopamine in the pancreas of the dogs^[1]. Haloperidol (10 mg/kg) as well as chlorpromazine (CPZ, 15 mg/kg) blocks mescaline-induced altered behavior within 7 to 10 minutes when injected

into the mice 45 minutes after 50 mg/kg (2 µc) of mescaline. Haloperidol has no effect on mescaline disappearance^[2].

PROTOCOL

Animal Administration ^[2]

Male albino mice of Swiss-Webster strain (33-36 g) are used, and all substances are given by i.p. injection in a volume of 0.5 mL. CPZ, haloperidol and mescaline are all in time form of their hydrochlorides and the dose solutions are prepared at concentrations of 1.0, 0.66 and 3.3 mg/mL of 0.9% saline, respectively. The doses are: CPZ, 15 mg/kg; haloperidol, 10 mg/kg; mescaline, 50 mg/kg. Mice are pretreated with either CPZ or haloperidol 30 minutes before administration of mescaline. In some instances CPZ is injected 45 minutes after mescaline. Time animals are housed individually in a plexiglas cage and the gross behavior and locomotor activity. At selected intervals after mescaline, groups of mice are sacrificed by decapitation. Plasma is separated and stored at -20°C. The brain, liver, kidney, lung, spleen and heart are frozen on dry ice and stored at -20°C for 18 to 20 hours before they are used for assays. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- PLoS Negl Trop Dis. 2019 Aug 20;13(8):e0007681.

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REFERENCES

[1]. Furuta Y, et al. Effects of enzyme inhibitors of catecholamine metabolism and of haloperidol on the pancreatic secretion induced by L-DOPA and by dopamine in dogs. Br J Pharmacol. 1973 Jan;47(1):77-84

[2]. Shah NS, et al. Effects of chlorpromazine and haloperidol on the disposition of mescaline-14C in mice. J Pharmacol Exp Ther. 1973 Aug;186(2):297-304

Caution: Product has not been fully validated for medical applications. For research use only.

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