Diphenylpyraline hydrochloride

Cat. No.: HY-B0970

CAS No.: 132-18-3

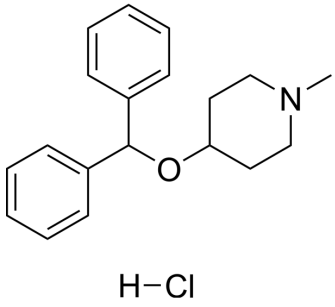
Molecular Formula: $C_{19}H_{24}ClNO$

Molecular Weight: 317.85

Target: Histamine Receptor

Pathway: GPCR/G Protein; Immunology/Inflammation; 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 : 100 mg/mL (314.61 mM; Need ultrasonic)
DMSO : ≥ 100 mg/mL (314.61 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.1461 mL	15.7307 mL	31.4614 mL
5 mM	0.6292 mL	3.1461 mL	6.2923 mL
10 mM	0.3146 mL	1.5731 mL	3.1461 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (314.61 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (7.87 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.87 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.87 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Diphenylpyraline hydrochloride is a potent histamine H_1 receptor antagonist. Diphenylpyraline hydrochloride acts as an orally active antihistamine agent with antimuscarinic and antiallergic effects. Diphenylpyraline hydrochloride can be used for the relief of allergic conditions including rhinitis and hay fever, and in pruritic skin disorders in vivo.[1]

IC_{50} & Target

H_1 Receptor

In Vitro	Diphenylpyraline hydrochloride (10 μM) markedly inhibits dopamine uptakein mouse nucleus accumbens slices[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Diphenylpyraline hydrochloride (intraperitoneal injection; 5-10 mg/kg) elevates extracellular dopamine levels (~200%) in mouse nucleus accumbens and induces locomotor activation in mice[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6 mice[2]
Dosage:	5-10 mg/kg
Administration:	Intraperitoneal injection
Result:	Had psychostimulant properties.

REFERENCES

[1]. Erik B Oleson, et al. Effects of the histamine H_1 receptor antagonist and benztropine analog diphenylpyraline on dopamine uptake, locomotion and reward.

[2]. Gennady B Lapa, et al. Diphenylpyraline, a histamine H1 receptor antagonist, has psychostimulant properties

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