Pirmenol

Cat. No.: HY-100795

CAS No.: 68252-19-7

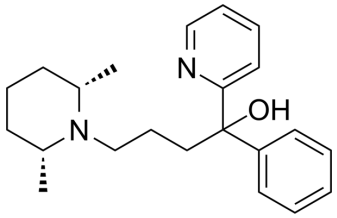
Molecular Formula: $C_{22}H_{30}N_2O$

Molecular Weight: 338.49

Target: mAChR; Potassium Channel

Pathway: GPCR/G Protein; Neuronal Signaling; Membrane Transporter/Ion Channel

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Pirmenol is an orally active antiarrhythmic agent. Pirmenol inhibits $I_{K.ACh}$ (IC_{50}: 0.1 μM) by blocking mAchR. Pirmenol can be used in the research of cardiovascular disease, such as atrial fibrillation[1][2][4].
IC_{50} & Target	IC50: 0.1 μM ($I_{K.ACh}$)[1]
In Vitro	Pirmenol (1 μM) inhibits the $I_{K.ACh}$ induced by carbachol or intracellular loading of GTPg S in in atrial cells[1]. Pirmenol (5 μM) depresses the early part of the plateau and lengthened the final repolarization of the action potentials in ventricular myocytes[3]. Pirmenol (1 μM) prolongs the action potential duration at 90% repolarization in atrial muscles and Purkinje fibers[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Pirmenol (2.5 and 5 mg/kg, p.o.) is effective against the arrhythmias in conscious, coronary artery ligated dogs[4]. Pirmenol (rats) shows LD_{50}s of 359.9 mg/kg (p.o), 23.6 mg/kg (i.v.)[2]. Pirmenol (mice) shows LD_{50}s of 215.5 mg/kg (p.o), 20.8 mg/kg (i.v.)[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Conscious, coronary artery ligated dogs[4]
Dosage:	Oral administration (p.o.)
Administration:	2.5 and 5 mg/kg
Result:	Restored normal sinus rhythm, and showed a long duration of activity, wide safety margin.

REFERENCES

[1]. T Sawanobori, et al. Electrophysiologic and antiarrhythmic actions of pirmenol on rabbit and guinea pig cardiac preparations. J Cardiovasc Pharmacol. 1990 Dec;16(6):975-83.

[2]. T E Mertz, et al. Pirmenol hydrochloride (CI-845): antiarrhythmic profile in coronary artery ligated conscious dogs. J Cardiovasc Pharmacol. 1980 Sep-Oct;2(5):527-41.

[3]. Watanabe Y, et al. Pirmenol inhibits muscarinic acetylcholine receptor-operated K+ current in the guinea pig heart. Eur J Pharmacol. 1997 Oct 29;338(1):71-4.

[4]. Schardein JL, et al. Preclinical toxicology studies with a new antiarrhythmic agent: Pirmenol hydrochloride (CI-845). Toxicol Appl Pharmacol. 1980 Nov;56(2):294-301.

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