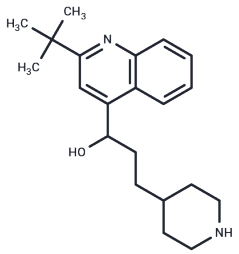
Data Sheet (Cat.No.T26010)

TargetMol

Quinacainol

Chemical Properties



CAS No. : 86073-85-0

Formula: C21H30N2O

Molecular Weight: 326.48

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Quinacainol (RP 54272) is a new antiarrhythmic compound with class I antiarrhythmic effects in rats.
Targets(IC50)	Others,Sodium Channel
In vitro	Quinacainol blocked sodium currents in a concentration-dependent manner and with a potency similar to that of quinidine (mean (+/-SEM) EC50 50+/-12 vs 95+/-25 micromol/L for quinidine and quinacainol, respectively). Quinacainol, a quinidine analog, blocks sodium currents in cardiac myocytes with little effect on I (to) or iKsus potassium currents, which suggests that quinacainol may be exerting class 1c anti-arrhythmic actions.[1]
In vivo	Evaluation of antiarrhythmic effects using Quinacainol in conscious rats with LAD coronary artery occlusion. Antiarrhythmic actions occurred with 2.0 and 4.0 mg/kg, whereas 8.0 mg/kg was pro-arrhythmic. At doses of 0.5 mg/kg and above, quinacainol increased threshold currents for capture and for ventricular fibrillation. Doses of 2.0 mg/kg and above increased ventricular refractoriness. From 1.0 to 8.0 mg/kg, quinacainol reduced dV/dtmax of phase 0 of epicardial action potentials but only 8.0 mg/kg increased action potential duration. The Q-T interval was also increased with the highest dose. Quinacainol dose-relatedly increased P-R interval whereas QRS did not change. Thus the Class I electrophysiological properties of quinacainol over the dose range tested did not fit accurately into a single subclass of the various subclasses of Class I. However, the Class Ic actions seen with 2.0 and 4.0 mg/kg were associated with antiarrhythmic actions.[2]

Solubility Information

Solubility	DMSO: 50 mg/mL (153.15 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.063 mL	15.3149 mL	30.6297 mL
5 mM	0.6126 mL	3.063 mL	6.1259 mL
10 mM	0.3063 mL	1.5315 mL	3.063 mL
50 mM	0.0613 mL	0.3063 mL	0.6126 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Pugsley MK, et al. Block of NA+ and K+ currents in rat ventricular myocytes by quinacainol and quinidine. Clin Exp Pharmacol Physiol. 2005;32(1-2):60-65.
Howard PG, et al. Quinacainol, a new antiarrhythmic with class I antiarrhythmic actions in the rat. Eur J Pharmacol. 1992;219(1):1-8.
Drobinski G, et al. Haemodynamic effects of intravenous quinacainol with and without autonomic nervous system blockade. Int J Cardiol. 1991;30(3):341-347.
Drobinski G, et al. Hemodynamic effects of quinacainol administered via an intravenous route. Study in patients with normal left ventricular function. Therapie. 1990;45(2):119-123.