Product Data Sheet

Product Name: Dopropidil
Cat. No.: GC32652

Chemical Properties

Cas. No.	79700-61-1		
SMILES	CC#CC1(OCC(N2CCCC2)COCC(C)C)CCCCC1		
Formula	$C_{20}H_{35}NO_2$	M.Wt	321.5
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Dopropidil		

Protocol

Animal experiment:

Rabbits[1] Groups of rabbits given a normal diet or one containing Cholesterol (1 %) are treated with vehicle, Diltiazem (10 mg/kg per day,p.o.), or Dopropidil (30 mg/kg per day, p.o.) over a 14-week period. Animals are then killed and certain blood vessels examined macroscopically, microscopically, and pharmacologically for reactivity to certain vasoactive agents.

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References:

[1]. J. Planellas, et al. Dopropidil, A Novel Antianginal Calcium Modulating Agent. Cardiovascular Drug Reviews. Vol.12, No.3, pp. 208-224.

Background

Dopropidil is a novel anti-anginal calcium ion modulating agent, possessing intracellular calcium antagonist activity andanti-ischemic effects in several predictive animal models.

Dopropidil is able to inhibit caffeine-induced contractions of rabbit renal arteries in a calcium-free medium (IC50=30.0 uM). Dopropidil inhibits norepinephnne (NE)-induced responses with IC50s of 2.7 and 29.8 uM, respectively. At 3 and 10 μM, Dopropidil significantly reduces the maximum increase in diastolic tension evoked by veratrine (IC50=2.8 μM)[1].

Dopropidil (1 and 2.5 mg/kg) dose-dependently reduces the electrical (ST segment elevation), biochemical (lactate production and potassium release), and mechanical (loss in myocardial segment contractility) perturbations induced by ischemia in the anesthetized dog. Intraduodenal administration of Dopropidil (50 mg/kg) significantly reduces isoproterenol-induced tachycardia. This effect is manifest at 15-120 min following administration of the compound which indicates a rapid absorption and a long duration of action. In conscious dogs Dopropidil (12-14 mg/kg p.o.) reduces resting heart rate by approximately10 beats/min[1].

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