Gallopamil

Cat. No.: HY-14276

CAS No.: 16662-47-8

Molecular Formula: $C_{28}H_{40}N_2O_5$

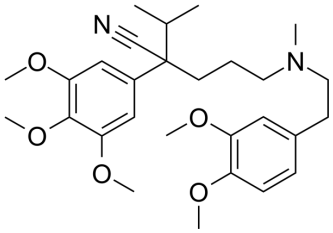
Molecular Weight: 484.63

Target: Calcium Channel

Pathway: Membrane Transporter/Ion Channel; 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 : 100 mg/mL (206.34 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0634 mL	10.3171 mL	20.6343 mL
	5 mM	0.4127 mL	2.0634 mL	4.1269 mL
	10 mM	0.2063 mL	1.0317 mL	2.0634 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.16 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.16 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.16 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Gallopamil (Methoxyverapamil), a methoxy derivative of Verapamil, is a phenylalkylamine calcium antagonist[1]. Gallopamil inhibits acid secretion in a concentration-dependent manner with an IC_{50} of 10.9 μM[2]. Gallopamil is a potent antiarrhythmic and vasodilator agent[3].

IC_{50} & Target

Ca^{2+}

In Vivo

Gallopamil (Methoxyverapamil; i.v.; 0.2 mg/kg; for 5 min) markedly reduces ventricular tachycardia (VT) and totally prevents

fibrillation (VF). Gallopamil significantly reduces systolic and diastolic blood pressure measured 5 min after injection without markedly influencing heart rate[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar rats weighing 290-370 g[3]
Dosage:	0.2 mg/kg
Administration:	i.v.; 5 min
Result:	Markedly reduced VT and totally prevented VF.

REFERENCES

[1]. Brogden RN, et al. Gallopamil. A review of its pharmacodynamic and pharmacokinetic properties, and therapeutic potential in ischaemic heart disease. Drugs. 1994 Jan;47(1):93-115.

[2]. Sewing KF, et al. Calcium channel antagonists verapamil and gallopamil are powerful inhibitors of acid secretion in isolated and enriched guinea pig parietal cells. Pharmacology. 1983;27(1):9-14.

[3]. Kirchengast M, et al. Reperfusion arrhythmias in closed-chest rats: the effect of myocardial noradrenaline depletion and Ca2(+)-antagonism. Clin Exp Pharmacol Physiol. 1991 Apr;18(4):217-21.

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