Disopyramide

Cat. No.: HY-12533

CAS No.: 3737-09-5

Molecular Formula: $C_{21}H_{29}N_3O$

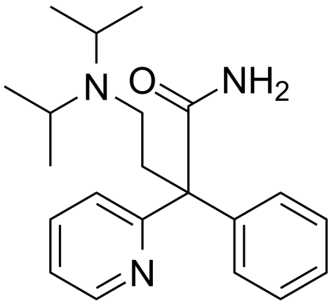
Molecular Weight: 339.47

Target: Sodium Channel; Potassium Channel

Pathway: Membrane Transporter/Ion Channel

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 : ≥ 250 mg/mL (736.44 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	2.9458 mL	14.7288 mL	29.4577 mL
	5 mM	0.5892 mL	2.9458 mL	5.8915 mL
	10 mM	0.2946 mL	1.4729 mL	2.9458 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: ≥ 6.25 mg/mL (18.41 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 6.25 mg/mL (18.41 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 6.25 mg/mL (18.41 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Disopyramide (Dicorantil) is a class IA antiarrhythmic drug with efficacy in ventricular and atrial arrhythmias. Disopyramide blocks the fast inward sodium current of cardiac muscle and prolongs the duration of cardiac action potentials. Disopyramide inhibits HERG encoded potassium channels. Disopyramide also exhibits complex protein binding, and has a potent negative inotropic action[1][2][3].

In Vitro

HERG tail currents recorded at -40 mV following test pulses to +30 mV were inhibited in a dose-dependent fashion by

Disopyramide concentrations within the clinical range (IC_{50}=7.23 μM)[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Med Chem. 2021 Mar 11;64(5):2725-2738.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. L A Siddoway, et al. Clinical Pharmacokinetics of Disopyramide. Clin Pharmacokinet. May-Jun 1986;11(3):214-22.

[2]. A A Paul, et al. Inhibition of HERG Potassium Channel Current by the Class 1a Antiarrhythmic Agent Disopyramide. Biochem Biophys Res Commun. 2001 Feb 9;280(5):1243-50.

[3]. S V Jones, et al. Non-competitive Effects of Disopyramide at the Neuromuscular Junction: Evidence for Endplate Ion Channel Block. Br J Anaesth. 1987 Jun;59(6):776-83.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA