Ethacizine hydrochloride

Cat. No.: HY-135121

CAS No.: 57530-40-2

Molecular Formula: $C_{22}H_{28}ClN_3O_3S$

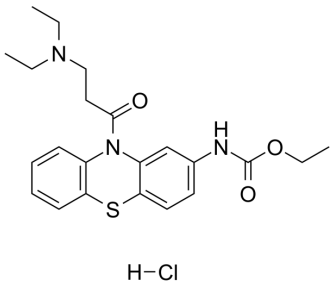
Molecular Weight: 449.99

Target: Sodium Channel

Pathway: Membrane Transporter/Ion Channel

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (222.23 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2223 mL	11.1114 mL	22.2227 mL
	5 mM	0.4445 mL	2.2223 mL	4.4445 mL
	10 mM	0.2222 mL	1.1111 mL	2.2223 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 (5.56 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.56 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.56 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ethacizine hydrochloride (Ethacizin; NIK-244) is a longer-lasting Class Ic antiarrhythmic agent than Flecainide[1]. Ethacizine hydrochloride (Ethacizin; NIK-244) inhibits the depolarizing current responsible for the intraatrial and His-Purkinje-ventricular conduction[2].

In Vivo

NIK-244 (1-300 ug) injects directly into the SA node and PM preparations shows negative chronotropic, negative inotropic and coronary vasodilator[1].

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

REFERENCES

[1]. Sugiyama A, et al. Comparison of cardiovascular effects of a novel class Ic antiarrhythmic agent, NIK-244, with those of flecainide in isolated canine heart preparations cross-circulated with a donor dog.Jpn J Pharmacol. 1991 May;56(1):1-12.

[2]. Satoh H, et al. An electrophysiological comparison of a novel class Ic antiarrhythmic agent, NIK-244 (ethacizin) and flecainide in canine ventricular muscle.Br J Pharmacol. 1989 Nov;98(3):827-32.Med Chem. 2019 Nov 6:115132.

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