Tocainide hydrochloride

Cat. No.: HY-B1798A

CAS No.: 71395-14-7

Molecular Formula: $C_{11}H_{17}ClN_2O$

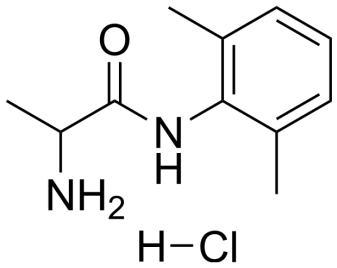
Molecular Weight: 228.72

Target: Sodium Channel

Pathway: Membrane Transporter/Ion Channel

Storage: 4°C, stored under nitrogen

* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (546.52 mM; Need ultrasonic)

H_2O : 50 mg/mL (218.61 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	4.3722 mL	21.8608 mL	43.7216 mL
5 mM	0.8744 mL	4.3722 mL	8.7443 mL
10 mM	0.4372 mL	2.1861 mL	4.3722 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: ≥ 2.08 mg/mL (9.09 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (9.09 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (9.09 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Tocainide hydrochloride is a sodium channel blocker, it blocks the sodium channels in the pain-producing foci in the nerve membranes. Tocainide hydrochloride is a primary amine analog of lidocaine, can be used for the treatment of tinnitus[1][2].

IC_{50} & Target

IC50: sodium channel[1]

In Vivo

Tocainide (100 mg/kg) effectively suppresses ventricular ectopic activity in unanesthetized dogs with coronary occlusion. Termination of tocainide infusion in both digitalis toxicity and coronary occlusion models results in prompt return of ventricular ectopic activity[1].

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

REFERENCES

[1]. Alpert JS, et al. Chemistry, pharmacology, antiarrhythmic efficacy and adverse effects of tocainide hydrochloride, an orally active structural analog of lidocaine. Pharmacotherapy. 1983 Nov-Dec;3(6):316-23.

[2]. De Luca A,et al.Optimal requirements for high affinity and use-dependent block of skeletal muscle sodium channel by N-benzyl analogs of tocainide-like compounds.Mol Pharmacol. 2003 Oct;64(4):932-45.

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