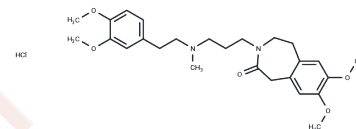


Zatebradine hydrochloride

Chemical Properties

CAS No. :	91940-87-3
Formula:	C ₂₆ H ₃₇ ClN ₂ O ₅
Molecular Weight:	493.04
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Zatebradine hydrochloride (UL-FS-49CL) is a highly effective and effective HCN Channel inhibitor (IC ₅₀ :1.96 μM). HCN Channel is an effective hyperpolarization activated loop nucleotide gated channel. Zatebradine hydrochloride blocks slow inward currents through human HCN1, HCN2, HCN3, and HCN4 channels with IC ₅₀ values of 1.83 μM, 2.21 μM, 1.90 μM, and 1.88 μM, respectively.
Targets(IC ₅₀)	HCN Channel
In vitro	Zatebradine demonstrates a use-dependent inhibitory effect on the cardiac pacemaker current in rabbit sino-atrial node cells, with an observed K _d value of 480 nM.[2]
In vivo	Zatebradine hydrochloride (0-20 mg/kg; i.p.; for 30 minutes; male C57/Bl6-mice) decreases the heart rate dose-dependently from 600 to 200 bpm (ED ₅₀ : 1.8 mg/kg).[1]

Solubility Information

Solubility	DMSO: 90 mg/mL (182.54 mM),Sonication is recommended. H ₂ O: 90 mg/mL (182.54 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (6.69 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0282 mL	10.1412 mL	20.2823 mL
5 mM	0.4056 mL	2.0282 mL	4.0565 mL
10 mM	0.2028 mL	1.0141 mL	2.0282 mL
50 mM	0.0406 mL	0.2028 mL	0.4056 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Stieber J, et al. Bradycardic and proarrhythmic properties of sinus node inhibitors. *Mol Pharmacol.* 2006;69(4): 1328-37.

Van Bogaert PP, et al. Use-dependent blockade of cardiac pacemaker current (I_f) by cilobradine and zatebradine. *Eur J Pharmacol.* 2003;478(2-3):161-71.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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