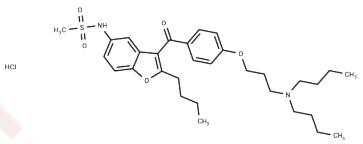
Data Sheet (Cat.No.T1073)

TargetMol

Dronedarone hydrochloride

Chemical Properties



CAS No. : 141625-93-6

Formula: C31H44N2O5S·HCl

Molecular Weight: 593.22

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	Dronedarone hydrochloride (SR33589) is an amiodarone analog which has an effective and promising treatment for Atrial fibrillation.
Targets(IC50)	Calcium Channel,Adrenergic Receptor,Autophagy,Potassium Channel,Sodium Channel
In vitro	Dronedarone reduces the incidence of early and delayed after depolarizations evoked by 1 mM Dofetilide and 0.2 mM Strophantidine in Purkinje fibres. Dronedarone (10 mM) markedly reduces the L-type calcium current (76.5%) and the rapid component of the delayed rectifier potassium current (97%) in ventricular myocytes. [1] Dronedarone inhibits the activity of I(K(ACh)) channels recorded from cell-attached patches by reducing the channel open probability (from 0.56 to 0.11) without modification of the single-channel conductance in single cells isolated from sinoatrial node (SAN) tissue of rabbit hearts. [2] Dronedarone exhibits a state-dependent inhibition of the fast Na(+) channel current with an IC50 of 0.7 μM in guinea pig ventricular myocytes, when the holding potential (V (hold)) is -80 mV. Dronedarone blocks Ca(2+) currents elicited by rectangular pulses at V (hold) = -40 mV with IC50 value of 0.4 μM, whereas at V (hold) = -80 mV, Dronedarone (10 μM) blocks only 20 % of the current. [3]
In vivo	Dronedarone increases action potential duration in normal hearts of rats. Dronedarone reduces the late sustained K(+) current, I(K) (or Isus) by 69%. Dronedarone induces only a tonic block of I(K). Dronedarone induces a weak increase in the fast transient outward current, I(to), in rats after myocardial infarction. [4]

Solubility Information

Solubility	DMSO: 245 mg/mL (413 mM),Sonication is recommended. Ethanol: 38 mg/mL (64.06 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.37 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6857 mL	8.4286 mL	16.8572 mL
5 mM	0.3371 mL	1.6857 mL	3.3714 mL
10 mM	0.1686 mL	0.8429 mL	1.6857 mL
50 mM	0.0337 mL	0.1686 mL	0.3371 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

Varró A, et al. Br J Pharmacol, 2001, 133(5), 625-634.
Altomare C, et al. Br J Pharmacol, 2000, 130(6), 1315-1320.
Bogdan R, et al. Naunyn Schmiedebergs Arch Pharmacol, 2011, 383(4), 347-356.
Aimond F, et al. J Pharmacol Exp Ther, 2000, 292(1), 415-424.