

Dronedarone (Hydrochloride)

Catalog No: tcsc0712



Available Sizes

Size: 10mg

Size: 50mg



Specifications

CAS No:

141625-93-6

Formula:

$C_{31}H_{45}ClN_2O_5S$

Pathway:

Autophagy; Membrane Transporter/Ion Channel

Target:

Autophagy; Potassium Channel

Purity / Grade:

>98%

Solubility:

10 mM in DMSO

Observed Molecular Weight:

593.22

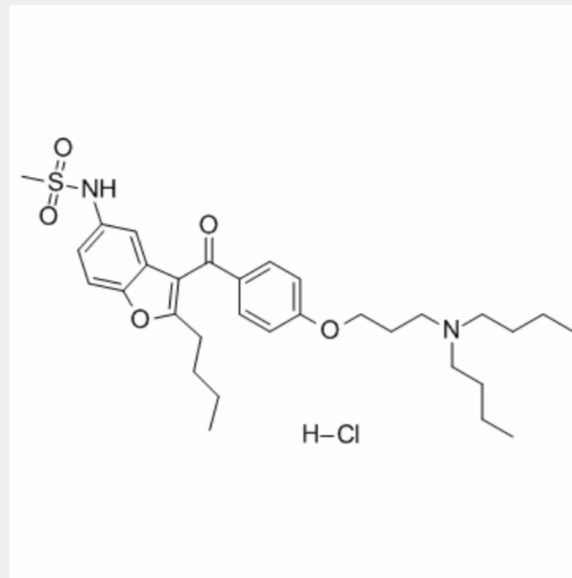
Product Description

Dronedarone hydrochloride is a non-iodinated amiodarone derivative that inhibits Na^+ , K^+ and Ca^{2+} currents.

In Vitro: Dronedarone (SR-33589) is a multichannel blocker for atrial fibrillation. It is a potent inhibitor of the acetylcholine-activated K^+ current from atrial and sinoatrial nodal tissue, and inhibits the rapid delayed rectifier more potently than slow and inward rectifier K^+ currents and inhibits L-type calcium current. Under whole-cell patch clamp, it blocks I_{Kr} ($IC_{50}=3 \mu M$) and I_{Ca-L} ($IC_{50}=0.18 \mu M$). The effects on I_{Ca-L} are use- and frequency-dependent. Dronedarone inhibits current carried by human ether-a-go-go

gene (HERG)-expressing oocytes (analogous to I_{Kr}) with an IC_{50} of $9 \mu M$ ^[1]. In guinea pig ventricular myocytes, dronedarone exhibits a state dependent inhibition of the fast Na^+ channel current with an IC_{50} of $0.7 \pm 0.1 \mu M$, when the holding potential is $-80 mV$ ^[2].

In Vivo: Dronedarone (Hydrochloride) reduces significantly the incidence of ventricular fibrillation (VF) from 80 to 30% (p [3]. Dronedarone inhibited carotid artery thrombus formation *in vivo*. Thrombin- and collagen-induced platelet aggregation is impaired in dronedarone-treated mice ($P < 0.05$), and expression of plasminogen activator inhibitor-1 (PAI1), an inhibitor of the fibrinolytic system, is reduced in the arterial wall^[4].



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