Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Caldaret

Catalog No: tcsc0018450

Available Sizes

Size: 1mg

Size: 5mg

Size: 10mg

Specifications

CAS No:
133804-44-1

Formula:
$C_{11}H_{16}N_2O_3S$

Pathway:
Membrane Transporter/Ion Channel

Target:
Na+/Ca2+ Exchanger

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Alternative Names:
MCC-135

Observed Molecular Weight:
256.32

Product Description

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Caldaret is an intracellular **Ca^{2+}** handling modulator that acts through reverse mode **Na^{+}/Ca^{2+} exchanger** inhibition.

IC50 & Target: Na^{+}/Ca^{2+} exchanger[1]

In Vitro: Caldaret (MCC-135) is demonstrated to restore Ca^{2+}-ATPase activity of the sarcoplasmic reticulum (SR) isolated from the myocardium acutely exposed to ischemia and reperfusion in vitro[2].

In Vivo: Caldaret, an intracellular Ca^{2+} handling modulator, limits infarct size of reperfused canine heart. The cardioprotective effect of Caldaret, a novel intracellular Ca^{2+} handling modulator that acts through reverse-mode Na^{+}/Ca^{2+} exchanger inhibition and potential sarcoplasmic reticulum (SR) Ca^{2+} uptake enhancement, against reperfusion injury is investigated. Intravenously infused Caldaret (3 or 30 microg/kg per hour) for 30 min at left circumflex (LCX)-reperfusion markedly reduces infarct size (by 51.3% or 71.9%, respectively). The amelioration of intracellular Ca^{2+} handling dysfunction achieved by Caldaret leads to cardioprotective effects against reperfusion injury following prolonged ischemia[1]. Caldaret (MCC-135) is a new potent compound with beneficial effects in heart failure. In diabetic rats, Caldaret decreases TR80 significantly without significant effect on developed tension (DT). Caldaret has minimal effects on SR Ca^{2+} uptake in normal rats, that is observed as increased SR Ca^{2+} uptake at uptake time of 20 and 30 s at the highest concentration of 10 μM. In diabetic rats, Caldaret increases SR Ca^{2+} uptake all over the range of uptake time. Both initial rate of SR Ca^{2+} uptake and the amount of Ca^{2+} accumulated in the SR with longer uptake time are increased by Caldaret[2].