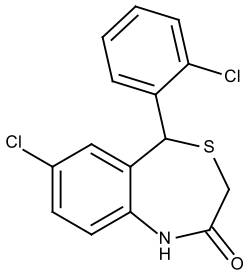
Catalog # 10-4250

CGP-37157

CAS# 75450-34-9

7-Chloro-5-(2-chlorophenyl)-1,5-dihydro-4,1-benzothiazepin-2(3H)-one

Lot # FBA6006



Inhibits the mitochondrial Na^+-Ca^{2+} exchanger (NCX) in isolated heart mitochondria, IC_{50}=0.36 μM.[1] Does not inhibit the plasmalemmal NCX.[2] Also inhibits voltage-gated Ca^{2+} channels in intact cells and therefore its use in cellular studies must employ adequate controls.[3] Prevents sudden death in a Guinea pig model of heart failure.[4] Displays pronounced cytoprotective effects in chromaffin cells[5] and in neuronal injury models.[6] Blood-brain barrier permeant.

1) Cox *et al*. (1993), *Selectivity of inhibition of Na(+)-CA2+ exchange of heart mitochondria by benzothiazepine CGP-37157*; J. Cardiovasc. Phamracol., **21** 595
2) Namekata *et al*. (2015), *Pharmacological discrimination of plasmalemmal and mitochondrial sodium-calcium exchanger in cardiomyocyte-derived H9c2 cells*; Biol. Pharm. Bull, **38** 147
3) Baron & Thayer (1997), *CGP37157 modulates mitochondrial Ca2+ homeostasis in cultured rat dorsal root ganglion neurons*; Eur. J. Pharmacol., **340** 295
4) Liu *et al*. (2014), *Inhibiting mitochondrial Na+/Ca2+ exchange prevents sudden death in a guinea pig model of heart failure*; Circ. Res., **115** 44
5) Nicolau *et al*. (2009), *Mitochondrial Na+/Ca2+-exchanger vlocker CGP37157 protects against chromaffin cell death elicited by veratridine*; J. Pharmacol. Exp. Ther., **330** 844
6) Ruiz *et al*. (2014), *CGP37157, an inhibitor of the mitochondrial Na+/CA2+ exchanger, protects neurons from excitotoxicity by blocking voltage gated Ca2+ channels*; Cell Death Dis., **5** e1156

PHYSICAL DATA

Molecular Weight:	324.22
Molecular Formula:	$C_{15}H_{11}Cl_2NOS$
Purity:	99% by TLC (5% Methanol/methylene chloride; Rf = 0.42)
Solubility:	DMSO (>25mg/mL)
Physical Description:	White solid
Storage and Stability:	Store as supplied at RT for up to 2 years from the date of purchase.

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