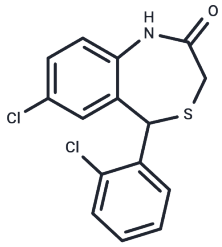
Data Sheet (Cat.No.T14941)

TargetMol

CGP37157

Chemical Properties



CAS No. : 75450-34-9

Formula: C15H11Cl2NOS

Molecular Weight: 324.22

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	CGP37157 (7-Chloro-5-(2-chlorophenyl)-1,5-dihydro-4,1-benzothiazepine-2(3H)-one) is a Na+/Ca2+ exchanger inhibitor, inhibits Na+-induced Ca2+ release from mitochondria in guinea pig heart with IC50 of 0.8 μM.
Targets(IC50)	Na+/Ca2+ Exchanger
In vitro	Administration of 10?μM CGP37157 shows an inhibitory effect on mitochondrial Na+/Ca2+ exchanger in cortical neurons, modulating intracellular Ca2+ levels via suppressing voltage-gated calcium channels. Administration of 10?μM CGP37157 in combination with salinomycin significantly attenuates cell viability and increases apoptosis of FaDu and HLaC79 cells. CGP37157 has no inhibitory effect on salinomycin tumor toxicity[2]. Administration of 10?μM CGP37157 reduces NMDA-induced cytosolic and mitochondrial Ca2+ overloads and it also reduces NMDA-induced excitotoxicity, and such an effect is via attenuating mitochondrial damage and calpain activity in neurons [3].

Solubility Information

Solubility	DMSO: 150 mg/mL (462.65 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: < 10 mg/mL (30.84 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% Corn oil: 10 mg/mL (30.84 mM),Solution. 10% DMSO+90% Saline: < 10 mg/mL (30.84 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% (20% SBE-β-CD in Saline): < 10 mg/mL (30.84 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. *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	3.0843 mL	15.4216 mL	30.8433 mL
5 mM	0.6169 mL	3.0843 mL	6.1687 mL
10 mM	0.3084 mL	1.5422 mL	3.0843 mL
50 mM	0.0617 mL	0.3084 mL	0.6169 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

Chiesi M, et al. Structural dependency of the inhibitory action of benzodiazepines and related compounds on the mitochondrial Na+-Ca2+ exchanger. Biochem Pharmacol. 1988 Nov 15;37(22):4399-403.
Scherzed A, et al. Effects of salinomycin and CGP37157 on head and neck squamous cell carcinoma cell lines in vitro. Mol Med Rep. 2015 Sep;12(3):4455-61.
Ruiz A, et al. CGP37157, an inhibitor of the mitochondrial Na+/Ca2+ exchanger, protects neurons from excitotoxicity by blocking voltage-gated Ca2+ channels. Cell Death Dis. 2014 Apr 10;5:e1156.