

CP-312

Chemical Properties

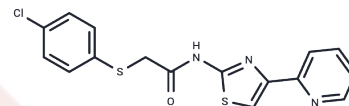
CAS No. : 895470-67-4

Formula: C₁₆H₁₂ClN₃O₂S

Molecular Weight: 361.87

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	CP-312 (Cardioprotectant 312) is an antioxidant defense response activator that protects hiPSC-CM viability by acting through induction of heme oxygenase-1 and targeting the antioxidant response network by inducing HMOX1 expression. CP-312 protects human iPSC-derived cardiomyocytes from oxidative stress.
Targets(IC50)	Reactive Oxygen Species, Autophagy, ROS
In vitro	CP-312 (10 μM; 2 h) demonstrated significant efficacy in protecting hiPSC-CM from acute peroxide-induced cell death, with an EC ₅₀ of 6.7 μM.[1]

Solubility Information

Solubility	DMSO: 45 mg/mL (124.35 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7634 mL	13.8171 mL	27.6342 mL
5 mM	0.5527 mL	2.7634 mL	5.5268 mL
10 mM	0.2763 mL	1.3817 mL	2.7634 mL
50 mM	0.0553 mL	0.2763 mL	0.5527 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

Kirby RJ, et al. Discovery of Novel Small-Molecule Inducers of Heme Oxygenase-1 That Protect Human iPSC-Derived Cardiomyocytes from Oxidative Stress [published correction appears in J Pharmacol Exp Ther. 2018 Feb;364(2):179]. J Pharmacol Exp Ther. 2018;364(1):87-96.

Fascia-derived stem cells enhance fat graft retention by promoting vascularization through the HMOX1-HIF-1 α pathway

Vessey DA, et al. Sphingosine 1-phosphate is an important endogenous cardioprotectant released by ischemic pre- and postconditioning. Am J Physiol Heart Circ Physiol. 2009;297(4):H1429-H1435.

Woodlock TJ, et al. Coincident acute myelogenous leukemia and ischemic heart disease: use of the cardioprotectant dexrazoxane during induction chemotherapy. Am J Hematol. 1998;59(3):246-248.

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