Data Sheet (Cat.No.T37297)

TargetMol

Ru360

Chemical Properties

CAS No. : 133399-54-9

Formula: C2H26N8O5Ru2.3Cl

Molecular Weight: 550.77

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	Ru360, an oxygen-bridged dinuclear ruthenium amine complex, is a selective mitochondrial calcium uptake inhibitor. Ru360 potently inhibits Ca2+ uptake into mitochondria with an IC50 of 0.184 nM. Ru360 binds to mitochondria with high affinity (Kd of 0.34 nM). Ru360 has antiarrhythmic and cardioprotective effects[1][2].
Targets(IC50)	Others
In vitro	Ru360 permeates slowly into the cell, and specifically inhibits mitochondrial calcium uptake in intact cardiomyocytes and in isolated heart. 1 μm Ru360 is taken up by myocardial cells and accumulated in the cytosol in a biphasic manner[1]. During pelleting hypoxia, Ru360 (10 μM) significantly improves cell viability in wild type cardiomyocytes[3].
In vivo	Ru360 (15-50 nmol/kg) treatment abolishes the incidence of arrhythmias and haemodynamic dysfunction elicited by reperfusion in a whole rat model. Ru360 administration partially inhibits calcium uptake, preventing mitochondria from depolarization by the opening of the mitochondrial permeability transition pore (mPTP) [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8156 mL	9.0782 mL	18.1564 mL
5 mM	0.3631 mL	1.8156 mL	3.6313 mL
10 mM	0.1816 mL	0.9078 mL	1.8156 mL
50 mM	0.0363 mL	0.1816 mL	0.3631 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

G de J García-Rivas, et al. Ru360, a Specific Mitochondrial Calcium Uptake Inhibitor, Improves Cardiac Post-Ischaemic Functional Recovery in Rats in Vivo. Br J Pharmacol. 2006 Dec;149(7):829-37.
M A Matlib, et al. Oxygen-bridged Dinuclear Ruthenium Amine Complex Specifically Inhibits Ca2+ Uptake Into Mitochondria in Vitro and in Situ in Single Cardiac Myocytes. J Biol Chem. 1998 Apr 24;273(17):10223-31.
Lukas J Motloch, et al. UCP2 Modulates Cardioprotective Effects of Ru360 in Isolated Cardiomyocytes During Ischemia. Pharmaceuticals (Basel). 2015 Aug 4;8(3):474-82.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481