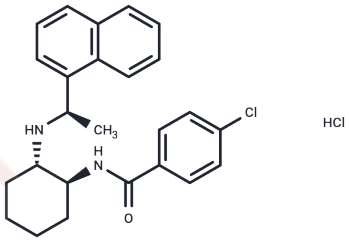
Data Sheet (Cat.No.T10666)

TargetMol

Calhex 231 hydrochloride

Chemical Properties



CAS No. : 2387505-78-2

Formula: C25H28Cl2N2O

Molecular Weight: 443.41

Storage: Store at low temperature
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	Calhex 231 hydrochloride is the salt form of Calhex 231, a potent calcium-sensing receptor (CaSR) negative-conversion modulator that blocks the increase in [3H]inositol phosphate, inhibits oxidative stress and mir-208a-mediated mitochondrial fission for vasculoprotection and treatment of traumatic hemorrhagic shock.
Targets(IC50)	Mitochondrial Metabolism,CaSR
In vitro	**Methods**: LX-2 cells were treated with Calhex 231 hydrochloride (2.5, 5, 7.5, 10 μM, 48 hours), and cell viability was detected by MTT assay. **Results**: Calhex 231 hydrochloride could inhibit the growth of LX-2 cells, with an IC50 value of 9.5 μM. [4]
In vivo	**Methods**: Transverse aortic constriction (TAC) induced pressure overload and cardiac hypertrophy in male Wistar rats. Four weeks after TAC, rats were treated with Calhex 231 hydrochloride (10 μmol/kg, 4 weeks) for 4 weeks and analyzed 12 weeks after surgery. Rats were sacrificed and hearts were rapidly excised and weighed in cold (4 °C) buffer. The left and right ventricles were then isolated and weighed, and the left ventricular tissue was snap-frozen in liquid nitrogen and stored at -80 °C for subsequent western blot analysis. **Results**: Animals were observed to exhibit increases in interventricular septum (IVS) thickness, left ventricular posterior wall (LVPW) thickness, left ventricular internal dimension (LVID), left ventricular diastolic volume (LVDV), and left ventricular systolic volume (LVSV), as well as decreases in left ventricular fractional shortening (LVFS) and left ventricular ejection fraction (LVEF). [5]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2552 mL	11.2762 mL	22.5525 mL
5 mM	0.451 mL	2.2552 mL	4.5105 mL
10 mM	0.2255 mL	1.1276 mL	2.2552 mL
50 mM	0.0451 mL	0.2255 mL	0.451 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

Yuan H, et al. Calhex231 Alleviates High Glucose-Induced Myocardial Fibrosis via Inhibiting Itch-Ubiquitin Proteasome Pathway in Vitro. Biol Pharm Bull. 2019 Aug 1;42(8):1337-1344.
Petrel C1, et al. Modeling and mutagenesis of the binding site of Calhex 231, a novel negative allosteric modulator of the extracellular Ca(2+)-sensing receptor. J Biol Chem. 2003 Dec 5;278(49):49487-94.
Yan Lei, et al. The Calcilytic Drug Calhex-231 Ameliorates Vascular Hyporesponsiveness in Traumatic Hemorrhagic Shock by Inhibiting Oxidative Stress and miR-208a-Mediated Mitochondrial Fission. Oxid Med Cell Longev. 2020 Dec 3:2020:4132785.
Kondo R, et al. Ca2+ Signaling and Proliferation via Ca2+-Sensing Receptors in Human Hepatic Stellate LX-2 Cells. Biol Pharm Bull. 2022;45(5):664-667.
Liu L, et al. Calhex$_{231}$ Ameliorates Cardiac Hypertrophy by Inhibiting Cellular Autophagy in Vivo and in Vitro. Cell Physiol Biochem. 2015;36(4):1597-612.