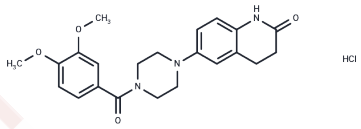
Data Sheet (Cat.No.T3465L)

TargetMol

Vesnarinone HCl

Chemical Properties



CAS No. :

Formula: C22H26ClN3O4

Molecular Weight: 431.91

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	Vesnarinone HCl (OPC-8212 HCl) is an orally active phosphodiesterase 3 (PDE3) inhibitor. Vesnarinone HCl modulates calcium and potassium ions, increasing calcium flux and decreasing potassium flux.Vesnarinone HCl is a new positive inotropic compound that enhances myocardial contractility and can be be used in heart failure studies.
Targets(IC50)	Calcium Channel,PDE,Potassium Channel
In vitro	Vesnarine (60 and 100 μg/mL; 48 h) in a dose-dependent manner to inhibit cell growth.[3] Vesnarine (60 μg/mL; 48 h) induces G1 phase arrest and cell apoptosis.[3] Vesnarine (60 μg/mL; 0, 12, 24, and 48 h) increased the expression of p21 mRNA and slightly decreased the p21 protein.[3]
In vivo	Vesnarinone (3-300 μM) increases contractile tension in isolated ventricular muscles of dogs, cats, rabbits, and guinea pig in a dose-dependent manner.[5] Vesnarinone (Oral and i.v.) administration of vesnarinone increases right ventricular pressure with no effect on heart rate in dog models of tricuspid insufficiency- and pulmonary stenosis-induced congestive heart failure. It also increases contractility and coronary flow while decreasing heart rate in a guinea pig model of aortic stenosis-induced congestive heart failure. Formulations containing vesnarinone have been used for the treatment of congestive heart failure.[6]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3153 mL	11.5765 mL	23.153 mL
5 mM	0.4631 mL	2.3153 mL	4.6306 mL
10 mM	0.2315 mL	1.1576 mL	2.3153 mL
50 mM	0.0463 mL	0.2315 mL	0.4631 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

Matsumori A, et al. Vesnarinone, a new inotropic agent, inhibits cytokine production by stimulated human blood from patients with heart failure. Circulation. 1994;89(3):955-958.
Cavusoglu E, et al. Vesnarinone: a new inotropic agent for treating congestive heart failure. J Card Fail. 1995;1(3): 249-257.
Yoneda K, et al. Induction of cyclin-dependent kinase inhibitor p21 in vesnarinone-induced differentiation of squamous cell carcinoma cells. Cancer Lett. 1998;133(1):35-45.
Gardner I, et al. A comparison of the covalent binding of clozapine, procainamide, and vesnarinone to human neutrophils in vitro and rat tissues in vitro and in vivo. Chem Res Toxicol. 2005;18(9):1384-139
Feldman A M. Pharmacologic Properties and Clinical Evaluation of the New Inotropic Agent OPC-8212 (Vesnarinone). Cardiovascular drug reviews, 1993, 11(1): 1-11.
Reis SE, et al. Estrogen is associated with improved survival in aging women with congestive heart failure: analysis of the vesnarinone studies. J Am Coll Cardiol. 2000;36(2):529-533.