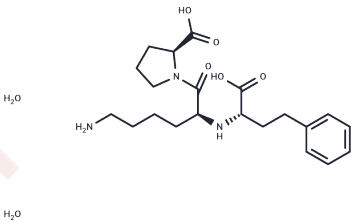
Data Sheet (Cat.No.T0706)

TargetMol

Lisinopril dihydrate

Chemical Properties



CAS No. : 83915-83-7

Formula: C21H35N3O7

Molecular Weight: 441.52

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Lisinopril dihydrate (MK-521) is an orally bioavailable, long-acting angiotensin-converting enzyme (ACE) inhibitor with antihypertensive activity.
Targets(IC50)	RAAS,MRP
In vitro	Lisinopril significantly reduces left ventricular (LV) end-diastolic pressure (EDP), pulmonary capillary wedge pressure (PCWP) and end-diastolic stress, addition of atenolol to Lisinopril further reduces EDP and PCWP. [1] Lisinopril is a structural homologue of enalaprilat, differing only in the second amino acid side chain. Lisinopril inhibits Angiotensin-converting enzyme (ACE) in vitro, as well as after parenteral and oral administration to humans; its oral bioavailability is only 25-29%, but it has a longer duration of action than enalapril. [2]
In vivo	Lisinopril treated SHR rats has significantly raised total cholesterol levels compared to untreated spontaneously hypertensive rats (SHR) rats (+27%), but not compared to lisinopril treated Wistar Kyoto rats (WKY) rats. [3] Lisinopril is a long-acting angiotensin-converting enzyme inhibitor which blocks the renin-angiotensin system (RAS) and reduces systemic blood pressure in rats. Lisinopril reduces the hydroxyproline level and inhibits accumulation of collagens in the pulmonary tissue of the treatment group (paraquat + lisinopril) and per-treatment group (lisinopril + paraquat) in rats. [4] Lisinopril results in preserved ultrafiltration volume (UF), glucose reabsorption (D 1 /D 0 glucose) and peritoneal thickness in rats. [5] Lisinopril (0.2 mg/kg twice a day for 10 days) protects the cell membrane integrity and lessens free radical-induced oxidant stress in guinea pig hearts. [6]

Solubility Information

Solubility	H2O: 10 mM,Sonication is recommended. DMSO: Insoluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2649 mL	11.3245 mL	22.649 mL
5 mM	0.453 mL	2.2649 mL	4.5298 mL
10 mM	0.2265 mL	1.1325 mL	2.2649 mL
50 mM	0.0453 mL	0.2265 mL	0.453 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.

Reference

Nemoto S, et al. J Am Coll Cardiol,2002, 40(1), 149-154.
Swaan PW, et al. Biochim Biophys Acta,1995, 1236(1), 31-38.
Mantle D, et al. Clin Chim Acta, 2000, 299(1-2), 1-10.
Mohammadi-Karakani A, et al. Clin Chim Acta,2006, 367(1-2), 170-174.
Duman S, et al. Int J Artif Organs,2005, 28(2), 156-163.