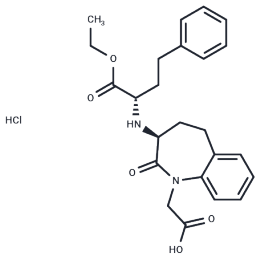
Data Sheet (Cat.No.T0180)

TargetMol

Benazepril hydrochloride

Chemical Properties



CAS No. : 86541-74-4

Formula: C24H29ClN2O5

Molecular Weight: 460.95

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	Benazepril hydrochloride (CGS 14824A HCl) is an angiotensin-converting enzyme (ACE) inhibitor widely used in the therapy of hypertension. Benazepril hydrochloride is associated with a low rate of transient serum aminotransferase elevations and has been linked to rare instances of acute liver injury.
Targets(IC50)	Apoptosis,RAAS,Akt,Angiotensin-converting Enzyme (ACE),ROS
In vivo	Benazepril hydrochloride (3 or 10 mg/kg/d, p.o. for 14 days) dose-dependently inhibits the increase in the blood pressure caused by continuous norepinephrine (NE) infusion in spontaneously hypertensive rats (SHR) and suppresses in seizures induced by a monoamine oxidase inhibitor, tranylcypromine in NE infused SHR. [1] Benazepril hydrochloride (30 mg/kg p.o.) decreases the triglyceride and total cholesterol levels in normotensive rats. Benazepril hydrochloride (3 mg/kg s.c.) causes a significant decrease in aortic atherosclerosis without reducing hypercholesterolemia in cholesterol-fed rabbits. Benazepril hydrochloride (100 mg/kg p.o.) shows no effect on the urine volume and urinary excretion of electrolytes but decreases PSP excretion in normotensive rats. Benazepril hydrochloride (10 mg/kg p.o.) inhibits the increase in the excretion of urinary protein in DOCA/salt spontaneously hypertensive rats. [3] Benazepril Hydrochloride administration corrects systemic hypertension and significantly reduces angiotensin II and aldosterone in cats with experimentally induced or spontaneously occurring chronic renal failure. Benazepril hydrochloride administration reduces serum creatinine and urinary protein concentration in cat with experimentally induced or spontaneously occurring chronic renal failure. [4] Benazepril hydrochloride significantly decreases blood pressure, angiotensin II and aldosterone and, increases upon discontinuation of administration to the pre-administration levels in a canine remnant kidney model of chronic renal failure. [5]

Solubility Information

Solubility	DMSO: 245 mg/mL (531.51 mM),Sonication is recommended. H2O: 23.1 mg/mL (50.11 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.34 mM),Sonication is recommended. 10% DMSO+90% Saline: 10 mg/mL (21.69 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1694 mL	10.8472 mL	21.6943 mL
5 mM	0.4339 mL	2.1694 mL	4.3389 mL
10 mM	0.2169 mL	1.0847 mL	2.1694 mL
50 mM	0.0434 mL	0.2169 mL	0.4339 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

Yamamoto S, et al. Arzneimittelforschung,1991, 41(6), 602-607.
Yamamoto S, et al. Arzneimittelforschung,1991, 41(9), 913-923.
Watanabe T, et al. J Vet Med Sci,2007, 69(10), 12015-1023.
Mishina M, et al. J Vet Med Sci,2008, 70(5), 455-460.