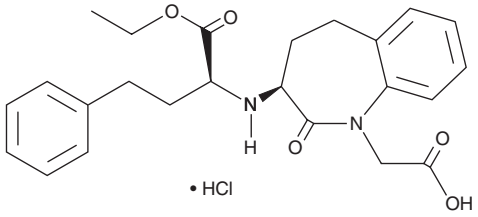
PRODUCT INFORMATION

Benazepril (hydrochloride)

Item No. 23804

CAS Registry No.: 86541-74-4
Formal Name: (3S)-3-[[1S-(ethoxycarbonyl)-3-phenylpropyl]amino]-2,3,4,5-tetrahydro-2-oxo-1H-1-benzazepine-1-acetic acid, monohydrochloride
Synonym: CGS 14824A
MF: $C_{24}H_{28}N_2O_5 \bullet HCl$
FW: 461.0
Purity: ≥98%
UV/Vis.: λ_{max}: 204, 237 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Benazepril (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the benazepril (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Benazepril (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of benazepril (hydrochloride) in these solvents is approximately 1, 20, and 30 mg/ml, respectively.

Benazepril (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, benazepril (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Benazepril (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Benazepril is a prodrug of the angiotensin converting enzyme (ACE) inhibitor benazeprilat (Item No. 21796).[1] It is metabolized to benazeprilat by hepatic esterases. Benazepril inhibits the *in vitro* enzymatic activity of partially purified ACE isolated from rabbit lung (IC_{50} = 2 nM).[2] It decreases the triglyceride and total cholesterol levels in normotensive rats when administered at a dose of 30 mg/kg and decreases aortic atherosclerosis in cholesterol-fed rabbits when administered at a dose of 3 mg/kg per day.[3] Benazepril (0.1-10 mg/kg per day) reduces blood pressure in spontaneously hypertensive rats.[4] It also decreases proteinuria in cats with chronic kidney disease when administered at doses ranging from 0.5 to 1 mg/kg per day.[5] Formulations containing benazepril have been used to treat hypertension, congestive heart failure, and chronic kidney disease in both human and veterinary medicine.

References

1. Toutain, P.L. and Lefèbvre, H.P. *J. Vet. Pharmacol. Ther.* **27(6)**, 515-525 (2004).
2. Ksander, G.M., Erion, M., Yuan, A.M., *et al. J. Med. Chem.* **37(12)**, 1823-1832 (1994).
3. Yamamoto, S., Takemori, E., Hasegawa, Y., *et al. Arzneimittelforschung* **41(9)**, 913-923 (1991).
4. Watthey, J.W.H., Stanton, J.L., Desai, M., *et al. J. Med. Chem.* **28(10)**, 1511-1516 (1985).
5. King, J.N., Gunn-Moore, D.A., Tasker, S., *et al. J. Vet. Intern. Med.* **20(5)**, 1054-1064 (2006).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM