Quinapril (hydrochloride)
Item No. 21439

CAS Registry No.: 82586-55-8
Formal Name: 2-[(2S)-2-[(1S)-1-(ethoxycarbonyl)-3-phenylpropyl]amino]-1-oxopropyl]-1,2,3,4-tetrahydro-3-isoquinolinecarboxylic acid, monohydrochloride
Synonyms: CI-906, PD 109452-2
MF: C_{25}H_{30}N_{2}O_{5} • HCl
FW: 475.0
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of quinapril (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of quinapril (hydrochloride) in PBS, pH 7.2, is approximately 3.33 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Quinapril is a prodrug to the angiotensin converting enzyme inhibitor quinaprilat (pK_{i}s = 9.25 and 9.92 in human heart and lung plasma membrane preparations, respectively).\(^1\) It has been shown to inhibit the contractile and pressor effects of angiotensin I in rabbit aorta and in rats, respectively, and to lower blood pressure in rodent and dog models of hypertension.\(^2\)

References