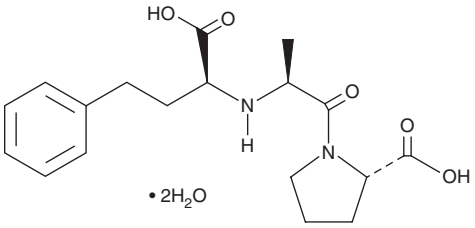
PRODUCT INFORMATION

Enalaprilat (hydrate)

Item No. 17603

CAS Registry No.:	84680-54-6
Formal Name:	N-[(1S)-1-carboxy-3-phenylpropyl]-L-alanyl-L-proline, dihydrate
MF:	$C_{18}H_{24}N_2O_5 \bullet 2H_2O$
FW:	384.4
Purity:	≥98%
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

Enalaprilat (hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the enalaprilat (hydrate) in the solvent of choice, which should be purged with an inert gas. Enalaprilat (hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of enalaprilat (hydrate) in these solvents is approximately 2, 30, and 20 mg/ml, respectively.

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 enalaprilat (hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of enalaprilat (hydrate) in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Enalaprilat is an active metabolite of the angiotensin-converting enzyme (ACE) inhibitor enalapril (Item No. 16041).[1] Enalaprilat is esterified with ethanol to produce enalapril in order to enable oral activity and subsequently metabolized *in vivo* to the active form by various esterases. Enalaprilat is reported to inhibit ACE activity with an IC_{50} value of 5.8 nM *in vitro*.[2]

References

1. Redelinghuys, P., Nchinda, A.T., and Sturrock, E.D. Development of domain-selective angiotensin I-converting enzyme inhibitors. *Ann. N. Y. Acad. Sci.* **1056**, 160-175 (2005).
2. Mencel, J.J., Regan, J.R., Barton, J., *et al*. Angiotensin converting enzyme inhibitors. 10. Aryl sulfonamide substituted N-[1-carboxy-3-phenylpropyl]-L-alanyl-L-proline derivatives as novel antihypertensives. *J. Med. Chem.* **33(6)**, 1606-1615 (1990).

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