

Product Data Sheet

Product Name: Enalapril D5 maleate (MK-421 (D5 maleate))

Cat. No.: GC30421

Chemical Properties

Cas. No. 349554-02-5

SMILES O=C(O)[C@H]1N(C([C@H](C)N[C@H](C(OCC)=O)CCC2=C([2H])C([2H])=C([2H])C([2H])=C2[2H])=O)CCC1.O=C(O)/C=C\C(O)=O

Formula $C_{24}H_{27}D_5N_2O_9$ M.Wt 497.55

Solubility DMSO : ≥ 50 mg/mL (100.49 mM); H₂O : 33.33 mg/mL (66.99 mM);
Need ultrasonic and warming Storage Store at -20°C

General For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution : ship with blue ice All other available size: ship with RT , or Condition blue ice upon request.

Structure

Background

Enalapril-d₅ is intended for use as an internal standard for the quantification of enalapril by GC- or LC-MS. Enalapril is an inhibitor of angiotensin-converting enzyme (ACE; IC₅₀ = 1.2 nM in porcine plasma).¹ *In vivo*, enalapril (0.05-1 mg/kg, p.o.) inhibits pressor responses induced by angiotensin I in rats and dogs in a dose-dependent manner. Enalapril reduces heart rate, systolic and diastolic blood pressures, and heart weight/body weight ratio in salt-sensitive and -resistant Dahl rats fed a high-salt or low-salt diet.² Formulations containing enalapril have been used for the treatment of hypertension, congestive heart failure, myocardial infarction, and diabetic nephropathies.³

1. Gross, D.M., Sweet, C.S., Ulm, E.H., et al. Effect of N-[(S)-1-carboxy-3-phenylpropyl]-L-Ala-L-Pro and its ethyl ester (MK-421) on angiotensin converting enzyme in vitro and angiotensin I pressor responses in vivo. *Pharmacol. Exp. Ther.* 216(3)552-557(1981) 2. Sharma, J.N., Fernandez, P.G., Kim, B.K., et al. Cardiac regression and blood pressure control in the Dahl rat treated with either enalapril maleate (MK 421, an angiotensin converting enzyme inhibitor) or hydrochlorothiazide. *Hypertens.* 1(3)251-256(1983) 3. 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)

Caution: Product has not been fully validated for medical applications. For research use only.

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