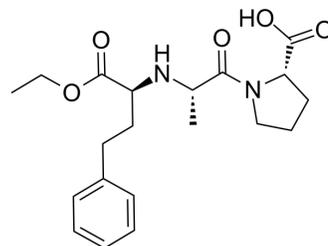


## Enalapril

<b>Cat. No.:</b>	HY-B0331
<b>CAS No.:</b>	75847-73-3
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>28</sub> N <sub>2</sub> O <sub>5</sub>
<b>Molecular Weight:</b>	376.45
<b>Target:</b>	Angiotensin-converting Enzyme (ACE)
<b>Pathway:</b>	Metabolic Enzyme/Protease
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Enalapril (MK-421) is an angiotensin-converting enzyme (ACE) inhibitor, can be used for hypertensive diseases research <sup>[1][2]</sup> .								
<b>In Vitro</b>	<p>Enalapril (10-20 μM) has an antiarrhythmic effect in ultrafiltered PV sleeve preparation isolated from canine hearts which can inhibit EAD and DAD-induced activity<sup>[1]</sup>.</p> <p>Enalapril (50 μM, 24 hours) inhibits the induction of apoptosis by patient serum only when used prior to treatment of HUVEC with Alzheimer's disease (AD) serum<sup>[2]</sup>.</p> <p>Pure Enalapril has better thermal stability than pure Enalapril<sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Apoptosis Analysis<sup>[2]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>Human umbilical vein ECs (HUVECs)</td> </tr> <tr> <td>Concentration:</td> <td>50 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Inhibited the induction of apoptosis by patient serum.</td> </tr> </table>	Cell Line:	Human umbilical vein ECs (HUVECs)	Concentration:	50 μM	Incubation Time:	24 hours	Result:	Inhibited the induction of apoptosis by patient serum.
Cell Line:	Human umbilical vein ECs (HUVECs)								
Concentration:	50 μM								
Incubation Time:	24 hours								
Result:	Inhibited the induction of apoptosis by patient serum.								
<b>In Vivo</b>	<p>Enalapril (intraperitoneal injection, 0.03 mg/kg, once, 1 hour) reduces infarct volume due to middle cerebral artery occlusion and lower or higher doses are ineffective in Male NMRI mice<sup>[4]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Male NMRI mice 20-40 g<sup>[4]</sup></td> </tr> <tr> <td>Dosage:</td> <td>0.03 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection; once; 1 hour</td> </tr> <tr> <td>Result:</td> <td>Reduced the area of middle cerebral artery infarction in mice at 0.03 mg/kg.</td> </tr> </table>	Animal Model:	Male NMRI mice 20-40 g <sup>[4]</sup>	Dosage:	0.03 mg/kg	Administration:	Intraperitoneal injection; once; 1 hour	Result:	Reduced the area of middle cerebral artery infarction in mice at 0.03 mg/kg.
Animal Model:	Male NMRI mice 20-40 g <sup>[4]</sup>								
Dosage:	0.03 mg/kg								
Administration:	Intraperitoneal injection; once; 1 hour								
Result:	Reduced the area of middle cerebral artery infarction in mice at 0.03 mg/kg.								

### CUSTOMER VALIDATION

- Nat Commun. 2023 May 2;14(1):2523.
- Environ Pollut. 2019 Apr;247:927-934.
- Toxicology. 2023 Jan 24;153442.
- Toxicol Lett. 2019 Jul;309:42-50.
- Am J Transl Res. 2022 Jan 15;14(1):211-222.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

---

## REFERENCES

- [1]. Serge Sicouri, et al. Antiarrhythmic effects of losartan and enalapril in canine pulmonary vein sleeve preparations. J Cardiovasc Electrophysiol. 2011 Jun;22(6):698-705.
  - [2]. Rokhsareh Meamar, et al. Enalapril protects endothelial cells against induced apoptosis in Alzheimer's disease. J Res Med Sci. 2013 Mar;18(Suppl 1):S1-5.
  - [3]. Talita A Cunha, et al. Effect of stearic acid on enalapril stability and dissolution from multiparticulate solid dosage forms. AAPS PharmSciTech. 2013 Sep;14(3):1150-7.
  - [4]. A Ravati, et al. Enalapril and moexipril protect from free radical-induced neuronal damage in vitro and reduce ischemic brain injury in mice and rats. Eur J Pharmacol. 1999 May 28;373(1):21-33.
- 

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA