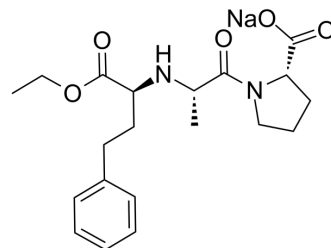


Enalapril sodium

Cat. No.:	HY-B0331B
CAS No.:	149404-21-7
Molecular Formula:	C ₂₀ H ₂₇ N ₂ NaO ₅
Molecular Weight:	398.43
Target:	Angiotensin-converting Enzyme (ACE)
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Enalapril (MK-421) sodium is an angiotensin-converting enzyme (ACE) inhibitor, can be used for hypertensive diseases research ^{[1][2]} .								
In Vitro	<p>Enalapril sodium (10-20 μM) has an antiarrhythmic effect in ultrafiltered PV sleeve preparation isolated from canine hearts which can inhibit EAD and DAD-induced activity^[1].</p> <p>Enalapril sodium (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^[2].</p> <p>Pure Enalapril sodium has better thermal stability than pure Enalapril^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Apoptosis Analysis^[2]</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.
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Result:	Inhibited the induction of apoptosis by patient serum.								
In Vivo	<p>Enalapril sodium (intraperitoneal injection, 0.03 mg/kg, once) reduces infarct volume due to middle cerebral artery occlusion and lower or higher doses are ineffective in Male NMRI mice^[4].</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^[4]</td> </tr> <tr> <td>Dosage:</td> <td>0.03 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection; once</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 ^[4]	Dosage:	0.03 mg/kg	Administration:	Intraperitoneal injection; once	Result:	Reduced the area of middle cerebral artery infarction in mice at 0.03 mg/kg.
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CUSTOMER VALIDATION

- Am J Transl Res. 2022 Jan 15;14(1):211-222.
- Int J Clin Exp Pathol. 2020 May 1;13(5):827-836.

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

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