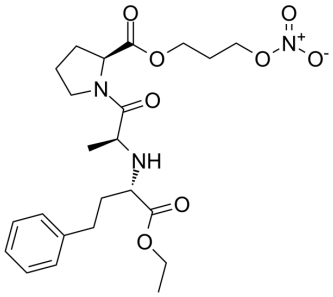
NCX899

Cat. No.:	HY-101577
CAS No.:	690655-41-5
Molecular Formula:	$C_{23}H_{33}N_3O_8$
Molecular Weight:	479.52
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	NCX899 is a NO-releasing derivative of enalapril, and shows inhibitory activity against angiotensin-converting enzyme (ACE) activity.
In Vivo	NCX 899 (NCX, 25 mg/kg, n=10) decreases the end-diastolic dimension in cardiomyopathic (CM) with heart failure. NCX 899 inhibits ACE activity and increases the plasma nitrate levels in CM hamster[1]. NCX899 (4 micromol/kg, i.v.) inhibits the activity of serum angiotensin-converting enzyme in dogs. NCX899 significantly attenuates both arterial hypertension and bradycardia[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [2]	Enalapril (40 nmol/kg per min), NCX899 (35 nmol/kg per min) or sterile saline are infused at a flow rate of 0.5 mL/min over 15 min. Next, cumulative doses of NG-nitro-l-arginine methyl ester (l-NAME; 0.1-10 mg/kg) are injected during infusion of enalapril, NCX899 or saline infusion. The l-NAME is infused at a rate of 0.5 mL/min over 15 min for each dose. At the end of each infusion, the resulting haemodynamic changes are recorded. The total dose administered of NCX899 and enalapril throughout the protocols is 3.5 and 4.0 μmol/kg, respectively. The haemodynamic variables are measured before and after each l-NAME dose in all groups. The MABP and HR are displayed continuously on a computer monitor and are recorded on a printer coupled to this system. Measurements of the haemodynamic events are performed in triplicate for each time period. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Iwanaga Y, et al. A nitric oxide-releasing derivative of enalapril, NCX 899, prevents progressive cardiac dysfunction and remodeling in hamsters with heart failure. FASEB J. 2004 Mar;18(3):587-8. Epub 2004 Jan 20.

[2]. Okuyama CE, et al. Pharmacokinetics and pharmacodynamics of a nitric oxide-releasing derivative of enalapril in male beagles. Clin Exp Pharmacol Physiol. 2007 Apr;34(4):290-5.

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

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