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Product Data Sheet

Leucylarginylproline

 Cat. No.:
 HY-P0143

 CAS No.:
 133943-59-6

 Molecular Formula:
 $C_{17}H_{32}N_6O_4$

 Molecular Weight:
 384.47

Sequence: Leu-Arg-Pro

Sequence Shortening: LRP

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	Leucylarginylproline is an angiotensin-converting enzyme (ACE) inhibitor with an IC $_{50}$ of 0.27 μ M.
IC ₅₀ & Target	IC50: $0.27\mu M$ (ACE) $^{[1]}$
In Vitro	Intravenous injection of Leucylarginylproline (30mg/kg) causes a decrease in the blood pressure. The maximum mean blood pressure reduction (about 15 mmHg) occurrs about 2 min after the injection ^[1] . Leucylarginylproline peptide reduces the blood pressure by about 15 mmHg at the fourth hour and shows a maximal reduction effect of about 35 mmHg at the eighth hour after oral administration ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay ^[1]	Hip-His-Leu (5mM) and an ACE inhibitor (Leucylarginylproline) are dissolved in a 100 mM sodium borate buffer (pH 8.3) containing 300 mM NaCl, and incubated for 30 min with 8 milliunits of ACE at 37°C. The ACE inhibitor concentration required to inhibit 50% of the ACE activity under the above conditions is defined as IC ₅₀ ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration ^[2]	Rats: Leucylarginylproline is dissolved in 1.0 mM normal saline. After being warmed up, rats are orally administered (0.18 mmol/kg bw) with peptides or normal saline (control). Tail systolic blood pressures are measured at 2-h intervals (0, 2, 4, 6, 8, 10, and 12 h) after the administration ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

 $[1]. \ Miyoshi \ S, et \ al. \ Structures \ and \ activity \ of \ angiotens \ in-converting \ enzyme \ inhibitors \ in \ an \ alpha-zein \ hydrolysate. \ Agric \ Biol \ Chem. \ 1991 \ May; 55(5): 1313-8.$

[2]. Chen TL, et al. Microencapsulation and modification of synthetic peptides of food proteins reduces the blood pressure of spontaneously hypertensive rats. J Agric Food

Chem. 2003 Mar 12;51(6):1671-5.

 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$

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