

Product Data Sheet

Product Name: Leucylarginylproline

Cat. No.: GC32520

Chemical Properties

Cas. No. 133943-59-6

SMILES Leu-Arg-Pro

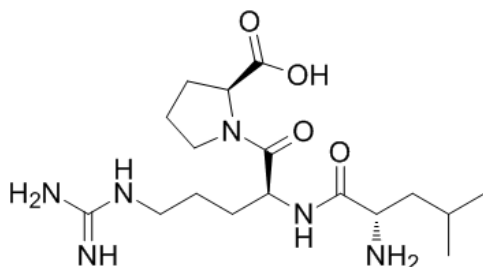
Formula $C_{17}H_{32}N_6O_4$ M.Wt 384.47

Solubility Soluble in DMSO Storage Store at -20°C

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

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

Structure



Protocol

Kinase experiment:

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 IC₅₀[1].

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Animal experiment: 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].

References:

- [1]. Miyoshi S, et al. Structures and activity of angiotensin-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.

Background

Leucylarginylproline is an angiotensin-converting enzyme (ACE) inhibitor with an IC₅₀ of 0.27μM.

Intravenous injection of Leucylarginylproline (30mg/kg) causes a decrease in the blood pressure. The maximum mean blood pressure reduction (about 15 mmHg) occurs 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].

- [1]. Miyoshi S, et al. Structures and activity of angiotensin-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.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA