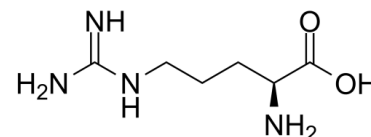


Data Sheet

Product Name:	L-Arginine
Cat. No.:	CS-2045
CAS No.:	74-79-3
Molecular Formula:	C ₆ H ₁₄ N ₄ O ₂
Molecular Weight:	174.20
Target:	Endogenous Metabolite; NO Synthase
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease
Solubility:	H ₂ O : 50 mg/mL (287.03 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

L-Arginine is the nitrogen donor for synthesis of nitric oxide, a potent vasodilator that is deficient during times of sickle cell crisis. Target: Others L-Arginine is an α -amino acid. It was first isolated in 1886. The L-form is one of the 20 most common natural amino acids. At the level of molecular genetics, in the structure of the messenger ribonucleic acid mRNA, CGU, CGC, CGA, CGG, AGA, and AGG, are the triplets of nucleotide bases or codons that code for arginine during protein synthesis. In mammals, arginine is classified as a semiessential or conditionally essential amino acid, depending on the developmental stage and health status of the individual. L-Arginine is associated with a decrease in cardiac index while stroke index is maintained in patients with severe sepsis. Resolution of shock at 72 hours is achieved by 40% and 24% of the patients in the L-Arginine and placebo cohorts, respectively. L-Arginine (450 mg/kg during a 15-minute period) amplifies and sustains the hyperemia (38%) and increases absolute brain blood flow after eNOS upregulation by chronic simvastatin treatment (2 mg/kg subcutaneously, daily for 14 days) in SV-129 mice.

References:

- [1]. Tapiero H, et al. I. Arginine. Biomed Pharmacother. 2002 Nov;56(9):439-45.
- [2]. Bakker J, et al. Administration of the nitric oxide synthase inhibitor NG-methyl-L-arginine hydrochloride (546C88) by intravenous infusion for up to 72 hours can promote the resolution of shock in patients with severe sepsis: results of a randomized, double-blind, placebo-controlled multicenter study (study no. 144-002). Crit Care Med. 2004 Jan;32(1):1-12.
- [3]. Yamada M, et al. Endothelial nitric oxide synthase-dependent cerebral blood flow augmentation by L-arginine after chronic statin treatment. J Cereb Blood Flow Metab. 2000 Apr;20(4):709-17.

CAIndexNames:

L-Arginine

SMILES:

N[C@@H](CCCNC(N)=N)C(O)=O

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

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