L-Arginine

Cat. No.: HY-N0455

CAS No.: 74-79-3

Molecular Formula: $C_6H_{14}N_4O_2$

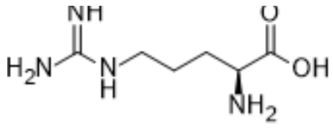
Molecular Weight: 174.2

Target: NO Synthase; Endogenous Metabolite

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 50 mg/mL (287.03 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.7405 mL	28.7026 mL	57.4053 mL
5 mM	1.1481 mL	5.7405 mL	11.4811 mL
10 mM	0.5741 mL	2.8703 mL	5.7405 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (574.05 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

L-Arginine ((S)-(+)-Arginine) is the substrate for the endothelial nitric oxide synthase (eNOS) to generate NO. L-Arginine is transported into vascular smooth muscle cells by the cationic amino acid transporter family of proteins where it is metabolized to nitric oxide (NO), polyamines, or L-proline[1][2].

IC_{50} & Target			
	Microbial Metabolite	Human Endogenous Metabolite	eNOS

CUSTOMER VALIDATION

- Nat Protoc. 2021 Jan;16(1):431-457.
- Viruses. 2021 Jun 26;13(7):1236.
- Pancreas. 2020 Jan;49(1):111-119.
- Dig Dis Sci. 2022 Jul 4.
- Patent. US20200352840A1.

See more customer validations on www.MedChemExpress.com

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.

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