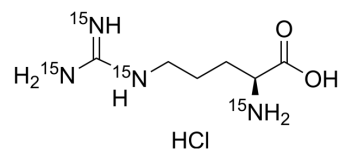


L-Arginine-¹⁵N₄ hydrochloride

Cat. No.:	HY-N0455AS1
CAS No.:	204633-95-4
Molecular Formula:	C ₆ H ₁₅ Cl ¹⁵ N ₄ O ₂
Molecular Weight:	214.64
Target:	NO Synthase; Endogenous Metabolite; Isotope-Labeled Compounds
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 250 mg/mL (1164.74 mM; Need ultrasonic)

Concentration	Mass			
	1 mg	5 mg	10 mg	
1 mM	4.6590 mL	23.2948 mL	46.5896 mL	
5 mM	0.9318 mL	4.6590 mL	9.3179 mL	
10 mM	0.4659 mL	2.3295 mL	4.6590 mL	

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

BIOLOGICAL ACTIVITY

Description

L-Arginine-¹⁵N₄ (hydrochloride) is the ¹⁵N-labeled L-Arginine hydrochloride. L-Arginine hydrochloride ((S)-(+)-Arginine hydrochloride) is the nitrogen donor for synthesis of nitric oxide, a potent vasodilator that is deficient during times of sickle cell crisis[1].

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Tapiero H, et al. L-Arginine. *Biomed Pharmacother.* 2002 Nov;56(9):439-45.
- [3]. 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.

[4]. 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.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA