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## Product Data Sheet

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Product Name: L-Arginine-15N4 hydrochloride

Cat. No.: GC63918

### Chemical Properties

Cas. No. 204633-95-4

Formula C<sub>6</sub>H<sub>15</sub>Cl<sub>15</sub>N<sub>4</sub>O<sub>2</sub>

M.Wt 214.64

Solubility H<sub>2</sub>O : 250 mg/mL (1164.74 mM; Need ultrasonic) 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 L-Arginine-15N4 hydrochloride

### Background

L-Arginine-15N4 ((S)-(+)-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].

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].

[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. I.

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.

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

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[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.

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