

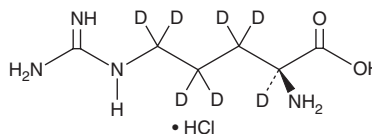
PRODUCT INFORMATION



L-Arginine-d₇ (hydrochloride)

Item No. 34834

CAS Registry No.: 204244-77-9
Formal Name: L-arginine-2,3,3,4,4,5,5-d₇, monohydrochloride
Synonym: L-(+)-Arginine-d₇
MF: C₆H₇D₇N₄O₂ • HCl
FW: 217.7
Chemical Purity: ≥95% (L-Arginine)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₇); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

L-Arginine-d₇ (hydrochloride) is intended for use as an internal standard for the quantification of L-arginine (Item No. 23703) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Description

L-Arginine is an amino acid and a precursor of nitric oxide (NO).¹ L-Arginine is a substrate for NO synthase that is oxidized to form NO and L-citrulline. It enhances NO release induced by bradykinin (Item No. 15539) or A23187 (Item No. 11016) in porcine aortic endothelial cells.² L-Arginine (30 and 300 mg/kg, i.v.) induces dilation of pial arterioles and increases cerebral blood flow in normotensive and spontaneously hypertensive rats.³ It also reduces infarct size by 35 and 28% in normotensive and spontaneously hypertensive rats, respectively, following middle cerebral artery occlusion.

References

1. Stuehr, D.J. Enzymes of the L-arginine to nitric oxide pathway. *J. Nutr.* **134(10 Suppl)**, 2748S-2751S (2004).
2. Palmer, R.M.J., Ashton, D.S., and Moncada, S. Vascular endothelial cells synthesize nitric oxide from L-arginine. *Nature* **333(6174)**, 664-666 (1988).
3. Morikawa, E., Moskowitz, M.A., Huang, Z., *et al.* L-arginine infusion promotes nitric oxide-dependent vasodilation, increases regional cerebral blood flow, and reduces infarction volume in the rat. *Stroke* **25(2)**, 429-435 (1994).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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