

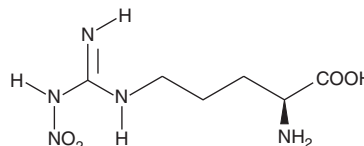
PRODUCT INFORMATION



L-NNA

Item No. 80220

CAS Registry No.: 2149-70-4
Formal Name: N⁵-[imino(nitroamino)methyl]-L-ornithine
Synonyms: L-N^G-Nitroarginine, N^G-nitro-L-Arginine
MF: C₆H₁₃N₅O₄
FW: 219.2
Purity: ≥99%
Supplied as: A crystalline solid
Storage: Room temperature
Stability: ≥4 years



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

Laboratory Procedures

L-NNA is supplied as a crystalline solid. A stock solution may be made by dissolving the L-NNA in the solvent, which should be purged with an inert gas. L-NNA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of L-NNA in these solvents is approximately 50 µg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. The solubility of L-NNA in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

L-NNA is a competitive inhibitor of nitric oxide synthase (NOS) with selectivity for the neuronal and endothelial isoforms of the enzyme. Although L-NAME is much more soluble than L-NNA in aqueous systems, a hydrolysis step is required to “activate” L-NAME, thus adding complexity to an *in vivo* experiment.¹ L-NNA inhibits nNOS, eNOS, and iNOS with K_i values of 15 nM (bovine), 39 nM (human), and 4.4 µM (mouse), respectively.^{1,2}

References

1. Griffith, O.W. and Kilbourn, R.G. Nitric oxide synthase inhibitors: Amino acids. *Methods Enzymol.* **268**, 375-392 (1996).
2. Garvey, E.P., Tuttle, J.V., Covington, K., *et al.* Purification and characterization of the constitutive nitric oxide synthase from human placenta. *Arch. Biochem. Biophys.* **311(2)**, 235-241 (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.

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