

# PRODUCT INFORMATION



## N<sup>ω</sup>-propyl-L-Arginine

Item No. 80587

CAS Registry No.: 137361-05-8

Formal Name: N<sup>5</sup>-[imino(propylamino)methyl]-L-ornithine

MF: C<sub>9</sub>H<sub>20</sub>N<sub>4</sub>O<sub>2</sub>

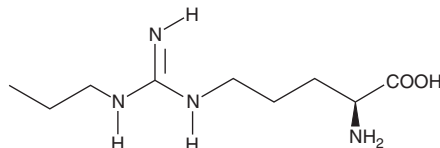
FW: 216.3

Purity: ≥98%

Supplied as: A crystalline 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

N<sup>ω</sup>-propyl-L-Arginine is supplied as a crystalline solid. A stock solution may be made by dissolving the N<sup>ω</sup>-propyl-L-arginine in the solvent of choice, which should be purged with an inert gas. N<sup>ω</sup>-propyl-L-Arginine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of N<sup>ω</sup>-propyl-L-arginine in ethanol is approximately 10 mg/ml and approximately 50 µg/ml in DMSO and DMF.

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. Organic solvent-free aqueous solutions of N<sup>ω</sup>-propyl-L-arginine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of N<sup>ω</sup>-propyl-L-arginine in PBS (pH 7.2) is approximately 25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

N<sup>ω</sup>-propyl-L-Arginine is a potent and selective inhibitor of neuronal nitric oxide synthase (nNOS). N<sup>ω</sup>-propyl-L-Arginine is a competitive inhibitor of bovine nNOS having a K<sub>i</sub> value of 57 nM.<sup>1</sup> The K<sub>i</sub> values for eNOS (bovine) and iNOS (murine) are 8.5 and 180 µM, respectively. N<sup>ω</sup>-propyl-L-Arginine therefore exhibits 3,000-fold and 150-fold selectivity for the neuronal isoform *versus* the inducible (murine) and endothelial (bovine) isoforms of NOS, respectively.<sup>1</sup>

### Reference

1. Zhang, H.Q., Fast, W., Marletta, M.A. *et al.* Potent and selective inhibition of neuronal nitric oxide synthase by N<sup>ω</sup>-propyl-L-Arginine. *J. Med. Chem.* **40**(24), 3869-3870 (1997).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897  
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM