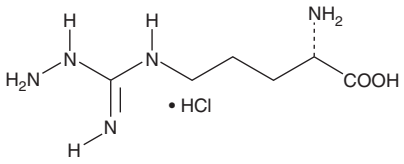
PRODUCT INFORMATION

N^G-amino-L-Arginine (hydrochloride)

Item No. 10554

CAS Registry No.: 1031799-40-2
Formal Name: N^5-(hydrazinyliminomethyl)-L-ornithine, monohydrochloride
MF: $C_6H_{15}N_5O_2 \bullet HCl$
FW: 225.7
Purity: ≥97%
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^G-amino-L-Arginine (hydrochloride) is supplied as a crystalline solid. Aqueous solutions of N^G-amino-L-arginine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of N^G-amino-L-arginine (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

N^G-amino-L-Arginine inhibits nNOS, iNOS, and eNOS with K_i values of 0.3, 3, and 2.5 µM, respectively.[1,2] Inhibition is mediated by covalent alteration of the heme prosthetic group leading to inactivation of the enzyme.[1-3] N^G-amino-L-Arginine can be used both in cell culture and *in vivo*.[4,5]

References

1. Wolff, D.J. and Lubeskie, A. Inactivation of nitric oxide synthase isoforms by diaminoguanidine and N^G-amino-L-arginine. *Arch. Biochem. Biophys.* **325(2)**, 227-234 (1996).
2. Vuletich, J.L., Lowe, E.R., Jianmongkol, S., *et al.* Alteration of the heme prosthetic group of neuronal nitric-oxide synthase during inactivation by N^G-amino-L-arginine *in vitro* and *in vivo*. *Mol. Pharmacol.* **61(6)**, 110-118 (2002).
3. Lee, A.J., Noon, K.R., Jianmongkol, S., *et al.* Metabolism of aminoguanidine, diaminoguanidine, and N^G-amino-L-arginine by neuronal NO-synthase and covalent alteration of the heme prosthetic group. *Chem. Res. Toxicol.* **18(12)**, 1927-1933 (2005).
4. Peng, H.-M., Morishima, Y., Clapp, K.M., *et al.* Dynamic cycling with Hsp90 stabilizes neuronal nitric oxide synthase through calmodulin-dependent inhibition of ubiquitination. *Biochemistry* **48**, 8483-8490 (2009).
5. Kellogg, D.L., Jr., Zhao, J.L., and Wu, Y. Endothelial nitric oxide synthase control mechanisms in the cutaneous vasculature of humans *in vivo*. *Am. J. Physiol. Heart Circ. Physiol.* **295**, H123-H129 (2008).

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