Product Information



Aminoguanidine (hydrochloride)

Item No. 81530

1937-19-5
hydrazinecarboximidamide,
monohydrochloride
Aminoguanidinium chloride, GER 11,
Pimagedine
$CH_6N_4 \bullet HCl$
110.5
≥98%
≥1 year at room temperatute
A crystalline solid



Laboratory Procedures

For long term storage, we suggest that Aminoguanidine (hydrochloride) be stored as supplied at room temperature. It should be stable for at least one year.

Aminoguanidine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the aminoguanidine (hydrochloride) in an organic solvent purged with an inert gas. Aminoguanidine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of aminoguanidine (hydrochloride) in ethanol is approximately 1.6 mg/ml and approximately 5 mg/ml in DMSO and DMF.

Organic solvent-free aqueous solutions of aminoguanidine (hydrochloride) can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of aminoguanidine (hydrochloride) in PBS, pH 7.2, is approximately 100 mg/ml. Store aqueous solutions of aminoguanidine on ice and use within 12 hours of preparation. Aminoguanidine tends to precipitate out of solution when stored at 4°C for prolonged periods (3-7 days). We do not recommend storing the aqueous solution for more than one day.

Aminoguanidine is equipotent to L-NMMA and L-NNA as an inhibitor of iNOS, but it is much less potent as an inhibitor of the constitutive isoforms of NOS.^{1,2} The IC₅₀ values for inhibition of mouse iNOS and rat neuronal NOS by aminoguanidine are 5.4 μ M and 160 μ M, respectively, at an arginine concentration of 30 μ M.² Aminoguanidine also inhibits induction of iNOS protein expression by endotoxin in rat macrophages.³

References

- 1. Joly, G.A., Ayres, M., Chelly, F., et al. Effects of NG-methyl-L-arginine, NG-nitro-L-arginine, and aminoguanidine on constitutive and inducible nitric oxide synthase in rat aorta. Biochem. Biophys. Res. Commun. 199, 147-154 (1994).
- 2. Misko, T.P., Moore, W.M., Kasten, T.P., et al. Selective inhibition of the inducible nitric oxide synthase by aminoguanidine. Eur. J. Pharmacol. 233, 119-125 (1993).
- Ruetten, H. and Thiemermann, C. Prevention of the expression of inducible nitric oxide synthase by aminoguanidine 3. or aminoethyl-isothiourea in macrophages and in the rat. Biochem. Biophys. Res. Commun. 225, 525-530 (1996).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/81530

WARNING: This product is for laboratory research only: not for administration to humans. Not for human or veterinary DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all. of the information required for the safe and proper use of this material. Before use, the user <u>must</u> review the <u>complete</u> Material Safety Data Sheet, which has been sent via e mail to uri institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications

purpose, suitability and merchanications, which exclude oxyses us description of the second oxyses us description of the second oxyses are description or second oxyses. This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees. Buyer's exclusive remedy and Cayman's sole liability hereunder shall be limited to a refined of the purchase price, or ar Cayman's option, the replacement, at no cost to Buyer, of all material that are description.

Buyers exclusive remeay and caymains sole naturity neterineer statute intervention of a <u>termine</u> or a <u>termine</u>

Cayman Chemical

Mailing address

1180 E. Ellsworth Road Ann Arbor, MI 48108 USA

Phone (800) 364-9897 (734) 971-3335

Fax (734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com