Aminoguanidine (hydrochloride)
Item No. 81530

CAS Registry No.: 1937-19-5
Formal Name: hydrazinecarboximidamide, monohydrochloride
Synonyms: Aminoguanidinium chloride, GER 11, Pimagedine
MF: CH₆N₄ • HCl
FW: 110.5
Purity: ≥98%
Stability: ≥1 year at room temperature
Supplied as: 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. The IC₅₀ values for inhibition of mouse iNOS and rat neuronal NOS by aminoguanidine are 5.4 µM and 160 µM, respectively, at an arginine concentration of 30 µM. Aminoguanidine also inhibits induction of iNOS protein expression by endotoxin in rat macrophages.

References

Related Products
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