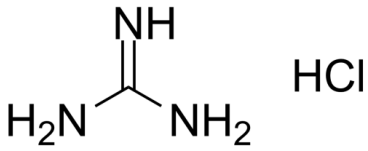
Data Sheet

Product Name:	Guanidine (hydrochloride)
Cat. No.:	CS-2056
CAS No.:	50-01-1
Molecular Formula:	CH6ClN3
Molecular Weight:	95.53
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Solubility:	H2O : ≥ 50 mg/mL (523.40 mM); DMSO : ≥ 100 mg/mL (1046.79 mM)



BIOLOGICAL ACTIVITY:

Guanidine hydrochloride, the crystalline compound of strong alkalinity formed by the oxidation of guanine, is a normal product of protein metabolism and a protein denaturant. Target: Others Guanidine hydrochloride is the most popular protein denaturant. Analysis of unfolding transitions by Guanidine hydrochloride provides several important parameters regarding the mechanism of conformational stability of proteins. Guanidine hydrochloride at low concentrations refolds acid-unfolds apomyoglobin and cytochrome c, stabilizing the molten globule state. Guanidine hydrochloride (> 1 M) causes co-operative unfolding of the molten globule state [1]. Guanidine hydrochloride at millimolar concentrations, is able to causes efficient loss of the normally stable [PSI+] element from yeast cells. 5 mM Guanidine hydrochloride in growth media cures [PSI+] and other prions of yeast. 5 mM Guanidine hydrochloride significantly reduces Hsp104-mediated basal and acquired thermotolerance by 30-fold and 50 fold, respectively. Guanidine hydrochloride also reduces the ability of Hsp104 to restore activity of thermally denatured luciferase [2].

References:

[1]. Hagihara, Y., et al., Guanidine hydrochloride-induced folding of proteins. J Mol Biol, 1993. 231(2): p. 180-4.

[2]. Jung, G. and D.C. Masison, Guanidine hydrochloride inhibits Hsp104 activity in vivo: a possible explanation for its effect in curing yeast prions. Curr Microbiol, 2001. 43(1): p. 7-10.

CAIndexNames:

Guanidine, hydrochloride (1:1)

SMILES:

NC(N)=N.Cl

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA