
Product Data Sheet

Product Name: Guanidine hydrochloride (Guanidinium chloride)

Cat. No.: GC31397

Chemical Properties

Cas. No. 50-01-1

SMILES NC(N)=N.ClFormula CH6ClN3

M.Wt 95.53

Solubility DMSO : ≥ 100 mg/mL (1046.79 mM); Water : ≥ 50 mg/mL (523.40 mM)

Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure **Background**

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

[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

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

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Hsp104 activity in vivo: a possible explanation for its effect in curing yeast prions. *Curr Microbiol*, 2001. 43(1): p. 7-10.

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