

Certificate of Analysis

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Product Name: Cystamine dihydrochloride

Catalog No.: 4981

Batch No.: 1

CAS Number: 56-17-7

EC Number: 200-260-7

IUPAC Name: 2,2'-Diaminodiethyl disulfide dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄H₁₂N₂S₂·2HCl

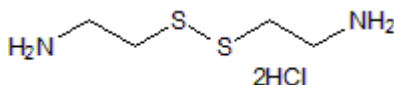
Batch Molecular Weight: 225.2

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	21.33	6.27	12.44
Found	21.4	6.22	12.45

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Transglutaminase inhibitor. Attenuates cell death induced by 3-nitropropionic acid (Cat. No. 4849) in Huntington's disease (HD) striatal cells. Also decreases aggregated and cross-linked huntingtin in transfected cells, and increases brain levels of BDNF. Shown to extend survival and improve motor performance in transgenic HD mice. Neuroprotective.

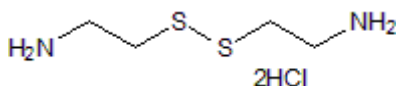
Physical and Chemical Properties:

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Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Dedeoglu et al (2002) Therapeutic effects of cystamine in a murine model of Huntington's disease. *J.Neurosci.* **22** 8942. PMID: 12388601.

Mao et al (2006) Cystamine and cysteamine prevent 3-NP-induced mitochondrial depolarization of Huntington's disease knock-in striatal cells. *Eur.J.Neurosci.* **23** 1701. PMID: 16623826.

Borrell-Pages et al (2006) Cystamine and cysteamine increase brain levels of BDNF in Huntington disease via HSJ1b and transglutaminase. *J.Clin.Invest.* **116** 1410. PMID: 16604191.

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