

Certificate of Analysis

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Product Name: H-7 dihydrochloride

Catalog No.: 0542

Batch No.: 13

CAS Number: 108930-17-2

IUPAC Name: (±)-1-(5-Isoquinolinesulphonyl)-2-methylpiperazine dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₁₇N₃O₂S.2HCl.½H₂O

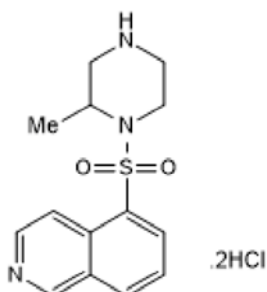
Batch Molecular Weight: 373.3

Physical Appearance: Off-white solid

Solubility: water to 100 mM
DMSO to 20 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.1% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	45.05	5.4	11.26	18.99
Found	44.35	5.35	11.01	19.56

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

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Description:

H-7 dihydrochloride is a protein kinase inhibitor (IC₅₀ values for inhibition of PKA, PKG, PKC and myosin light chain kinase are 3.0, 5.8, 6.0 and 97.0 µM, respectively. H-7 shows antiviral activity against influenza A (IC₅₀ = 10 µM) in vitro. H-7 also inhibits interleukin-stimulated secretion of IgM and blocks PMA-stimulated interleukin 1β production.

Physical and Chemical Properties:

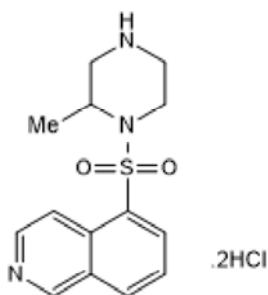
Batch Molecular Formula: C₁₄H₁₇N₃O₂S.2HCl.½H₂O

Batch Molecular Weight: 373.3

Physical Appearance: Off-white solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

water to 100 mM

DMSO to 20 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:

Quick et al (1992) The structure and biological activities of the widely used protein kinase inhibitor, H7, differ depending on the commercial source. *Biochem.Biophys.Res.Commun.* **187** 657. PMID: 1530632.

Hurme et al (1990) Control of interleukin-1 beta expression by protein kinase C and cyclic adenosine monophosphate in myeloid leukemia cells *Blood* **76** (11) 2198. PMID: 2175219.

Kurokawa et al (1990) Inhibitory effect of protein kinase C inhibitor on the replication of influenza type A virus. *J.Gen.Virol.* **71** 2149. PMID: 1698925.

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