

Certificate of Analysis

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Product Name: ML 7 hydrochloride

Catalog No.: 4310

Batch No.: 3

CAS Number: 110448-33-4

IUPAC Name: Hexahydro-1-[(5-iodo-1-naphthalenyl)sulfonyl]-1*H*-1,4-diazepine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅H₁₇IN₂O₂S.HCl

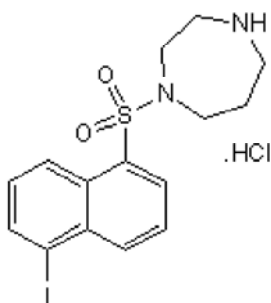
Batch Molecular Weight: 452.74

Physical Appearance: Pale yellow solid

Solubility: DMSO to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.6% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	39.79	4.01	6.19
Found	39.71	3.94	6.12

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

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Description:

ML 7 hydrochloride is a selective MLCK inhibitor ($K_i = 0.3 \mu\text{M}$). Exhibits more potent inhibition than ML 9 hydrochloride (Cat. No. 0431) Displays reversible, ATP-competitive inhibition of Ca^{2+} -calmodulin-dependent and -independent smooth muscle MLCKs. Inhibits proplatelet formation and stabilization.

Physical and Chemical Properties:

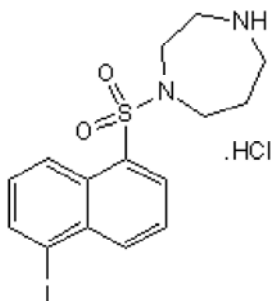
Batch Molecular Formula: $\text{C}_{15}\text{H}_{17}\text{IN}_2\text{O}_2\text{S}\cdot\text{HCl}$

Batch Molecular Weight: 452.74

Physical Appearance: Pale yellow solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



References:

Meinders *et al* (2015) Sp1/Sp3 transcription factors regulate hallmarks of megakaryocyte maturation and platelet formation and function. *Blood* **125** 1957. PMID: 25538045.

Saitoh *et al* (1987) Selective inhibition of catalytic activity of smooth muscle myosin light chain kinase. *J.Biol.Chem.* **262** 7796. PMID: 3108259.

Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 50 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 $45\text{-}60^\circ\text{C}$ 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.

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