

## Certificate of Analysis

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**Product Name:** W-7 hydrochloride

**Catalog No.:** 0369

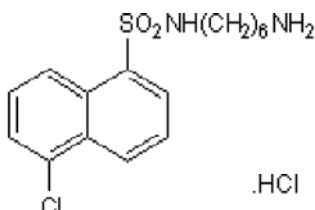
**Batch No.:** 8

CAS Number: 61714-27-0

IUPAC Name: *N*-(6-Aminohexyl)-5-chloro-1-naphthalenesulfonamide hydrochloride

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>16</sub>H<sub>21</sub>ClN<sub>2</sub>O<sub>2</sub>S.HCl  
**Batch Molecular Weight:** 377.33  
**Physical Appearance:** White solid  
**Solubility:** water to 5 mM with gentle warming  
DMSO to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.52 (5% Pyridine, 15% AcOH, 20% water, 60% butanol)  
**HPLC:** Shows 99% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	50.93	5.88	7.42
Found	50.99	5.92	7.46

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

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**Product Name:** W-7 hydrochloride

**Catalog No.:** 0369

**Batch No.:** 8

CAS Number: 61714-27-0

IUPAC Name: N-(6-Aminoethyl)-5-chloro-1-naphthalenesulfonamide hydrochloride

**Description:**

Calmodulin antagonist. Inhibits Ca<sup>2+</sup>-calmodulin-dependent phosphodiesterase (IC<sub>50</sub> = 28 μM) and myosin light chain kinase (IC<sub>50</sub> = 51 μM).

**Physical and Chemical Properties:**

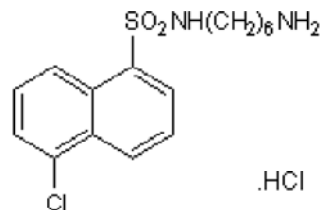
Batch Molecular Formula: C<sub>16</sub>H<sub>21</sub>ClN<sub>2</sub>O<sub>2</sub>S.HCl

Batch Molecular Weight: 377.33

Physical Appearance: White solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

water to 5 mM with gentle warming  
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:**

**Asano et al** (1989) Divergent pharmacological effects of three calmodulin antagonists, N-(6-aminoethyl)-5-chloro-1-naphthalenesulfonamide (W 7), chlorpromazine and calmidazolium, on isometric tension development and myosin light chain phosphorylation in intact bovine tracheal smooth muscle. *J.Pharmacol.Exp.Ther.* **251** 764. PMID: 2810127.

**Itoh and Hidaka** (1984) Direct interaction of calmodulin antagonists with Ca<sup>2+</sup>/calmodulin-dependent cyclic nucleotide phosphodiesterase. *J.Biochem.* **96** 1721. PMID: 6099352.

**Hidaka et al** (1981) N-(6-aminoethyl)-5-chloro-1-naphthalenesulfonamide, a calmodulin antagonist, inhibits cell proliferation. *Proc.Natl.Acad.Sci.U.S.A.* **78** 4354. PMID: 6945588.

**Tanaka and Hidaka** (1980) Hydrophobic regions function in calmodulin-enzyme(s) interactions. *J.Biol.Chem.* **255** 11078. PMID: 6254958.

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