

## Certificate of Analysis

www.tocris.com

**Product Name:** Amiloride hydrochloride

**Catalog No.:** 0890

**Batch No.:** 3

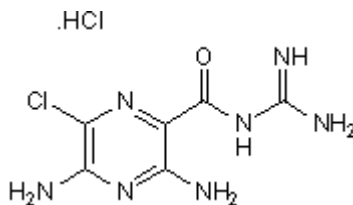
CAS Number: 2016-88-8

EC Number: 217-958-2

IUPAC Name: 3,5-Diamino-*N*-(aminoiminomethyl)-6-chloropyrazinecarboxamide hydrochloride

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>6</sub>H<sub>8</sub>ClN<sub>7</sub>O.HCl.2H<sub>2</sub>O  
**Batch Molecular Weight:** 302.12  
**Physical Appearance:** Yellow crystalline solid  
**Solubility:** water to 10 mM with gentle warming  
DMSO to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**Melting Point:** Between 291 - 293°C  
**HPLC:** Shows 98.2% purity  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	23.85	4.33	32.45
Found	23.84	4.24	32.59

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

**Product Name:** Amiloride hydrochloride

**Catalog No.:** 0890

**Batch No.:** 3

CAS Number: 2016-88-8

EC Number: 217-958-2

IUPAC Name: 3,5-Diamino-*N*-(aminoiminomethyl)-6-chloropyrazinecarboxamide hydrochloride

**Description:**

Na<sup>+</sup> channel blocker. Defines the I<sub>2A</sub>-amiloride sensitive and I<sub>2B</sub>-amiloride insensitive imidazoline binding Blocks TRPP3, acid sensing- (ASIC) and mechanogated membrane-ion channels, as well as the Na<sup>+</sup>/H<sup>+</sup> exchanger. Also inhibits urokinase-type plasminogen activator (uPA); has no effect on tissue-type plasminogen activator.

**Physical and Chemical Properties:**

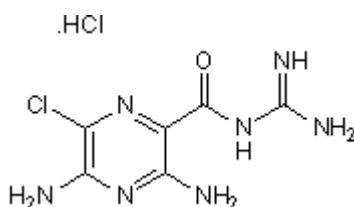
Batch Molecular Formula: C<sub>6</sub>H<sub>8</sub>ClN<sub>7</sub>O.HCl.2H<sub>2</sub>O

Batch Molecular Weight: 302.12

Physical Appearance: Yellow crystalline solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**Vassalli et al** (1987) Amiloride selectively inhibits the urokinase-type plasminogen activator. **214** 187. PMID: 3106085.

**Kleyman et al** (1988) Amiloride and its analogues as tools in the study of ion transport. *J.Membr.Biol.* **105** 1. PMID: 2852254.

**Ernsberger et al** (1992) A second generation of centrally acting antihypertensive agents act on putative I<sub>1</sub>-imidazoline receptors. *J.Cardiovasc.Pharmacol.* **20** S1.

**Hamill and McBride** (1996) The pharmacology of mechanogated membrane ion channels. *Pharmacol.Rev.* **48** 231. PMID: 8804105.

**Dai et al** (2007) Inhibition of TRPP<sub>3</sub> channel by amiloride and analogs. *Mol.Pharmacol.* **72** 1576. PMID: 17804601.

**Jetti et al** (2010) Evaluation of the role of nitric oxide in acid sensing ion channel mediated cell death. *Nitric Oxide* **22** 213. PMID: 20045740.

**Storage:** Store at RT

**Solubility & Usage Info:**

water to 10 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.

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

**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel:+1 612 379 2956