

## Certificate of Analysis

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**Product Name:** U 89843A

**Catalog No.:** 2734

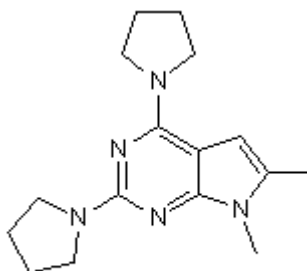
**Batch No.:** 2

CAS Number: 157013-85-9

IUPAC Name: 6,7-Dimethyl-2,4-di-1-pyrrolidinyl-7H-pyrrolo[2,3-d]pyrimidine hydrochloride

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:**  $C_{16}H_{23}N_5 \cdot HCl$   
**Batch Molecular Weight:** 321.85  
**Physical Appearance:** Off-white solid  
**Solubility:** water to 25 mM  
DMSO to 50 mM  
**Storage:** Desiccate at RT  
**Batch Molecular Structure:**



$C_{16}H_{23}N_5$   
Mol. Wt.: 285.39

### 2. ANALYTICAL DATA

**TLC:**  $R_f = 0.67$  (Chloroform:Methanol:Ammonia soln. [95:5:0.1])  
**HPLC:** Shows >99.2% purity  
 **$^1H$  NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

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

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**Description:**

Positive allosteric modulator of GABA<sub>A</sub> receptors. Enhances GABA-induced Cl<sup>-</sup> currents in the α<sub>1</sub>β<sub>2</sub>γ<sub>2</sub>, α<sub>3</sub>β<sub>2</sub>γ<sub>2</sub> and α<sub>6</sub>β<sub>2</sub>γ<sub>2</sub> subtypes. Causes sedation in vivo following i.v. administration without losing "righting reflex". Also displays antioxidant activity.

**Physical and Chemical Properties:**

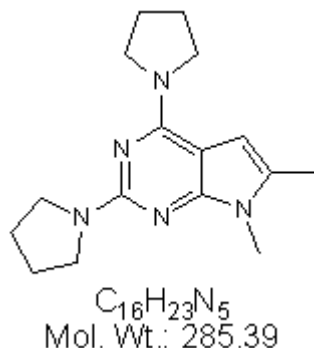
Batch Molecular Formula: C<sub>16</sub>H<sub>23</sub>N<sub>5</sub>.HCl

Batch Molecular Weight: 321.85

Physical Appearance: Off-white solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Desiccate at RT

**Solubility & Usage Info:**

water to 25 mM

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 45-60°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:**

**Bundy et al (1995)** Synthesis of novel 2,4-diaminopyrrolo-[2,3-d]pyrimidines with antioxidant, neuroprotective, and antiasthma activity. *J.Med.Chem.* **38** 4161. PMID: 7473542.

**Haesook et al (1995)** U-89843A is a novel allosteric modulator of γ-aminobutyric acid<sub>A</sub> receptors. *J.Pharmacol.Exp.Ther.* **275** 1390. PMID: 8531107.

**Rohn et al (1996)** Inhibition of Ca<sup>2+</sup>-pump ATPase and the Na<sup>+</sup>/K<sup>+</sup>-pump ATPase by iron-generated free radicals. *Biochem.Pharmacol.* **51** 471. PMID: 8619892.

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**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