

## Certificate of Analysis

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**Product Name:** 3-MATIDA

**Catalog No.:** 2196

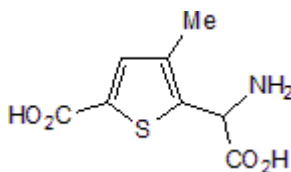
**Batch No.:** 1

CAS Number: 518357-51-2

IUPAC Name:  $\alpha$ -Amino-5-carboxy-3-methyl-2-thiopheneacetic acid

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>8</sub>H<sub>9</sub>NO<sub>4</sub>S·½H<sub>2</sub>O  
**Batch Molecular Weight:** 224.24  
**Physical Appearance:** White solid  
**Solubility:** 1eq. NaOH to 100 mM  
 DMSO to 50 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.5 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])  
**HPLC:** Shows >99.7% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	42.85	4.49	6.25
Found	42.85	4.52	6.15

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

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**Description:**

Potent metabotropic glutamate mGlu<sub>1</sub> receptor antagonist (IC<sub>50</sub> = 6.3  $\mu$ M at rat mGlu<sub>1a</sub>). Displays  $\geq$  40-fold selectivity over other receptors: mGlu<sub>5</sub>, mGlu<sub>2</sub>, mGlu<sub>4a</sub> (IC<sub>50</sub> > 300  $\mu$ M), NMDA and AMPA (IC<sub>50</sub> = 250  $\mu$ M). Neuroprotective in cultured murine cortical cells and rat hippocampal slice cultures in vitro. Reduces the volume of ischemia-induced brain infarcts in rats following systemic administration in vivo.

**Physical and Chemical Properties:**

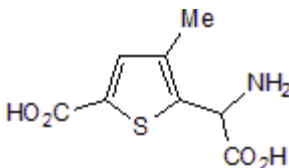
Batch Molecular Formula: C<sub>8</sub>H<sub>9</sub>NO<sub>4</sub>S.½H<sub>2</sub>O

Batch Molecular Weight: 224.24

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**References:**

**Moroni et al** (2002) The novel and systemically active metabotropic glutamate 1 (mGlu1) receptor antagonist 3-MATIDA reduces post-ischemic neuronal death. *Neuropharmacology* **42** 741. PMID: 12015200.

**Cozzi et al** (2002) Metabotropic glutamate 1 (mGlu1) receptor antagonists enhance GABAergic neurotransmission: a mechanism for the attenuation of post-ischemic injury and epileptiform activity? *Neuropharmacology* **43** 119. PMID: 12213266.

**Constantino et al** (2004) Stereoselective synthesis and preliminary evaluation of (+)- and (-)-3-methyl-5-carboxy-thien-2-yl-glycine (3-MATIDA): identification of (+)-3-MATIDA as a novel mGluR1 competitive antagonist. *Il Farmaco* **59** 93. PMID: 14871500.

**Storage:** Store at +4°C

**Solubility & Usage Info:**

1eq. NaOH to 100 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.

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