

# Certificate of Analysis

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**Product Name:** ACBC

**Catalog No.:** 0258

**Batch No.:** 13

CAS Number: 22264-50-2

IUPAC Name: 1-Aminocyclobutane-1-carboxylic acid

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>5</sub>H<sub>9</sub>NO<sub>2</sub>·0.3H<sub>2</sub>O

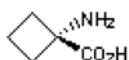
**Batch Molecular Weight:** 121.14

**Physical Appearance:** White solid

**Solubility:** water to 100 mM

**Storage:** Store at RT

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.2 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])

**Melting Point:** At 262°C

**<sup>1</sup>H NMR:** Consistent with structure

**Microanalysis:**

	Carbon Hydrogen Nitrogen			
Theoretical	49.57	8.04	11.56	0.00
Found	49.58	7.67	11.87	0.00

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

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## Product Information

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**Catalog No.:** 0258

**Batch No.:** 13

CAS Number: 22264-50-2

IUPAC Name: 1-Aminocyclobutane-1-carboxylic acid

### Description:

NMDA receptor partial agonist, acting at the glycine site of GluN1 (formally NR1). Please refer to IUPHAR Guide to Pharmacology for the most recent naming conventions.

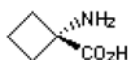
### Physical and Chemical Properties:

Batch Molecular Formula: C<sub>5</sub>H<sub>9</sub>NO<sub>2</sub>·0.3H<sub>2</sub>O

Batch Molecular Weight: 121.14

Physical Appearance: White solid

### Batch Molecular Structure:



**Storage:** Store at RT

### Solubility & Usage Info:

water 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:

**Inanobe et al** (2005) Mechanism of partial agonist action at the NR1 subunit of NMDA receptors. *Neuron* **47** 71. PMID: 15996549.

**Rao et al** (1990) Neuropharmacological characterization of 1-aminocyclopropane-1-carboxylate and 1-aminocyclobutane-1-carboxylate, ligands of the N-MthD.-aspartate-associated glycine receptor. *Neuropharmacology* **29** 305. PMID: 2158004.

**Hood et al** (1989) 1-Aminocyclobutane-1-carboxylic acid (ACBC): a specific antagonist of the NMDA receptor coupled glycine receptor. *Eur.J.Pharmacol.* **161** 281. PMID: 2542048.

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