

Product Name: *trans*-ACBD
CAS Number: 117488-23-0
IUPAC Name: *trans*-1-Aminocyclobutane-1,3-dicarboxylic acid

Catalog No.: 0270

Batch No.: 8

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆H₉NO₄·H₂O
Batch Molecular Weight: 177.16
Physical Appearance: White solid
Solubility: 1eq. NaOH to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.4 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])
¹H NMR: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	40.68	6.26	7.91
Found	40.75	6.67	7.92

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

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Description:

Very potent and selective NMDA agonist. Certain confusion exists over the naming of this compound because of apparent contradictions in the literature. This is the isomer which has the carboxylic acid and the amino groups on opposite sides of the cyclobutyl ring. *cis*-ACBD (Cat. No. 0271) also available.

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Solubility & Usage Info:

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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:

Allan et al (1990) Synthesis and activity of a potent NMDA agonist, *trans*-1-aminocyclobutane-1,3-dicarboxylic acid, and related phosphonic and carboxylic acids. *J.Med.Chem.* **33** 2905. PMID: 2145435.

Lanthorn et al (1990) *cis*-2,4-Methanoglutamate is a potent and selective NMDA receptor agonist. *Eur.J.Pharmacol.* **182** 397. PMID: 2146136.

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