

Certificate of Analysis

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Product Name: tADA

Catalog No.: 0860

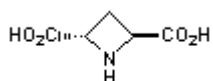
Batch No.: 6

CAS Number: 161596-62-9

IUPAC Name: *trans*-Azetidine-2,4-dicarboxylic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₅H₇NO₄
Batch Molecular Weight: 145.11
Physical Appearance: White crystalline solid
Solubility: 1eq. NaOH to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.15 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])
Melting Point: Between 235 - 236°C(Dec)
¹H NMR: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	41.39	4.86	9.65
Found	41.45	4.91	9.6

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

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IUPAC Name: *trans*-Azetidine-2,4-dicarboxylic acid

Description:

Group I selective metabotropic glutamate receptor agonist. More potent at mGlu_{5a} than mGlu_{1a} in LLC-PKI cells and induces calcium release in CA3 pyramidal cells in vitro.

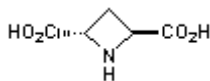
Physical and Chemical Properties:

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Solubility & Usage Info:

1eq. NaOH 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:

Kozikowski et al (1993) Synthesis and metabotropic receptor activity of the novel rigidified glutamate analogues (+) and (-)-*trans*-azetidine-2,4,-dicarboxylic acid and their *N*-methyl derivatives. *J.Med.Chem.* **36** 2706. PMID: 8410984.

Manahan-Vaughan et al (1996) Physiological and pharmacological profile of *trans*-azetidine-2,4-dicarboxylic acid: metabotropic glutamate receptor agonism and effects on long-term potentiation. *Neuroscience* **72** 999. PMID: 8735225.

Takeda et al (2007) Role of zinc influx via AMPA/Kainate receptor activation in metabotropic glutamate receptor-mediated calcium release. *J.Neurosci.Res.* **85** 1310. PMID: 17304583.

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