

## Certificate of Analysis

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**Product Name:** L-*trans*-2,4-PDC

**Catalog No.:** 0298

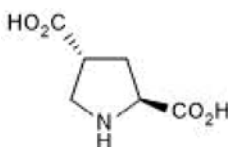
**Batch No.:** 16

CAS Number: 64769-66-0

IUPAC Name: L-*trans*-Pyrrolidine-2,4-dicarboxylic acid

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>6</sub>H<sub>9</sub>NO<sub>4</sub>  
**Batch Molecular Weight:** 159.14  
**Physical Appearance:** White solid  
**Solubility:** water to 100 mM  
 phosphate buffered saline to 100 mM  
 1eq. NaOH to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows >99.5% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Optical Rotation:** [α]<sub>D</sub> = -50.4 (Concentration = 1, Solvent = Water)  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	45.28	5.7	8.8
Found	45.13	5.73	8.75

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

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**Batch No.:** 16

CAS Number: 64769-66-0

IUPAC Name: L-*trans*-Pyrrolidine-2,4-dicarboxylic acid

**Description:**

Potent, competitive, transportable EAAT1-4 inhibitor/non-transportable EAAT5 inhibitor.

**Physical and Chemical Properties:**

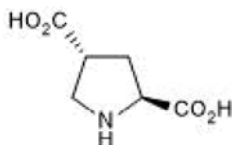
Batch Molecular Formula: C<sub>6</sub>H<sub>9</sub>NO<sub>4</sub>

Batch Molecular Weight: 159.14

Physical Appearance: White solid

**Minimum Purity:** >97%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

water to 100 mM

phosphate buffered saline to 100 mM

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:**

**Zuiderwijk et al** (1996) Effects of uptake carrier blockers SK & F 89976-A and L-*trans*-PDC on *in vivo* release of amino acids in rat hippocampus. *Eur.J.Pharmacol.* **307** 275. PMID: 8836615.

**Mitrovic and Johnston** (1994) Regional differences in the inhibition of L-glutamate and L-aspartate sodium-dependent high affinity uptake systems in rat CNS synaptosomes by L-*trans*-pyrrolidine-2,4-dicarboxylic *threo*-3-hydroxy-D-aspartate and D-aspartate. *Neurochem.Int.* **24** 583. PMID: 7981641.

**Bridges et al** (1991) Conformationally defined neurotransmitter analogues. Selective inhibition of glutamate uptake by one pyrrolidine-2,4-dicarboxylate diastereomer. *J.Med.Chem.* **34** 717. PMID: 1671706.

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