

## Certificate of Analysis

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**Product Name:** L-AP5

**Catalog No.:** 0107

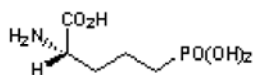
**Batch No.:** 6

CAS Number: 79055-67-7

IUPAC Name: L-(+)-2-Amino-5-phosphonopentanoic acid

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>5</sub>H<sub>12</sub>NO<sub>5</sub>P  
**Batch Molecular Weight:** 197.13  
**Physical Appearance:** White solid  
**Solubility:** 1eq. NaOH to 100 mM  
 water to 100 mM  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**TLC:** R<sub>f</sub> = 0.31 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])  
**Melting Point:** At 255°C  
**Chiral HPLC:** Shows >99.1% purity  
<sup>1</sup>H NMR: Consistent with structure  
**Optical Rotation:** [α]<sub>D</sub> = +26.4 (Concentration = 1, Solvent = 6N HCl)  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen	
Theoretical	30.46	6.14	7.11	0.00
Found	30.55	6.2	7.05	0.00

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

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**Description:**

L-AP5 is an NMDA antagonist and an agonist at quisqualate-sensitized AP6 site, where it is more potent than the isomer D-AP5. L-AP5 is more potent than D-AP5 at depressing synaptic responses at amino acid-induced and synaptic excitation of cat spinal neurons. D-isomer, DL mixture and sodium salt also available.

**Physical and Chemical Properties:**

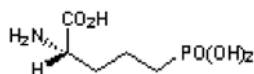
Batch Molecular Formula: C<sub>5</sub>H<sub>12</sub>NO<sub>5</sub>P

Batch Molecular Weight: 197.13

Physical Appearance: White solid

**Minimum Purity:** ≥99%

**Batch Molecular Structure:**



**Storage:** Store at RT

**Solubility & Usage Info:**

1eq. NaOH to 100 mM  
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:**

**Schulte et al** (1994) Utilization of the resolved L-isomer of 2-amino-6-phosphonohexanoic acid (L-AP6) as a selective agonist for a quisqualate-sensitized site in hippocampal CA1 pyramidal neurons. *Brain Res.* **649** 203. PMID: 7953634.

**Davies and Watkins** (1982) Actions of D and L forms of 2-amino-5-phosphonovalerate and 2-amino-4-phosphonobutyrate in the cat spinal cord. *Brain Res.* **235** 378. PMID: 6145492.

**Evans et al** (1982) The effect of a series of ω-phosphonic-α-carboxylic amino acids on electrically evoked and amino acid induced responses in isolated spinal cord preparations. *Br.J.Pharmacol.* **75** 65. PMID: 7042024.

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