

Certificate of Analysis

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Product Name: D-AP4

Catalog No.: 0102

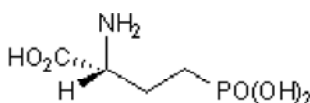
Batch No.: 3

CAS Number: 78739-01-2

IUPAC Name: D-(-)-2-Amino-4-phosphonobutyric acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄H₁₀NO₅P
Batch Molecular Weight: 183.1
Physical Appearance: White solid
Solubility: 1eq. NaOH to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.45 (Pyridine:Acetic acid:Water:Butanol [3:8:11:33])
Melting Point: At 236°C
Chiral HPLC: Shows >98.5% purity
¹H NMR: Consistent with structure
Optical Rotation: [α]_D = -20 (Concentration = 1, Solvent = 6N HCl)
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	26.24	5.5	7.65
Found	26.19	5.54	7.52

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

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel: +1 612 379 2956

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Description:

Broad spectrum excitatory amino acid receptor antagonist. Also agonist at the quisqualate-sensitized AP6 site in hippocampus where it is less potent than L-AP4. DL Mixture and L-isomer also available.

Physical and Chemical Properties:

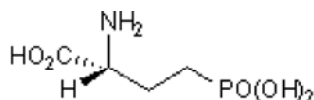
Batch Molecular Formula: C₄H₁₀NO₅P

Batch Molecular Weight: 183.1

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at RT

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:

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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