

Certificate of Analysis

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Product Name: DL-AP5 Sodium salt

Catalog No.: 3693

Batch No.: 13

CAS Number: 1303993-72-7

IUPAC Name: DL-2-Amino-5-phosphonopentanoic acid sodium salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₅H₁₁NNaO₅P·1¼H₂O

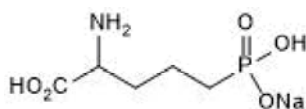
Batch Molecular Weight: 241.63

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.5% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	24.85	5.63	5.8
Found	24.72	5.53	5.53

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

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IUPAC Name: DL-2-Amino-5-phosphonopentanoic acid sodium salt

Description:

DL-AP5 Sodium salt is the sodium salt of DL-AP5 (Cat. No. 0105) and a racemic mixture of the D- and L-isomers of AP5, a selective NMDA receptor antagonist that competes with glutamate binding and is commonly used to inhibit NMDA-dependent synaptic plasticity. D-AP5 (Cat. No. 0106) is the more active isomer and displays approximately 52-fold higher potency than the L-isomer, L-AP5 (Cat. No. 0107). In vitro D-AP5 reduces NMDA-induced depolarization of cortical neurons, with no effect on the response to L-Quisqualic acid (Cat. No. 0188) or Kainic acid (Cat. No. 0222). Following spinal injection of D-AP5, NMDA-response is rapidly reduced, with no... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

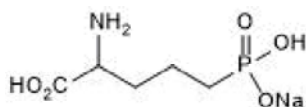
Batch Molecular Formula: C₅H₁₁NNaO₅P.1¼H₂O

Batch Molecular Weight: 241.63

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

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.

Storage: Desiccate at RT. This product is packaged under an inert atmosphere.

Solubility & Usage Info:

water to 100 mM

CAUTION: This compound is hygroscopic and should be stored desiccated.

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.

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