bio-techne
TOCRIS

Print Date: Feb 19th 2024

Certificate of Analysis

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Product Name: **DL-AP5 Sodium salt** **Catalog No.: 3693** **Batch No.: 14**

CAS Number: 1303993-72-7

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_5H_{11}NNaO_5P.½H_2O$

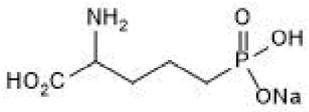
Batch Molecular Weight: 228.12

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.2% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	26.33	5.3	6.14
Found	25.78	5.41	5.94

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CAS Number: 1303993-72-7

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:

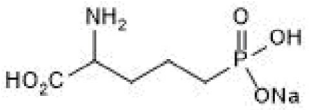
Batch Molecular Formula: $C_5H_{11}NNaO_5P.½H_2O$

Batch Molecular Weight: 228.12

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:

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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