

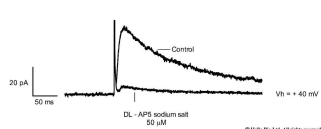
## DATASHEET

### DL-AP5 sodium salt

#### Product overview

<b>Name</b>	DL-AP5 sodium salt
<b>Cat No</b>	HB0252
<b>Alternative names</b>	DL-APV sodium salt
<b>Biological action</b>	Antagonist
<b>Purity</b>	>98%
<b>Description</b>	Competitive NMDA receptor antagonist. Sodium salt.

#### Images



#### Biological Data

##### Biological description

DL-AP5 sodium salt is a water soluble, competitive NMDA receptor antagonist and is the sodium salt of **DL-AP5**. DL-AP5 sodium salt binds at the glutamate site and impairs learning and fear conditioning.

##### Application notes

DL-AP5 sodium salt is a water soluble NMDA receptor antagonist. It is typically used at a concentration of 50–100  $\mu\text{M}$ . DL-AP5 sodium salt from Hello Bio reduces evoked NMDAR current with full receptor antagonism at 50  $\mu\text{M}$  (see Fig 1 above), consistent with the literature for this compound.

##### **#Protocol 1: Evoked NMDAR currents at +40 mV**

- NMDAR currents were recorded via whole cell voltage clamp recordings of CA1 pyramidal neurons from rat hippocampal brain slice.
- NMDAR currents were evoked via a stimulating electrode placed in the CA3 region to stimulate the Schaffer collateral pathway.
- Each NMDAR current was evoked via a single square (150  $\mu\text{s}$ ) pulse every 10 sec at a stimulus intensity that gave a reliable NMDAR current.
- Neurons were constantly held at +40 mV and NMDAR currents recorded in response to continual bath applications of NMDAR antagonists.
- All NMDAR recordings were made in the presence of GABAA-R and AMPAR antagonists.

#### Solubility & Handling

##### Storage instructions

Room temperature (desiccate)

**Solubility overview  
Handling**

Soluble in water (100mM)

Hydroscopic solid, contact with air may cause material to become sticky. Product performance should not be affected but we recommend storing the material in a sealed jar.

**Important**

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

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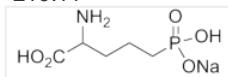
## Chemical Data

**Chemical name**

DL-2-Amino-5-phosphonopentanoic acid sodium salt

**Molecular Weight**

219.11

**Chemical structure****Molecular Formula**C<sub>5</sub>H<sub>11</sub>NNaO<sub>5</sub>P**CAS Number**

1303993-72-7

**PubChem identifier**

52974251

**SMILES**

C(CC(C(=O)O)N)CP(=O)(O)[O-].[Na+]

**Source**

Synthetic

**InChi**

InChI=1S/C5H12NO5P.Na/c6-4(5(7)8)2-1-3-12(9,10)11;/h4H,1-3,6H2,(H,7,8)(H2,9,10,11);/q;+1/p-1

**InChiKey**

KWRCYAPNGUCHOE-UHFFFAOYSA-M

**Appearance**

White solid

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## References

**Infusion of the NMDA receptor antagonist, DL-APV, into the basolateral amygdala disrupts learning to fear a novel and a familiar context as well as relearning to fear an extinguished context.**Laurent V *et al* (2009) Learn Mem 16(1)**PubMedID** [19141468](#)**The basolateral amygdala is necessary for learning but not relearning extinction of context conditioned fear.**Laurent V *et al* (2008) Learn Mem 15(5)**PubMedID** [18463174](#)**Comparative analysis of different competitive antagonists interaction with NR2A and NR2B subunits of NMDA ionotropic glutamate receptor.**Blaise MC *et al* (2005) J Mol Model 11(6)**PubMedID** [15928921](#)

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