

# DATASHEET

## D-AP5

### Product overview

<b>Name</b>	D-AP5
<b>Cat No</b>	HB0225
<b>Alternative names</b>	APV, 2-APV, D-APV, dAPV, dAP5
<b>Biological action</b>	Antagonist
<b>Mode of action</b>	Antagonist
<b>Purity</b>	>99%
<b>Customer comments</b>	<i>I made the discovery that the NMDA receptor is the trigger for the induction of LTP using D-AP5 synthesized by Jeff Watkins, the discoverer of the NMDA receptor... I now obtain my D-AP5 from Hello Bio. I love their products and ethos and that is why I accepted a position on their Scientific Advisory Board.</i>

#### Professor Graham Collingridge, winner of The Brain Prize, 2016

*My lab used D-AP5 from Hello Bio and were very happy with it. It behaved exactly as expected! Professor Kei Cho, Chair of Neuroscience, University of Bristol, UK (Hello Bio Scientific Advisory Board Member)*

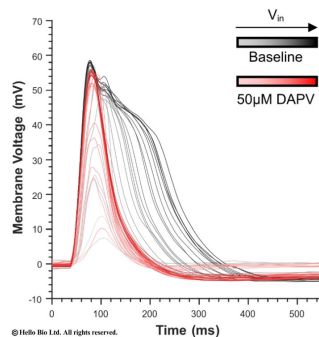
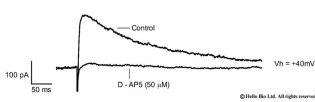
*My lab is very satisfied with your D-AP5 quality and price. Verified customer, European Brain Research Institute (EBRI)*

*I used to buy D-AP5 from another company, but Hello Bio is far more cost-effective and works great in our experiments. Verified customer, University of South Carolina*

*The D-AP5 works as expected, great price. Verified customer, UCSF*

**Description** Selective, competitive NMDA receptor antagonist. Inhibits NMDAR-synaptic plasticity.

### Images



### Biological Data

**Biological description** Widely used, selective and competitive NMDA receptor antagonist which binds at the glutamate site. It is the more active form of DL-AP5.

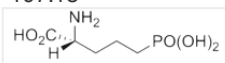
D-AP5 blocks induction of LTP (long term potentiation) in a reversible manner and is frequently used to inhibit NMDAR-mediated synaptic plasticity. Also impairs spatial learning.

**Application notes** **#Figure 1: D-AP5 inhibition of evoked NMDAR mediated EPSCs in mouse cortical neuron**



**Molecular Weight**  
**Chemical structure**

197.13



**Molecular Formula**  
**CAS Number**  
**PubChem identifier**  
**SMILES**  
**Source**  
**InChi**  
**InChiKey**  
**MDL number**  
**Appearance**

C<sub>5</sub>H<sub>12</sub>NO<sub>5</sub>P

79055-68-8

135342

N[C@H](CCCP(=O)(O)O)C(=O)O

Synthetic

InChI=1S/C5H12NO5P/c6-4(5(7)8)2-1-3-12(9,10)11/h4H,1-3,6H2,(H,7,8)(H2,9,10,11)/t4-/m1/s1

VOROEQBFPIACJ-SCSAIBSYSA-N

MFCD00078839

White solid

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## References

**NMDA receptors, learning and memory: chronic intraventricular infusion of the NMDA receptor antagonist d-AP5 interacts directly with the neural mechanisms of spatial learning.**

Morris RG *et al* (2013) Eur J Neurosci 37(5)

**PubMedID** [23311352](#)

**Actions of D and L forms of 2-amino-5-phosphonovalerate and 2-amino-4-phosphonobutyrate in the cat spinal cord.**

Davies J *et al* (1982) Brain Res 235(2)

**PubMedID** [6145492](#)

**Effects of pre or posttraining dorsal hippocampus D-AP5 injection on fear conditioning to tone, background, and foreground context.**

Schenberg EE *et al* (2008) Hippocampus 18(11)

**PubMedID** [18727044](#)

**Age-dependent hippocampal network dysfunction in a mouse model of alpha-synucleinopathy**

Tweedy *et al* (2018) Thesis University of Newcastle

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