

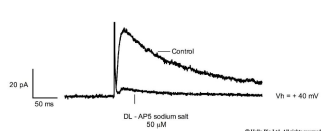
DATASHEET

DL-AP5 sodium salt

Product overview

Name	DL-AP5 sodium salt
Cat No	HB0252
Alternative names	DL-APV sodium salt
Biological action	Antagonist
Purity	>98%
Description	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 μM . DL-AP5 sodium salt from Hello Bio reduces evoked NMDAR current with full receptor antagonism at 50 μM (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 μs) 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.

Chemical Data

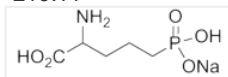
Chemical name

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

Molecular Weight

219.11

Chemical structure



Molecular Formula

C₅H₁₁NNaO₅P

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

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](#)
