

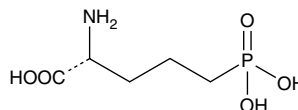
Product Information



D-AP5

Item No. 14539

CAS Registry No.: 79055-68-8
Formal Name: 5-phosphono-D-norvaline
Synonyms: D-2-Amino-5-Phosphonovaleric acid,
D-APV
MF: $C_5H_{12}NO_5P$
FW: 197.1
Purity: ≥99%
Stability: ≥6 months at 4°C
Supplied as: A white to off-white solid



Laboratory Procedures

For long term storage, we suggest that D-AP5 be stored as supplied at 4°C. It should be stable for at least six months.

D-AP5 is supplied as a white to off-white solid. D-AP5 is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of D-AP5 be prepared by directly dissolving the D-AP5 compound in water. D-AP5 is soluble in water up to approximately 100 mM. We do not recommend storing the aqueous solution for more than one day.

D-AP5 is a selective N-methyl-D-aspartate (NMDA) receptor antagonist ($K_d = 1.4 \mu M$) that competitively inhibits the glutamate binding site of NMDA receptors.¹ Whereas D-AP5 is the active (-)-stereoisomer, its (+)-isomer (L-AP5) demonstrates considerably less potent NMDA receptor antagonist activity.¹ AP5 has been widely used to study the activity of NMDA receptors particularly in regard to researching synaptic plasticity, learning, and memory.²

References

1. Evans, R.H., Francis, A.A., Jones, A.W., *et al.* The Effects of a Series of ω -Phosphonic α -Carboxylic Amino Acids on Electrically Evoked and Excitant Amino Acid-Induced Responses in Isolated Spinal Cord Preparations. *Br. J. Pharmac.* **75**, 65-75 (1982).
2. Morris, R.J. Synaptic Plasticity and Learning: Selective Impairment of Learning in Rats and Blockade of Long-Term Potentiation *in vivo* by the N-Methyl-D-Aspartate Receptor Antagonist AP5. *J. Neurosci.* **9**, 3040-3057 (1989).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/14539

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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