

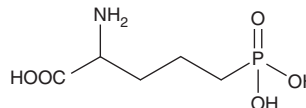
# PRODUCT INFORMATION



## DL-AP5

Item No. 14540

**CAS Registry No.:** 76326-31-3  
**Formal Name:** 5-phosphono-norvaline  
**Synonyms:** DL-2-Amino-5-Phosphonovaleric acid, 2-APV  
**MF:** C<sub>5</sub>H<sub>12</sub>NO<sub>5</sub>P  
**FW:** 197.1  
**Purity:** ≥95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

DL-AP5 is supplied as a crystalline solid. Aqueous solutions of DL-AP5 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of DL-AP5 in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

DL-AP5 is the racemic version of the selective N-methyl-D-aspartate (NMDA) receptor antagonist, D-AP5 (Item No. 14539).<sup>1</sup> Whereas D-AP5 is the active (-)-stereoisomer that competitively inhibits the glutamate binding site of NMDA receptors ( $K_d = 1.4 \mu\text{M}$ ), the (+)-isomer (L-AP5) demonstrates considerably less potent NMDA receptor antagonist activity.<sup>1</sup> AP5 has been widely used to study the activity of NMDA receptors particularly in regard to researching synaptic plasticity, learning, and memory.<sup>2</sup>

### References

1. Evans, R.H., Francis, A.A., Jones, A.W., *et al.* The effects of a series of  $\omega$ -phosphonic  $\alpha$ -carboxylic amino acids on electrically evoked and excitant amino acid-induced responses in isolated spinal cord preparations. *Br. J. Pharmacol.* **75(1)**, 65-75 (1982).
2. Morris, R.J. Synaptic plasticity and learning: Selective impairment of learning rats and blockade of long-term potentiation *in vivo* by the N-methyl-D-aspartate receptor antagonist AP5. *J. Neurosci.* **9(9)**, 3040-3057 (1989).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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