

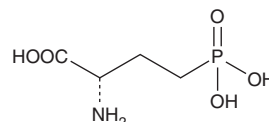
PRODUCT INFORMATION



L-AP4

Item No. 14538

CAS Registry No.: 23052-81-5
Formal Name: 2S-amino-4-phosphono-butanoic acid
Synonyms: L-(+)-2-amino-4-phosphorobutanoic acid,
L-APB
MF: C₄H₁₀NO₅P
FW: 183.1
Purity: ≥99%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

L-AP4 is supplied as a solid. A stock solution may be made by dissolving the L-AP4 in water. The solubility of L-AP4 in water is approximately 100 mM. We do not recommend storing the aqueous solution for more than one day.

Description

Metabotropic glutamate receptors (mGluR) function to modulate excitatory synaptic transmission in the brain. Eight subtypes (1-8) and multiple splice variants of the mGluR have been identified and grouped based on their pharmacological properties. Group I mGluRs (subtypes 1 and 5) activate the phosphatidylinositol pathway, while Group II (2 and 3) and Group III (4, 6, 7, and 8) inhibit adenylyl cyclase.

L-AP4, an analog of L-glutamic acid, is a selective Group III mGluR agonist that functions presynaptically to suppress glutamate release (IC₅₀ = 2.5 μM).¹⁻³ L-AP4 has been shown to depress synaptic transmission in glutamatergic pathways in the hippocampus, olfactory bulb, and retina as well as act as an agonist at the quisqualate-sensitized AP6 site in hippocampus.¹

References

1. Thomsen, C. The L-AP4 receptor. *Gen. Pharmac.* **29(2)**, 151-158 (1997).
2. 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. Pharmacol.* **75(1)**, 65-75 (1982).
3. Schoepp, D.D. Unveiling the functions of presynaptic metabotropic glutamate receptors in the central nervous system. *J. Pharmacol. Exp. Ther.* **299(1)**, 12-20 (2001).

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.

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