**Product overview**

**Name**  
L-AP4

**Cat No**  
HB0370

**Short description**  
L-AP4 is a selective group III mGluR agonist which inhibits synaptic transmission.

**Biological description**  
L-AP4 is a selective group III mGluR agonist (EC$_{50}$ values are 0.9, 252, 0.06-0.6 μM at mGlu$_4$, mGlu$_7$, mGlu$_8$ receptors respectively and >1000 μM at other mGluRs) and also a weak NMDA receptor agonist.

L-AP4 is a potent synaptic depressant.

L-AP4 reduces glutamate release, inhibits glutamate-mediated EPSPs in the hippocampus, olfactory cortex and spinal cord and inhibits long term potentiation (LTP) in vivo.

Additionally, L-AP4 also inhibits GABA release and reversibly reduces GABA-mediated inhibitory post-synaptic potential (IPSP) amplitude.

L-AP4 also shows neuroprotective properties.

**Biological action**  
Agonist

**Purity**  
>99%

**Customer comments**  
Great product - L-AP4 arrived in time for experiments. Excellent documentation and ease of use. Data looks promising from experiments - happy customer!  
Verified customer, The University of Newcastle

**Properties**

**Chemical name**  
L-(+)-2-Amino-4-phosphonobutyric acid

**Molecular Weight**  
183.1

**Chemical structure**

![Chemical structure of L-AP4]

**Molecular Formula**  
C$_4$H$_{10}$NO$_5$P

**CAS Number**  
23052-81-5

**PubChem identifier**  
179394

**SMILES**  
C(CP=O)(O)O][C@@H](C=O)O)N

**Source**  
Synthetic

**InChi**  
InChI=1S/C4H10NO5P/c5-3(4(6)7)1-2-11(8,9)10/h3H,1-2,5H2,(H,6,7)(H2,8,9,10)/t3-/m0/s1

**InChiKey**  
DDOQBQRIEWHWBT-VKHMYHEASA-N

**MDL number**  
MFCD00083244

**Appearance**  
White solid
Storing and Using Your Product

Storage instructions
Room temperature

Solubility overview
Soluble in water (5mM) and in 0.1M NaOH (100mM)

Important
This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

References for L-AP4

L-AP4, a potent agonist of group III metabotropic glutamate receptor, decreases central action of angiotensin II.

PubMedID: 12593528

The agonist selectivity of a class III metabotropic glutamate receptor, human mGluR4a, is determined by the N-terminal extracellular domain.

PubMedID: 8742431

Changes of mGluR4 and the effects of its specific agonist L-AP4 in a rodent model of diffuse brain injury.

PubMedID: 14592619

Unveiling the functions of presynaptic metabotropic glutamate receptors in the central nervous system.

PubMedID: 11561058