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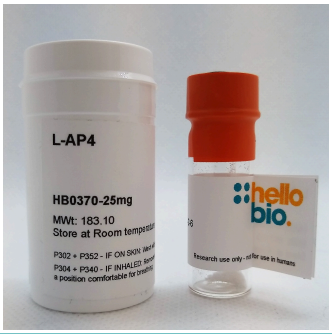
DATASHEET

L-AP4

Product overview

Name	L-AP4
Cat No	HB0370
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**
Description	L-AP4 is a selective group III mGluR agonist which inhibits synaptic transmission.

Images



Biological Data

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.

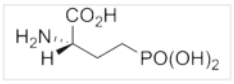
Additionally, L-AP4 also inhibits GABA release and reversibly reduces GABA-mediated inhibitory post-synaptic potential (IPSP) amplitude.

L-AP4 also shows neuroprotective properties.

Solubility & Handling

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.

Chemical Data

Chemical name	L-(+)-2-Amino-4-phosphonobutyric acid
Molecular Weight	183.1
Chemical structure	
Molecular Formula	$C_4H_{10}NO_5P$
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

References

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

Fedosiewicz-Wasiluk M *et al* (2002) Pol J Pharmacol 54(5)
PubMedID 12593528

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

Tones MA *et al* (1995) Neuroreport 7(1)
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Changes of mGluR4 and the effects of its specific agonist L-AP4 in a rodent model of diffuse brain injury.

Zhou F *et al* (2003) J Clin Neurosci 10(6)
PubMedID 14592619

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

Schoepp DD (2001) J Pharmacol Exp Ther 299(1)
PubMedID 11561058