L-AP4 monohydrate

Cat. No.: HY-100781B

CAS No.: 2247534-79-6

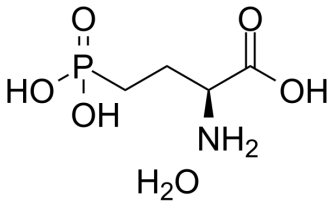
Molecular Formula: $C_4H_{12}NO_6P$

Molecular Weight: 201.11

Target: mGluR

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



BIOLOGICAL ACTIVITY

Description

L-AP4 (L-APB) monohydrate is a potent and specific agonist for the group III mGluRs, with EC_{50}s of 0.13, 0.29, 1.0, 249 μM for $mGlu_4$, $mGlu_8$, $mGlu_6$ and $mGlu_7$ receptors, respectively[1][2].

IC_{50} & Target

$mGlu_4$	mGlu8	$mGlu_6$	mGlu7
0.13 μM (EC50)	0.29 μM (EC50)	1.0 μM (EC50)	249 μM (EC50)

In Vivo

L-AP4 (5-30 μg, intrathecal inhection 4-5 days) significantly increases the paw withdrawal threshold in response to application of von Frey filaments in eight nerve-ligated rats in a dose-dependent manner. Intrathecal administration of different doses of L-AP4 is not associated with any evident motor dysfunction[2].
Intrathecal injection of 30 μg of L-AP4 does not significantly alter the paw withdrawal latency in these normal rats[2].
Topical application of 5 to 50 μM L-AP4 to the spinal cord significantly inhibited the evoked response of neurons to touch, pressure, pinch, and von Frey filaments in a concentration-dependent fashion[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Rats.[2]
Dosage:	5-30 μg.
Administration:	Intrathecal inhection 4-5 days.
Result:	Dose-dependently increased paw withdrawal threshold.

CUSTOMER VALIDATION

- Biochem Biophys Res Commun. 2020 Dec 17;533(4):1393-1399.

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REFERENCES

[1]. Selvam C, et al. Increased Potency and Selectivity for Group III Metabotropic Glutamate Receptor Agonists Binding at Dual sites. J Med Chem. 2018 Mar 8;61(5):1969-1989.

[2]. Chen SR, et al. Distinct roles of group III metabotropic glutamate receptors in control of nociception and dorsal horn neurons in normal and nerve-injured Rats. J Pharmacol Exp Ther. 2005 Jan;312(1):120-6.

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