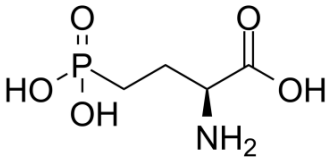
L-AP4

Cat. No.:	HY-100781A
CAS No.:	23052-81-5
Molecular Formula:	$C_4H_{10}NO_5P$
Molecular Weight:	183.1
Target:	mGluR
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 50 mg/mL (273.07 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	5.4615 mL	27.3075 mL	54.6150 mL
	5 mM	1.0923 mL	5.4615 mL	10.9230 mL
	10 mM	0.5461 mL	2.7307 mL	5.4615 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

L-AP4 (L-APB) 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.

See more customer validations on www.MedChemExpress.com

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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA