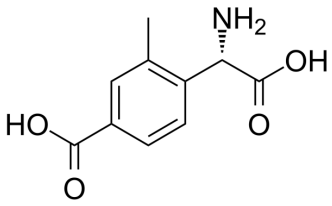
LY367385

Cat. No.:	HY-107515
CAS No.:	198419-91-9
Molecular Formula:	$C_{10}H_{11}NO_4$
Molecular Weight:	209.2
Target:	mGluR
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	LY367385 is a highly selective and potent mGluR1a antagonist. LY367385 has an IC_{50} of 8.8 μM for inhibiting of quisqualate-induced phosphoinositide (PI) hydrolysis, compared with >100 μM for mGlu5a. LY367385 has neuroprotective, anticonvulsant and antiepileptic effects[1][2].
IC_{50} & Target	mGluR1a 8.8 μM (IC_{50})
In Vitro	LY367385 combined with N-methyl-D-aspartate (NMDA) during the toxic pulse attenuates neuronal degeneration in a concentration-dependent fashion, with a maximal reduction of NMDA toxicity ranging from 40 to 60%. LY367385 shows greater efficacy than LY367366 and neither of these compounds influenced neuronal viability per se. LY367385 shows potent neuroprotective effects, with causing a 50% reduction in (S)-3,5-Dihydroxyphenylglycine (DHPG) potentiation at a concentration of 10 nM. Under experimental conditions at higher concentrations of antagonist, LY367385 a completely antagonized the amplification of NMDA toxicity by DHPG[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	LY367385 has been administered intracerebroventricularly (i.c.v.) to DBA/2 mice and lethargic mice (lh/lh), and focally into the inferior colliculus of genetically epilepsy prone rats (GEPR). In DBA/2 mice, LY367385 produces a rapid, transient suppression of sound-induced clonic seizures ED50 = 12 nM, i.c.v., 5 min). In lethargic mice, LY367385 significantly reduces the incidence of spontaneous spike and wave discharges on the electroencephalogram, from 30 to >150 min after the administration of LY367385, 250 nM, i.c.v[3]. In genetically epilepsy prone rats, LY367385 reduces sound-induced clonic seizures. LY367385, 160 nM bilaterally, fully suppresses clonic seizures after 2-4 h[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Clark et al. (+)-2-Methyl-4-carboxyphenylglycine (LY 367385) selectively antagonises metabotropic glutamate mGluR1 receptors. Bioorg.Med.Chem.Lett. November 1997, 7 (21): 2777-2780.

[2]. Bruno V, et al. Neuroprotective activity of the potent and selective mGlu1a metabotropic glutamate receptor antagonist, (+)-2-methyl-4 carboxyphenylglycine (LY367385): comparison with LY357366, a broader spectrum antagonist with equal affinity for mGlu1a and mGlu5 receptors. Neuropharmacology. 1999 Feb;38(2):199-207.

[3]. Chapman AG, et al. Anticonvulsant actions of LY 367385 ((+)-2-methyl-4-carboxyphenylglycine) and AIDA ((RS)-1-aminoindan-1,5-dicarboxylic acid). Eur J Pharmacol. 1999 Feb 26;368(1):17-24.

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