(S)-AMPA

Cat. No.: HY-100815A

CAS No.: 83643-88-3

Molecular Formula: $C_7H_{10}N_2O_4$

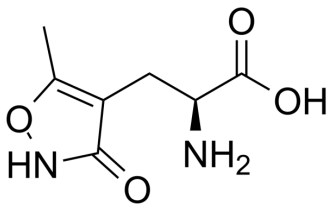
Molecular Weight: 186

Target: iGluR

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling

Storage:

Powder	-20°C	3 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

H_2O : 18.7 mg/mL (100.54 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	5.3763 mL	26.8817 mL	53.7634 mL
	5 mM	1.0753 mL	5.3763 mL	10.7527 mL
	10 mM	0.5376 mL	2.6882 mL	5.3763 mL

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

BIOLOGICAL ACTIVITY

Description

(S)-AMPA (L-AMPA), an active S-enantiomer of AMPA, is a potent and selective AMPA receptor agonist[1][2].

In Vitro

Superfusion of (S)-AMPA (1 μM) significantly attenuates CGRP release in a CB1-dependent manner[3].

24-h exposure to (S)-AMPA (0.01-1000 μM) induces concentration-dependent neuronal cell death (EC_{50} of 3 μM) with cellular changes including neurite blebbing, chromatin condensation, and DNA fragmentation, indicative of apoptosis[4].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. J A Larm, et al. (S)-5-fluorowillardiine-mediated neurotoxicity in cultured murine cortical neurones occurs via AMPA and kainate receptors. Eur J Pharmacol. 1996 Oct 24;314(1-2):249-54.

[2]. B Ebert, et al. Molecular pharmacology of the AMPA agonist, (S)-2-amino-3-(3-hydroxy-5-phenyl-4-isoxazolyl)propionic acid [(S)-APPA] and the AMPA antagonist, (R)-APPA. Neurochem Int. 1994 Jun;24(6):507-15.

[3]. J W Brooks, et al. (S)-AMPA inhibits electrically evoked calcitonin gene-related peptide (CGRP) release from the rat dorsal horn: reversal by cannabinoid receptor

antagonist SR141716A. Neurosci Lett. 2004 Nov 30;372(1-2):85-8.

[4]. J A Larm, et al. Apoptosis induced via AMPA-selective glutamate receptors in cultured murine cortical neurons. J Neurochem. 1997 Aug;69(2):617-22.

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