Data Sheet (Cat.No.T21271L)

TargetMol

(S)-AMPA HCl

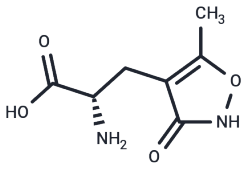
Chemical Properties

CAS No. :

Formula: C7H11ClN2O4

Molecular Weight: 222.63

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	(S)-AMPA HCl (L-AMPA HCl) is a selective AMPA receptor agonist with potential antidepressant activity. It can be used in research on Parkinson's disease.
Targets(IC50)	GluR
In vitro	(S)-AMPA HCl is a potent and selective AMPA receptor agonist. (S)-AMPA HCl (1 μM) infusion significantly reduced CGRP release in a CB-dependent manner. [1] In cultured mouse cortical neurons, (S)-AMPA HCl induces apoptotic states such as cell contraction, neurite vesicles and nuclear enrichment, with an EC50 of 3.1 μM.[2]
In vivo	Single focal injection of the (S)-AMPA HCl (6 nmol/microliters) into rat dorsal hippocampus resulted in widespread neurodegeneration with 90-100% loss of hippocampal pyramidal cells in CA1, CA2, CA3 and CA4 subfields, and 50-70% loss of dentate granule (DG) cells.[3]

Solubility Information

Solubility	H2O: 25 mg/mL (112.29 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.4918 mL	22.4588 mL	44.9176 mL
5 mM	0.8984 mL	4.4918 mL	8.9835 mL
10 mM	0.4492 mL	2.2459 mL	4.4918 mL
50 mM	0.0898 mL	0.4492 mL	0.8984 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

John CA, et al. Cyclothiazide and GYKI 52466 modulate AMPA receptor-mediated apoptosis in cortical neuronal cultures. Neurosci Lett. 1999 Jun 11;268(1):9-12.
Larm JA,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.
Moncada C, et al. Non-NMDA antagonists protect against kainate more than AMPA toxicity in the rat hippocampus. Neurosci Lett. 1991 Dec 9;133(2):287-90.