

Leteprinin

Chemical Properties

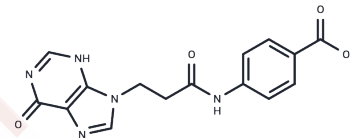
CAS No. : 138117-50-7

Formula: C₁₅H₁₃N₅O₄

Molecular Weight: 327.29

Storage: 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	Leteprinin (AIT 082 acid) is an hypoxanthine derivative that stimulates in vitro neurite outgrowth and the production of adenosine and neurotrophins from astrocytes.
Targets(IC50)	Others, Reactive Oxygen Species, ROS
In vitro	Leteprinin stimulates the outgrowth of neurites from PC12 cells and neurons, stimulates the synthesis and/or release of neurotrophic factors from astrocytes, enhances nerve fibre regeneration in vivo, and enhances memory in animals and humans. Leteprinin also protects against glutamate neurotoxicity in vitro and in vivo, which has led to successful tests of Leteprinin in animal models of acute central nervous system injury
In vivo	Leteprinin (60 mg/kg/day; i.p., for 7 days, starting from 20 min before the kainate injection) did not modify the seizures caused by kainate but, like diazepam, it decreased kainate-induced mortality, the reduction of GAD activity, and the loss of hippocampal neurons in rats[2].

Solubility Information

Solubility	DMSO: 12.5 mg/mL (38.19 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0554 mL	15.277 mL	30.5539 mL
5 mM	0.6111 mL	3.0554 mL	6.1108 mL
10 mM	0.3055 mL	1.5277 mL	3.0554 mL
50 mM	0.0611 mL	0.3055 mL	0.6111 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

Morrone CD, et al. Effects of Neurotrophic Support and Amyloid-Targeted Combined Therapy on Adult Hippocampal Neurogenesis in a Transgenic Model of Alzheimer's Disease. PLoS One. 2016 Oct 21;11(10): e0165393.

Di Iorio P, et al. AIT-082 is neuroprotective against kainate-induced neuronal injury in rats. Exp Neurol. 2001 Jun; 169(2):392-9.

Rathbone MP, et al. AIT-082 as a potential neuroprotective and regenerative agent in stroke and central nervous system injury. Expert Opin Investig Drugs. 1999 Aug;8(8):1255-62.

Johnston TH, Brotchie JM. Drugs in development for Parkinson's disease. Curr Opin Investig Drugs. 2004 Jul;5(7): 720-6. Review.

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