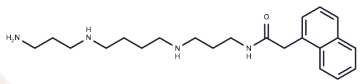
Data Sheet (Cat.No.T12187)

TargetMol

Naspm

Chemical Properties



CAS No. : 122306-11-0

Formula: C22H34N4O

Molecular Weight: 370.53

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	Naspm is a synthetic analogue of Joro spider toxin and is a antagonist iscalcium permeable AMPA (CP-AMPA) receptors.
Targets(IC50)	Others,iGluR
In vitro	NASPM selectively suppressed the inwardly rectifying and Ca(2+)-permeable AMPA receptors expressed in type II neurons. It had no effect on AMPA receptors in type I neurons. The blocking effect of NASPM on the Ca(2+)-permeable AMPA receptors was use and voltage-dependent. When the effect of NASPM reached a steady state, current responses induced by ionophoretic applications of kainate, a non-desensitizing agonist of AMPA receptors, in type II neurons were suppressed by NASPM in a dose-dependent manner at -60 mV (IC50 0.33 microM, and Hill coefficient 0.94). The response to kainate recovered partially after washing out NASPM. NASPM did not affect the Ca(2+)-permeable AMPA receptors when the neuronal membrane was held at potentials more positive than +40 mV. Furthermore, the blockade by NASPM which was attained at negative potentials was transiently removed by shifting membrane potential to +60 mV for 5 s together with a single ionophoretic application of kainate.

Solubility Information

Solubility	DMSO: 10 mg/mL (26.99 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 1 mg/mL (2.7 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6988 mL	13.4942 mL	26.9884 mL
5 mM	0.5398 mL	2.6988 mL	5.3977 mL
10 mM	0.2699 mL	1.3494 mL	2.6988 mL
50 mM	0.054 mL	0.2699 mL	0.5398 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

Koike M, et al. Blocking effect of 1-naphthyl acetyl spermine on Ca2+-permeable AMPA receptors in cultured rat hippocampal neurons. Neurosci Res. 1997 Sep;29(1):27-36.