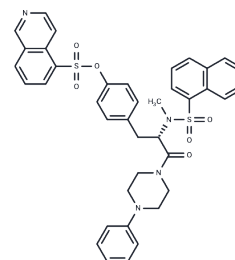


KN-62

Chemical Properties

CAS No. : 127191-97-3
Formula: C₃₈H₃₅N₅O₆S₂
Molecular Weight: 721.84
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	KN-62 is a potent and specific Ca ²⁺ /calmodulin-dependent protein kinase II (CaMKII) inhibitor with K _i of 0.9 μM.
Targets(IC ₅₀)	CaMK,P2X Receptor,Autophagy
In vitro	KN-62 administration in adult rats reduces the expression levels of brain-derived neurotrophic factor (BDNF) mRNA induced by epilepsy in the brain.
In vivo	KN-62 inhibits the proliferation of K562 cells and blocks cell cycle progression. When administered at 10 μM to rat pancreatic islet cells, KN-62 inhibits insulin secretion stimulated by carbachol and potassium. Furthermore, KN-62 suppresses the phosphorylation of Ca ²⁺ /CaM kinase induced by A23187 in PC12 D cells.
Kinase Assay	Kinase assay: Total kinase activity of CaMKII, determined in a standard 2 min assay (100 μL), contained 35 mM HEPES, 10 mM MgCl ₂ , 1 mM CaCl ₂ , 10 μg of chicken gizzard myosin 20-kD light chain, 0.1 μM calmodulin, and 10 μM [γ-33]ATP at 30 °C. The kinase reaction is halted by adding 1 mL of 10% trichloroacetic acid.
Cell Research	For cell growth analysis, K562 cells are plated in a 3-cm dish with 5 mL of culture medium containing various concentration of KN-62. After two days in these condition cell numbers are counted. (Only for Reference)

Solubility Information

Solubility	DMSO: 72.2 mg/mL (100 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3853 mL	6.9267 mL	13.8535 mL
5 mM	0.2771 mL	1.3853 mL	2.7707 mL
10 mM	0.1385 mL	0.6927 mL	1.3853 mL
50 mM	0.0277 mL	0.1385 mL	0.2771 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.

Reference

Zeng L, Lyu X, Yuan J, et al. STMN1 Promotes Tumor Metastasis in Non-small Cell Lung Cancer Through Microtubule-dependent And Nonmicrotubule-dependent Pathways. International Journal of Biological Sciences.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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