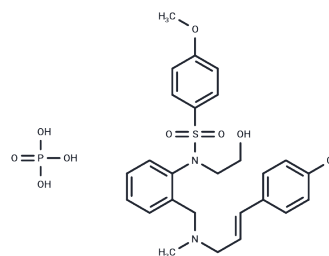


KN-93 Phosphate

Chemical Properties

CAS No. :	1913269-12-1
Formula:	C ₂₆ H ₃₂ ClN ₂ O ₈ PS
Molecular Weight:	599.03
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	KN-93 phosphate is a novel membrane-permeant synthetic inhibitor of purified neuronal CaMK-II with K _i of 370 nM. KN-93 phosphate inhibits serum-induced fibroblast cell growth in a comparable dose-dependent fashion to its inhibition of CaMK-II activity.
Targets(IC ₅₀)	CaMK
In vitro	Following a 2-day exposure to KN-93, 95% of cells were found to be halted in the G1 phase of the cell cycle, a condition that is reversible as evidenced by the progression of cells into the S and G2-M phases a day after cessation of KN-93 treatment. Additionally, KN-93 inhibits cell proliferation induced by basic fibroblast growth factor, platelet-derived growth factor-BB, and epidermal growth factor in NIH 3T3 fibroblasts. It also counteracts the activity of H ⁺ , K ⁺ -ATPase and disrupts the proton gradient across gastric membrane vesicles, ultimately leading to a decrease in the luminal space volume. Moreover, at a concentration of 0.5 μM, KN-93 prevents the increase in left ventricular developed pressure during action potential prolongation and early afterdepolarizations, a phenomenon associated with a rise in Ca ²⁺ -independent CaM kinase activity, which is inhibited by pre-treatment with KN-93.

Solubility Information

Solubility	DMSO: 93 mg/mL (155.3 mM), Ethanol: < 1 mg/mL (insoluble or slightly soluble), H ₂ O: 84 mg/mL (140.2 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	1.6694 mL	8.3468 mL	16.6937 mL
5 mM	0.3339 mL	1.6694 mL	3.3387 mL
10 mM	0.1669 mL	0.8347 mL	1.6694 mL
50 mM	0.0334 mL	0.1669 mL	0.3339 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

Sumi M, et al. Biochem Biophys Res Commun. 1991, 181(3), 968-975.

Tombes RM, et al. Cell Growth Differ. 1995, 6(9), 1063-1070.

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