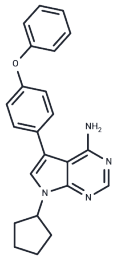
Data Sheet (Cat.No.T16760)

RK-24466

Chemical Properties



CAS No. : 213743-31-8

Formula: C23H22N4O

Molecular Weight: 370.45

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	RK-24466 (KIN 001-51) is a selective and potent Lck inhibitor, targeting Lck (64-509) and LckCD isoforms with IC50 values of less than 1 nM and 2 nM, respectively.
Targets(IC50)	Src
In vitro	RK-24466, a lymphocyte-specific protein tyrosine kinase (Lck) inhibitor, significantly inhibited both VSMC proliferation and migration. RK-24466 suppresses VSMC proliferation and migration via down-regulating the protein kinase B (Akt) and extracellular signal regulated kinase (ERK) pathways, and it significantly decreased the expression of proliferating cell nuclear antigen (PCNA) and cyclin D1 and, the phosphorylation of retinoblastoma protein (pRb). Additionally, RK-24466 suppressed the migration of VSMCs from endothelium-removed aortic rings, as well as neointima formation following rat carotid balloon injury. The present study identified RK-24466 as a potent VSMC proliferation and migration inhibitor and warrants further studies to elucidate its more detailed molecular mechanisms, such as its primary target, and to further validate its in vivo efficacy as a therapeutic agent for pathologic vascular conditions, such as restenosis and atherosclerosis[1].

Solubility Information

Solubility	DMSO: 40 mg/mL (107.98 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: 2 mg/mL (5.4 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	2.6994 mL	13.4971 mL	26.9942 mL
5 mM	0.5399 mL	2.6994 mL	5.3988 mL
10 mM	0.2699 mL	1.3497 mL	2.6994 mL
50 mM	0.054 mL	0.2699 mL	0.5399 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

Seo HH, et al. 7-cyclopentyl-5-(4-phenoxyphenyl)-7H-pyrrolo[2,3-d] pyrimidin-4-ylamine inhibits the proliferation and migration of vascular smooth muscle cells by suppressing ERK and Akt pathways. Eur J Pharmacol. 2017 Mar 5;798:35-42.

Arnold LD, et al. Pyrrolo[2,3-d]pyrimidines containing an extended 5-substituent as potent and selective inhibitors of lck I. Bioorg Med Chem Lett. 2000 Oct 2;10(19):2167-70.

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