

R-10015

Chemical Properties

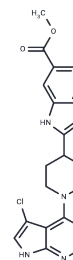
CAS No. : 2097938-51-5

Formula: C₂₀H₁₉ClN₆O₂

Molecular Weight: 410.86

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	R-10015 is a highly potent and selective LIMK inhibitor that blocks LIMK by binding to the ATP-binding pocket. It inhibits human LIMK1 with an IC ₅₀ value of 38 nM. It also exerts broad-spectrum antiviral effects and may be used in HIV infection research.
Targets(IC ₅₀)	Reverse Transcriptase, LIM Kinase
In vitro	R10015 as a lead compound that blocks LIMK activity by binding to the ATP-binding pocket. R10015 specifically blocks viral DNA synthesis, nuclear migration, and virion release. In addition, R10015 inhibits multiple viruses, including Zaire ebolavirus (EBOV), Rift Valley fever virus (RVFV), Venezuelan equine encephalitis virus (VEEV), and herpes simplex virus 1 (HSV-1), suggesting that LIMK inhibitors could be developed as a new class of broad-spectrum antiviral drugs.

Solubility Information

Solubility	DMSO: 62.5 mg/mL (152.12 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: 5 mg/mL (12.17 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4339 mL	12.1696 mL	24.3392 mL
5 mM	0.4868 mL	2.4339 mL	4.8678 mL
10 mM	0.2434 mL	1.217 mL	2.4339 mL
50 mM	0.0487 mL	0.2434 mL	0.4868 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

Yi F, et al. Discovery of Novel Small-Molecule Inhibitors of LIM Domain Kinase for Inhibiting HIV-1. J Virol. 2017 Jun 9;91(13). pii: e02418-16.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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