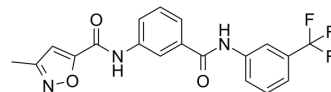


T56-LIMKi

Cat. No.:	HY-19352		
CAS No.:	924473-59-6		
Molecular Formula:	C ₁₉ H ₁₄ F ₃ N ₃ O ₃		
Molecular Weight:	389.33		
Target:	LIM Kinase (LIMK)		
Pathway:	Cell Cycle/DNA Damage		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (256.85 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.5685 mL	12.8426 mL	25.6852 mL
		5 mM	0.5137 mL	2.5685 mL	5.1370 mL
10 mM		0.2569 mL	1.2843 mL	2.5685 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (6.42 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	T56-LIMKi is a selective inhibitor of LIMK2; inhibits the growth of Panc-1 cells with an IC ₅₀ of 35.2 μM.
IC₅₀ & Target	LIMK2
In Vitro	T56-LIMKi efficiently inhibits the growth of ST88-14, U87, Panc-1 cells, A549 lung cancer cells with IC ₅₀ values of 18.3, 7.4, 35.2 and 90 μM, respectively. T56-LIMKi decreases phosphorylated cofilin (p-cofilin) levels and thus inhibits growth of several cancerous cell lines, including those of pancreatic cancer, glioma and schwannoma ^[1] . It blocks the phosphorylation of cofilin which leads to actin severance and inhibition of tumor cell migration, tumor cell growth, and anchorage-independent colony formation in soft agar. T56-LIMKi (10-50 μM) reduces p-cofilin in a dose-dependent manner in NF1 ^{-/-} MEFs with an IC ₅₀ of 30 μM. Notably, the inhibitor does not affect the amounts of total cofil. 50μM T56-LIMKi causes a statistically significant reduction in the number of cells exhibiting stress fibers ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo	T56-LIMKi can induce inhibition of cofilin phosphorylation and Panc-1 tumor shrinkage in vivo. Mice treated with T56-LIMKi (60 mg/kg) shows a significant decrease in tumor volume compared to control ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
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PROTOCOL

Cell Assay	T56-LIMKi can induce inhibition of cofilin phosphorylation and Panc-1 tumor shrinkage in vivo. Mice treated with T56-LIMKi (60 mg/kg) shows a significant decrease in tumor volume compared to control ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration ^[1]	Mice: T56-LIMKi is dissolved in 0.5% carboxymethylcellulose solution. Mice are implanted with xenografted Panc-1 cells. Treatment is started 7 days later. Mice in the two experimental groups are each treated with a daily oral non-toxic dose of T56-LIMKi (30 or 60 mg/kg in gavage) and mice in the control group receives only the vehicle (0.5% CMC) in the gavage ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Int J Biochem Cell Biol. December 2022, 106326.

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REFERENCES

- [1]. Rak R, et al. Novel LIMK2 Inhibitor Blocks Panc-1 Tumor Growth in a mouse xenograft model. Oncoscience. 2014 Jan 1;1(1):39-48. eCollection 2014.
- [2]. Mashiach-Farkash E, et al. Computer-based identification of a novel LIMK1/2 inhibitor that synergizes with salirasib to destabilize the actin cytoskeleton. Oncotarget. 2012 Jun;3(6):629-39.

Caution: Product has not been fully validated for medical applications. For research use only.

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