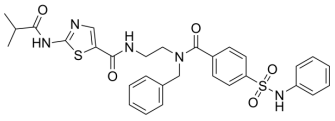
TH470

Cat. No.:	HY-151539
CAS No.:	2834739-51-2
Molecular Formula:	$C_{30}H_{31}N_5O_5S_2$
Molecular Weight:	605.73
Target:	LIM Kinase (LIMK)
Pathway:	Cell Cycle/DNA Damage
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (165.09 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6509 mL	8.2545 mL	16.5090 mL
	5 mM	0.3302 mL	1.6509 mL	3.3018 mL
	10 mM	0.1651 mL	0.8255 mL	1.6509 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.5 mg/mL (4.13 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (4.13 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

TH470 is a highly selective LIMK1/2 (LIM kinase1/2) inhibitor (LIMK1 IC_{50}=9.8 nM; LIMK2 IC_{50}=13 nM), and can be used in orphan disease research[1].

IC_{50} & Target

LIMK1	LIMK2
9.8 nM (IC_{50})	13 nM (IC_{50})

In Vitro

TH470 (0.05-5 μM; 12 h) inhibits the growth of neurite[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	N1E-115 cells transfected with siRNAs against FMR1 (siFMR1) or control siRNAs (siCtr)
Concentration:	0.05, 0.5, or 5 μM
Incubation Time:	12 hours
Result:	Inhibited neurite outgrowth in a dose-dependent manner.

REFERENCES

[1]. Hanke T, et al. Development and Characterization of Type I, Type II, and Type III LIM-Kinase Chemical Probes. J Med Chem. 2022 Oct 13;65(19):13264-13287.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA