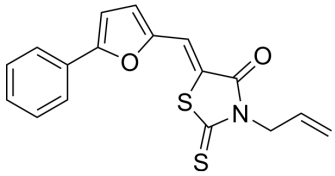
LJ001

Cat. No.:	HY-16957
CAS No.:	851305-26-5
Molecular Formula:	$C_{17}H_{13}NO_2S_2$
Molecular Weight:	327.42
Target:	HCV; HIV
Pathway:	Anti-infection
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 (305.42 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.0542 mL	15.2709 mL	30.5418 mL
	5 mM	0.6108 mL	3.0542 mL	6.1084 mL
	10 mM	0.3054 mL	1.5271 mL	3.0542 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: ≥ 5 mg/mL (15.27 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

LJ001 is a broad-spectrum and orally active antiviral agent. LJ001 exerts antiviral activities by binding to viral membranes. LJ001 inhibits TGEV and PDCoV infection. LJ001 decreases TGEV N and PDCoV N-protein expression[1][2].

In Vitro

LJ001 (0.782- 200 μM; 24 h) shows no significant cytotoxicity with a CC_{50} value of 146.4 μM for ST cells[1].
LJ001 (12.5 μM; 12, 24 h) inhibits transmissible gastroenteritis virus (TGEV) and porcine deltacoronavirus (PDCoV) infection[1].
LJ001 (12.5 μM; 1, 6,12, 24 h) decreases the TGEV and PDCoV gene mRNA expression in ST cells[1].
LJ001 can inhibit the entry and spread of some enveloped viruses, including human immunodeficiency virus (HIV), hepatitis C virus (HCV), influenza, Ebola, arenaviruses and poxvi ruses[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Cell Viability Assay[1]

Cell Line:	ST cells
Concentration:	0.782, 1.563, 3.125, 6.25, 12.5, 25, 50, 100, 200 μM
Incubation Time:	24 h
Result:	Showed slight cytotoxicity with a CC_{50} value of 146.4 μM.

Western Blot Analysis[1]

Cell Line:	ST cells
Concentration:	12.5 μM
Incubation Time:	12, 24 h
Result:	Decreased the expression of TGEV N protein and PDCoV N-protein at 24 h and markedly reduced $TCID_{50}$ titers at 12 and 24 h.

RT-PCR[1]

Cell Line:	ST cells
Concentration:	12.5 μM
Incubation Time:	1, 6, 12, 24 h
Result:	Inhibited TGEV and PDCoV gene mRNA expression in a time-dependent manner.

In Vivo

LJ001 (20, 50 mg/kg; oral gavage or i.p.; daily for 7 days) shows no toxicity in mouse[2].

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

Animal Model:	Female BALB/c mice[2]
Dosage:	20, 50 mg/kg
Administration:	Oral gavage or i.p.; daily for 7 days
Result:	Revealed no abnormalities except a slight elevation in serum cholesterol levels in the treated vs. vehicle control group.

REFERENCES

[1]. Zhang Y, et al. Rhodanine derivative LJ001 inhibits TGEV and PDCoV replication in vitro. Virus Res. 2020 Nov;289:198167.

[2]. Wolf MC, et al. A broad-spectrum antiviral targeting entry of enveloped viruses. Proc Natl Acad Sci U S A. 2010 Feb 16;107(7):3157-62.

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