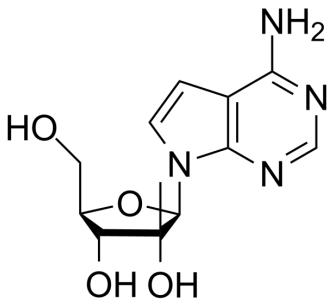
MK-0608

Cat. No.:	HY-10244
CAS No.:	443642-29-3
Molecular Formula:	$C_{12}H_{16}N_4O_4$
Molecular Weight:	280.28
Target:	HCV
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 : 250 mg/mL (891.97 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.5679 mL	17.8393 mL	35.6786 mL
	5 mM	0.7136 mL	3.5679 mL	7.1357 mL
	10 mM	0.3568 mL	1.7839 mL	3.5679 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: ≥ 2.08 mg/mL (7.42 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (7.42 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (7.42 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MK-0608 is a potent and orally bioavailable inhibitor of HCV replication in vitro with an EC_{50} of 0.3 μM (EC_{90}=1.3 μM) in the subgenomic-replicon assay[1].

IC_{50} & Target

EC50: 0.3 μM (HCV replication)[1]

In Vivo

Oral dosing of MK-0608 results in a potent antiviral effect. In preclinical pharmacokinetic experiments with rats, dogs, and rhesus monkeys, MK-0608 demonstrates good to excellent oral bioavailability (50 to 100%) and long plasma half-lives in

dogs and rhesus macaques (9 and 14 h, respectively)[1].

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

Animal Model:	The HCV-infected chimpanzees[1]
Dosage:	1 mg/kg
Administration:	Administered orally; once daily for 37 days
Result:	Chimpanzee X6 had a baseline viral load that varied from 1,110 to 12,900 IU/mL, and chimpanzee X4 had a baseline viral load of 3×10^6 to 9×10^6 IU/mL.

REFERENCES

[1]. Carroll SS, et al. Robust antiviral efficacy upon administration of a nucleoside analog to hepatitis C virus-infected chimpanzees. Antimicrob Agents Chemother. 2009 Mar;53(3):926-34.

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