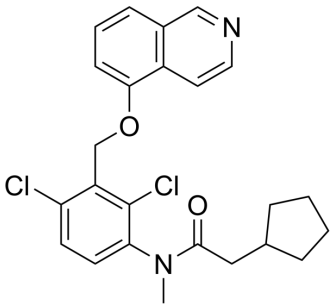
AS1708727

Cat. No.:	HY-123046
CAS No.:	1253226-93-5
Molecular Formula:	$C_{24}H_{24}Cl_2N_2O_2$
Molecular Weight:	443.37
Target:	Autophagy
Pathway:	Autophagy

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 : 41.67 mg/mL (93.98 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2555 mL	11.2773 mL	22.5545 mL
	5 mM	0.4511 mL	2.2555 mL	4.5109 mL
	10 mM	0.2255 mL	1.1277 mL	2.2555 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 (4.69 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.08 mg/mL (4.69 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.69 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

AS1708727 is an orally active Foxo1 inhibitor, with EC_{50} values of 0.33 μM and 0.59 μM for G6Pase and PEPCK, respectively[1].

In Vitro

AS1708727 suppresses increases in blood glucose level by inhibiting gluconeogenic gene expression[1].

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

RT-PCR[1]

Cell Line:	Fao cells, derived from the H4IIE hepatoma cell line.

Concentration:	0.1-3000 μM.
Incubation Time:	18 h.
Result:	Showed dose-dependent reduction in mRNA levels for G6Pase and PEPCK.

In Vivo

AS1708727 (30 to 300 mg/kg, orally) reduces both blood glucose and triglyceride levels, exhibiting anti-diabetic effects[1].

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

Animal Model:	db/db mice aged six weeks[1].
Dosage:	100-1000 mg/kg (Pharmacokinetic Analysis).
Administration:	Orally.
Result:	C_{max}) was 26.7 μM and maximum drug concentration time (T_{max}) of 0.5 h at 300 mg/kg[1]. Liver concentration of AS1708727 at 0.5-2 h after oral administration was 3.7- to 5.4-fold higher than the plasma concentration, indicating good liver transition of AS1708727[1].

Animal Model:	Diabetic model mice[1].
Dosage:	30 to 300 mg/kg.
Administration:	Orally twice daily for 4 days.
Result:	Blood glucose level was significantly reduced at 300 mg/kg[1]. Plasma alanine aminotransferase (ALT) and aspartate aminotransferase (AST) levels were significantly reduced at 300 mg/kg[1]. G6Pase and PEPCK mRNA levels were significantly reduced at dosages of 100 and 300 mg/kg[1].

CUSTOMER VALIDATION

- iScience. 2023 Jul 3.
- FEBS Open Bio. 2023 Jan 5.

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REFERENCES

[1]. Hirotsugu Tanaka, et al. Effects of the Novel Foxo1 Inhibitor AS1708727 on Plasma Glucose and Triglyceride Levels in Diabetic Db/Db Mice. Eur J Pharmacol. 2010 Oct 25;645(1-3):185-91.

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