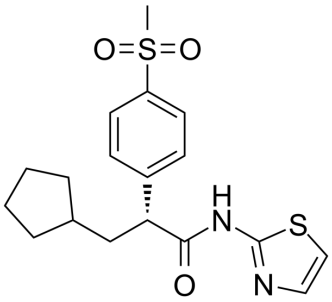
RO-28-1675

Cat. No.:	HY-10595
CAS No.:	300353-13-3
Molecular Formula:	$C_{18}H_{22}N_2O_3S_2$
Molecular Weight:	378.51
Target:	Glucokinase
Pathway:	Metabolic Enzyme/Protease
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 : 50 mg/mL (132.10 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6419 mL	13.2097 mL	26.4194 mL
5 mM	0.5284 mL	2.6419 mL	5.2839 mL
10 mM	0.2642 mL	1.3210 mL	2.6419 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 (6.60 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.60 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.60 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

RO-28-1675 is a potent allosteric glucokinase (GK) activator with an EC_{50} of 54 nM. RO-28-1675 can be used for the research of type 2 diabetes[1][2].

IC_{50} & Target

EC50: 54 nM (glucokinase)[1]

In Vitro

RO-28-1675 can reverse the inhibitory action of the human glucokinase regulatory protein (GKRP)[2].

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

In Vivo

RO-28-1675 (50 mg/kg; p.o.) reduces blood glucose levels in wild-type C57BL/6J mice[2].

RO-28-1675 exhibits high oral bioavailability (mice 92.8%) and C_{max} (1140 μg/mL) following oral administration (10 mg/kg)[1].

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

Animal Model:	10 weeks old male C57BL/6J mice[2]
Dosage:	50 mg/kg
Administration:	Oral administration
Result:	Reduced blood glucose levels.

Animal Model:	C57BL/6J mice[1]
Dosage:	10 mg/kg (Pharmacokinetic Analysis
Administration:	Oral administration
Result:	Oral bioavailability (92.8%), C_{max} (1140 μg/mL), T_{max} (3.3 h).

CUSTOMER VALIDATION

- PLoS One. 2018 Jul 11;13(7):e0200449.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Joseph Grimsby, et al. Allosteric activators of glucokinase: potential role in diabetes therapy. Science. 2003 Jul 18;301(5631):370-3.

[2]. Nancy-Ellen Haynes, et al. Discovery, structure-activity relationships, pharmacokinetics, and efficacy of glucokinase activator (2R)-3-cyclopentyl-2-(4-methanesulfonylphenyl)-N-thiazol-2-yl-propionamide (RO0281675). J Med Chem. 2010 May 13;53(9):3618-25.

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

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