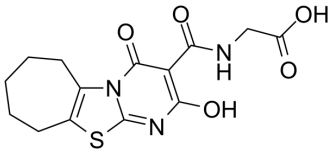
TRC160334

Cat. No.:	HY-141625
CAS No.:	1293289-69-6
Molecular Formula:	$C_{14}H_{15}N_3O_5S$
Molecular Weight:	337.35
Target:	HIF/HIF Prolyl-Hydroxylase
Pathway:	Metabolic Enzyme/Protease
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 : 25 mg/mL (74.11 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9643 mL	14.8214 mL	29.6428 mL
	5 mM	0.5929 mL	2.9643 mL	5.9286 mL
	10 mM	0.2964 mL	1.4821 mL	2.9643 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 (6.17 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.17 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.17 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

TRC160334 is a hypoxia-inducible factor (HIF) hydroxylase inhibitor. TRC160334 can be used for the research of ischemia/reperfusion injury[1].

IC_{50} & Target

HIF hydroxylase[1]

In Vitro

TRC160334 (100~400 μM; 4 hours; Hep3B cells) results in dose-dependent stabilization of nuclear HIF-1[1].
TRC160334 (75~300 μM; 4 hours; Hep3B cells) results in dose-dependent transcriptional activation of HIF-1. TRC160334

shows a dose-dependent expression of HIF target genes such as EPO and adrenomedullin[1].

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

Western Blot Analysis[1]

Cell Line:	Hep3B cells
Concentration:	100~400 μM
Incubation Time:	4 hours
Result:	Resulted in dose-dependent stabilization of nuclear HIF-1.

In Vivo

TRC160334 (0.1 and 0.3 mg/kg; i.p.) significantly reduces serum creatinine and blood urea nitrogen[1].

TRC160334 (0.3 and 0.6 mg/kg; i.p.) shows reducing trends for acute tubular necrosis[1].

TRC160334 significantly reduces the rise in electrolyte excretion dose dependently. Preischemic treatment with TRC160334 results in a pronounced induction of HSP70 in kidneys by 6 hours while postischemic treatment with TRC160334 results in a pronounced induction of HSP70 in kidneys by 12 hours as compared with the respective vehicle control[1].

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

Animal Model:	Sprague-Dawley male rats (250–300 g)[1]
Dosage:	0.1 and 0.3 mg/kg
Administration:	I.p.
Result:	Significantly reduced serum creatinine and blood urea nitrogen.

Animal Model:	Sprague-Dawley male rats (250–300 g)[1]
Dosage:	0.3 and 0.6 mg/kg
Administration:	I.p.
Result:	Showed reducing trends for acute tubular necrosis.

REFERENCES

[1]. Jamadarkhana P, et al. Treatment with a novel hypoxia-inducible factor hydroxylase inhibitor (TRC160334) ameliorates ischemic acute kidney injury. Am J Nephrol. 2012;36(3):208-218.

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