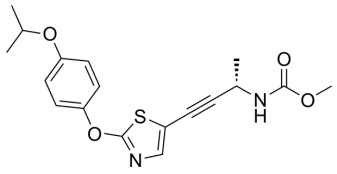
A-908292

Cat. No.:	HY-147004
CAS No.:	903886-95-3
Molecular Formula:	$C_{18}H_{20}N_2O_4S$
Molecular Weight:	360.43
Target:	Acetyl-CoA Carboxylase
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 : 50 mg/mL (138.72 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.7745 mL	13.8723 mL	27.7446 mL
	5 mM	0.5549 mL	2.7745 mL	5.5489 mL
	10 mM	0.2774 mL	1.3872 mL	2.7745 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: ≥ 1.25 mg/mL (3.47 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.25 mg/mL (3.47 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (3.47 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

A-908292 is a potent and selective acetyl-CoA carboxylase 2 (ACC2) inhibitor, with an IC_{50} of 23 nM for human ACC2. A-908292 can be used for the research of fatty acid metabolism[1][2]. A-908292 is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

IC_{50} & Target

IC50: 23 nM (ACC2)[2]

In Vivo	A-908292 (30 mg/kg; p.o.; twice a day for 2 weeks) reduces serum glucose and triglyceride levels in ob/ob mice[2]. A-908292 (15 mg/kg; p.o.; twice a day for 4 days) markedly reduces plasma triglyceride levels in ACC2 knockout mice[3]. A-908292 (30-100 mg/kg; p.o.; twice a day for 3 days) stimulates the PPAR-α-dependent signaling pathway in rats[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Nishiura Y, et, al. Discovery of a novel olefin derivative as a highly potent and selective acetyl-CoA carboxylase 2 inhibitor with in vivo efficacy. Bioorg Med Chem Lett. 2018 Aug 1;28(14):2498-2503.

[2]. Waring JF, et, al. Gene expression analysis in rats treated with experimental acetyl-coenzyme A carboxylase inhibitors suggests interactions with the peroxisome proliferator-activated receptor alpha pathway. J Pharmacol Exp Ther. 2008 Feb;324(2):507-16.

[3]. Takagi H, et, al. A Novel Acetyl-CoA Carboxylase 2 Selective Inhibitor Improves Whole-Body Insulin Resistance and Hyperglycemia in Diabetic Mice through Target-Dependent Pathways. J Pharmacol Exp Ther. 2020 Mar;372(3):256-263.

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