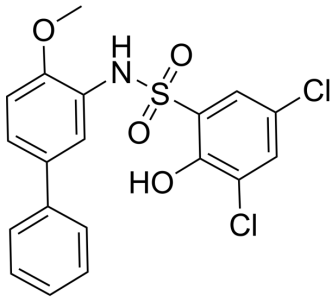
BMS-303141

Cat. No.:	HY-16107
CAS No.:	943962-47-8
Molecular Formula:	$C_{19}H_{15}Cl_2NO_4S$
Molecular Weight:	424.3
Target:	ATP Citrate Lyase
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 : 25 mg/mL (58.92 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3568 mL	11.7841 mL	23.5682 mL
5 mM	0.4714 mL	2.3568 mL	4.7136 mL
10 mM	0.2357 mL	1.1784 mL	2.3568 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 (5.89 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (5.89 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (5.89 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

BMS-303141 is a potent, cell-permeable ATP-citrate lyase (ACL) inhibitor with an IC_{50} of 0.13 μM.

IC_{50} & Target

IC50: 0.13 uM (ACL)[1]

In Vitro

In HepG2 cells, BMS-303141 shows inhibition of total lipid syntheses with an IC_{50} of 8 μM. BMS-303141 shows no cytotoxicity up to 50 lM under a cell based Alamar Blue cytotoxicity assay, indicating the observed inhibition of lipid synthesis is not a result of compound-induced cytotoxicity[1].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Chronic oral dosing of BMS-303141 in high-fat fed mice lowers approximate 20-30% plasma cholesterol and triglycerides, as well as 30-50% fasting plasma glucose. Chronic treatment with BMS-303141 shows a gradual inhibition of weight gain along with a reduction in adiposity without apparent changes in food intake. BMS-303141 shows an oral bioavailability of 55% but a relatively short half-life of 2.1 h[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Mice: Effect of BMS-303141 in high-fat fed mice is studied. There are a total of four groups in the study; mice on normal diet and high-fat diet controls, and two treated groups that are supplemented with BMS-303141 in their high-fat diet to an equivalent daily dose of 10 or 100 mg/kg. The study is continued for a total of 34 days. Food consumption and body weight gain are tracked along with weekly assessment of lipid and glucose plasma chemistries[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Gastroenterology. 2024 Jan 24:S0016-5085(24)00064-7.
- Nat Cancer. 2023 Feb 2.
- Nat Commun. 2024 Jan 2;15(1):163.
- Mol Cell. 2022 Aug 9;S1097-2765(22)00647-5.
- Free Radic Biol Med. 2024 Mar:213:443-456.

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REFERENCES

[1]. Li JJ, et al. 2-hydroxy-N-arylbenzenesulfonamides as ATP-citrate lyase inhibitors. Bioorg Med Chem Lett. 2007 Jun 1;17(11):3208-11.

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