

COH-SR4

Chemical Properties

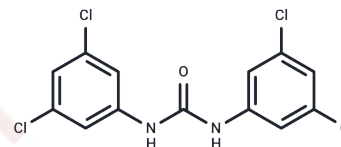
CAS No. : 73439-19-7

Formula: C₁₃H₈Cl₄N₂O

Molecular Weight: 350.03

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	COH-SR4 (COH-SR4 (Mitochondria uncoupler SR4)) is a uncoupler of mitochondrial oxidative phosphorylation. COH-SR4 modulates amp-dependent kinase (ampk)-mammalian target of rapamycin (mtor) signaling, and inhibiting proliferation of hepg2 hepatocarcinoma cells
Targets(IC50)	AMPK
In vivo	SR4 is a novel mitochondrial uncoupler with anti-obesity and anti-diabetic properties.? SR4 increased oxygen consumption, dissipated mitochondrial membrane potential, induced mitochondrial swelling, and decreased intracellular ATP in cultured cells and isolated liver mitochondria.? Oral feeding of SR4 significantly reduced body weight gain, improved glycemic control and insulin resistance, and prevented dyslipidemia in both high-fat-diet (HFD) induced obese and diabetic db/db mice.? SR4 treatment also decreased liver triglycerides and prevented hepatic steatosis in both animal models.? Mitochondrial uncoupling of SR4 results to activation of AMP-activated protein kinase (AMPK), leading to the phosphorylation and inhibition of acetyl-CoA carboxylase (ACC).? Gene analyses by RT-PCR showed SR4 significantly suppressed the mRNA expression of several lipogenic genes and gluconeogenic genes in the liver of HFD obese mice.? RNA sequencing analysis showed that 642 genes were differentially expressed in liver of db/db mice after SR4 treatment (217 upregulated, 425 down-regulated).? Gene ontology analysis by DAVID indicated SR4 upregulated amino acid metabolism and down-regulated lipid and fatty acid synthesis and glucose metabolism.? These studies demonstrate that SR4 may be a promising compound for treatment of T2DM and obesity

Solubility Information

Solubility	DMSO: 4 mg/mL (11.43 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
------------	---

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8569 mL	14.2845 mL	28.569 mL
5 mM	0.5714 mL	2.8569 mL	5.7138 mL
10 mM	0.2857 mL	1.4284 mL	2.8569 mL
50 mM	0.0571 mL	0.2857 mL	0.5714 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Sharad S Singhal, James L Figarola, Jyotsana Singhal, et al. COH-SR4, a Novel Mitochondrial Uncoupler, Improves Metabolic Alterations in Obese and Diabetic Mice.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481