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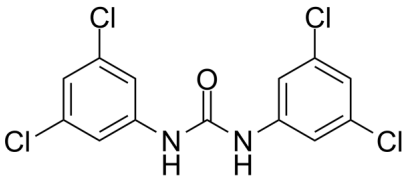
Certificate of Analysis

Catalog Number	BP14209
Product Name	COH-SR4

Physical and Chemical Properties

Synonyms	COH-SR4 (Mitochondria uncoupler SR4)
CAS No.	73439-19-7
Chemical Formula	C13H8Cl4N2O
Molecular Weight	350.02
Solubility	DMSO: 10 mM
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

Product Information

Description	SR4 is a uncoupler of mitochondrial oxidative phosphorylation. SR4 modulating amp-dependent kinase (ampk)-mammalian target of rapamycin (mtor) signaling, and inhibiting proliferation of hepg2 hepatocarcinoma cells
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

Analytical Data

HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.

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