Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

SR9009

Catalog No: tcsc4669

Available Sizes

Size: 5mg

Size: 10mg

Size: 25mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
1379686-30-2

Formula:
$C_{20}H_{24}ClN_3O_4S$

Pathway:
Autophagy

Target:
Autophagy

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 30 mg/mL (68.50 mM)

Observed Molecular Weight:
437.94

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Product Description

SR9009 is a **REV-ERBα/β** agonist with **IC_{50}**s of 670 nM and 800 nM for REV-ERBα and REV-ERBβ, respectively.

IC50 & Target: IC50: 670 nM (Rev-ErbBα), 800 nM (Rev-ErbBβ)[1]

In Vitro: SR9009 dose-dependently increases the REV-ERB-dependent repressor activity assessed in HEK293 cells expressing a chimeric Gal4 DNA Binding Domain (DBD)-REV-ERB ligand binding domain (LBD)α or β and a Gal4-responsive luciferase reporter (SR9009: REV-ERBα IC_{50}=670 nM, REV-ERBβ IC_{50}=800 nM). SR9009 potently and efficaciously suppresses transcription in a cotransfection assay using full-length REV-ERBα along with a luciferase reporter driven by the Bmal1 promoter (IC_{50}=710 nM). SR9009 suppresses the expression of *BMAL1* mRNA in HepG2 cells in a *REV-ERBα/β*-dependent manner. Direct binding of the SR9009 to REV-ERBα is also confirmed using circular dichrosim analysis (K_d=800 nM)[1].

In Vivo: While the stress of handling and twice-daily injections caused weight loss in vehicle-treated controls, weight loss of SR9009-treated animals is 60% greater. SR9009 (100 mg/kg ,i.p.) treated mice exhibit a more severe reduction in adiposity. Plasma non-esterified fatty acids (NEFA) are also reduced (23%) along with plasma glucose (19%) in the SR9009 treated animals. In the white adipose tissue (WAT) , SR9009 treatment results in a decrease in expression of genes encoding enzymes involved in triglyceride (TG) synthesis as is also observed in lean mice[1].