

PRODUCT INFORMATION



SR9009

Item No. 11929

CAS Registry No.: 1379686-30-2
Formal Name: 3-[[[4-(4-chlorophenyl)methyl] [(5-nitro-2-thienyl)methyl]amino] methyl]-1-pyrrolidinecarboxylic acid ethyl ester

Synonym: REV-ERB Agonist II

MF: C₂₀H₂₄ClN₃O₄S

FW: 437.9

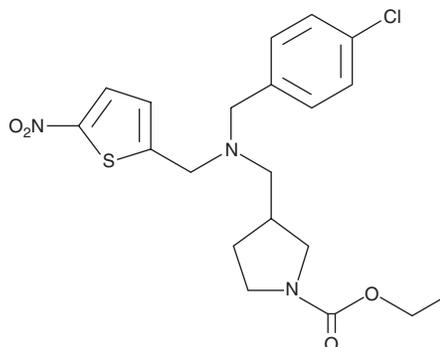
Purity: ≥98%

UV/Vis.: λ_{max}: 220, 325 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SR9009 is supplied as a crystalline solid. A stock solution may be made by dissolving the SR9009 in the solvent of choice, which should be purged with an inert gas. SR9009 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SR9009 in ethanol is approximately 14 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

REV-ERB α and REV-ERB β nuclear receptors are transcriptional repressors that coordinate circadian rhythm and metabolic pathways in a heme-dependent manner. SR9009 is a REV-ERB agonist that increases the constitutive repression of genes regulated by REV-ERB α and REV-ERB β with IC₅₀ values of 670 and 800 nM, respectively.¹ Through activation of REV-ERB, SR9009 has been shown to decrease circadian locomotor activity during the dark phase and to alter the expression pattern of core clock genes in the hypothalami of mice.¹ The circadian pattern of expression of an array of metabolic genes in the liver, skeletal muscle and adipose tissue was also shown to be altered in mice exposed to SR9009, resulting in increased energy expenditure.¹ Diet-induced obese mice treated with 100 mg/kg SR9009 (i.p. two times a day for 30 days) have been reported to display decreased fat mass and markedly improved dyslipidemia and hyperglycemia.¹

Reference

1. Solt, L.A., Wang, Y., Banerjee, S., *et al.* Regulation of circadian behaviour and metabolism by synthetic REV-ERB agonists. *Nature* **485**, 62-68 (2012).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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