

PRODUCT INFORMATION



MD001

Item No. 27443

CAS Registry No.: 2254605-76-8
Formal Name: 5,7-dihydroxy-8-methyl-3-[(2E)-1-oxo-3-phenyl-2-propen-1-yl]-4-phenyl-2H-1-benzopyran-2-one

MF: C₂₅H₁₈O₅

FW: 398.4

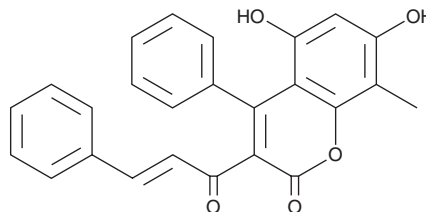
Purity: ≥90%

UV/Vis.: λ_{max}: 270, 296 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

MD001 is supplied as a crystalline solid. A stock solution may be made by dissolving the MD001 in the solvent of choice, which should be purged with an inert gas. MD001 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MD001 in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

MD001 is a dual agonist of peroxisome proliferator-activated receptor α (PPAR α) and PPAR γ .¹ It binds to PPAR α and PPAR γ (K_d s = 9.55 and 0.14 μ M, respectively) but does not bind to PPAR β/δ at concentrations up to 500 μ M. It increases transcriptional activity of PPAR α and PPAR γ in a cell-based luciferase reporter assay when used at a concentration of 10 μ M. MD001 (10 μ M) increases expression of PPAR α , PPAR γ , and retinoid X receptor (RXR), as well as PPAR α and PPAR γ target genes, in HepG2 cells. It increases glucose consumption as well as expression of GLUT2 and GLUT4 in HepG2 and 3T3-L1 cells, respectively, in a concentration-dependent manner. MD001 (20 mg/kg) decreases levels of glucose, insulin, free fatty acids, triglycerides, LDL, alanine aminotransferase (ALT), and aspartate aminotransferase (AST) in blood and reduces the size and number of hepatic lipid droplets in diabetic *db/db* mice.

Reference

1. Kim, S.-H., Hong, S.H., Park, Y.-J., *et al.* MD001, a novel peroxisome proliferator-activated receptor α/γ agonist, improves glucose and lipid metabolism. *Sci. Rep.* **9**(1), 1656 (2019).

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.

WARRANTY AND LIMITATION OF REMEDY

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