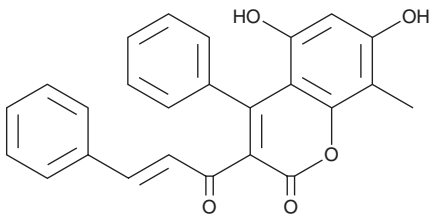
PRODUCT INFORMATION

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:	$C_{25}H_{18}O_5$
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 (PPARα) and PPARγ.[1] It binds to PPARα and PPARγ (K_ds = 9.55 and 0.14 µM, respectively) but does not bind to PPARβ/δ at concentrations up to 500 µM. It increases transcriptional activity of PPARα and PPARγ in a cell-based luciferase reporter assay when used at a concentration of 10 µM. MD001 (10 µM) increases expression of PPARα, PPARγ, and retinoid X receptor (RXR), as well as PPARα and PPARγ 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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM