GW 9578
Item No. 10011211

CAS Registry No.: 247923-29-1
MF: C_{26}H_{34}F_{2}N_{2}O_{3}S
FW: 492.6
Purity: ≥98%
UV/Vis.: λ_{max}: 231, 268 nm
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥1 year

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

Laboratory Procedures

GW 9578 is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of GW 9578 in ethanol is approximately 2.5 mg/ml and approximately 10 mg/ml in DMSO and DMF.

GW 9578 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of GW 9578 should be diluted with the aqueous buffer of choice. GW 9578 has a solubility of 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Peroxisome proliferator-activated receptor α (PPARα) is a ligand-activated transcription factor found predominantly in the liver that is involved in the regulation of lipid homeostasis. Activation of PPARα results in expression of a variety of genes, particularly those involved in fatty acid β-oxidation, binding, and transport. GW 9578 is a potent agonist of PPARα that activates the murine and human receptors with EC50 values of 0.005 and 0.05 µM, respectively. GW 9578 is highly selective for PPARα compared to PPARγ and PPARδ, which it activates in murine at EC_{50} values of 0.15 and 2.6 µM, respectively and in human at 1.0 and 1.4 µM, respectively. GW 9578 is a potent lipid lowering agent that may reduce insulin resistance. When 0.2 mg/kg GW 9578 was given orally once daily for three days, serum total LDL cholesterol was decreased 40-60% in male Sprague-Dawely rats. Obese Zucker rats treated with 5 mg/kg GW 9578 for nine days had markedly reduced serum insulin concentrations compared to controls.

References