

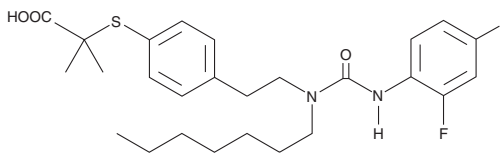
PRODUCT INFORMATION



GW 9578

Item No. 10011211

CAS Registry No.: 247923-29-1
Formal Name: 2-[[4-[2-[[[(2,4-difluorophenyl)amino]carbonyl]heptylamino]ethyl]phenyl]thio]-2-methyl-propanoic acid
MF: C₂₆H₃₄F₂N₂O₃S
FW: 492.6
Purity: ≥98%
UV/Vis.: λ_{max}: 231, 268 nm
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



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 (PPAR α) is a ligand-activated transcription factor found predominantly in the liver that is involved in the regulation of lipid homeostasis.^{1,2} Activation of PPAR α results in expression of a variety of genes, particularly those involved in fatty acid β -oxidation, binding, and transport.³ GW 9578 is a potent agonist of PPAR α that activates the murine and human receptors with EC₅₀ values of 0.005 and 0.05 μ M, respectively.⁴ GW 9578 is highly selective for PPAR α compared to PPAR γ and PPAR δ , which it activates in murine at EC₅₀ values of 0.15 and 2.6 μ M, respectively and in human at 1.0 and 1.4 μ M, respectively.⁴ 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-Dawley rats.⁴ Obese Zucker rats treated with 5 mg/kg GW 9578 for nine days had markedly reduced serum insulin concentrations compared to controls.⁵

References

1. Latruffe, N. and Vamecq, J. Peroxisome proliferators and peroxisome proliferator activated receptors (PPARs) as regulators of lipid metabolism. *Biochimie* **79**(2-3), 81-94 (1997).
2. Lemberger, T., Desvergne, B., and Wahli, W. Peroxisome proliferator-activated receptors: A nuclear receptor signaling pathway in lipid physiology. *Annu. Rev. Cell Dev. Biol.* **12**, 335-363 (1996).
3. Mandard, S., Müller, M., and Kersten, S. Peroxisome proliferator-activated receptor α target genes. *Cell. Mol. Life Sci.* **61**(4), 393-416 (2004).
4. Brown, P.J., Winegar, D.A., Plunket, K.D., et al. A ureido-thioisobutyric acid (GW9578) is a subtype-selective PPAR α agonist with potent lipid-lowering activity. *J. Med. Chem.* **42**(19), 3785-3788 (1999).
5. Guerre-Millo, M., Gervois, P., Raspé, E., et al. Peroxisome proliferator-activated receptor α activators improve insulin sensitivity and reduce adiposity. *J. Biol. Chem.* **275**(22), 16638-16642 (2000).

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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