

PRODUCT INFORMATION

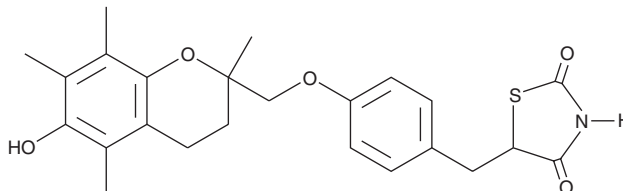


Troglitazone

Item No. 71750

CAS Registry No.: 97322-87-7
Formal Name: 5-[[4-[(3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl)methoxy]phenyl]methyl]-2,4-thiazolidinedione

MF: C₂₄H₂₇NSO₅
FW: 441.5
Purity: ≥98%
UV/Vis.: λ_{max}: 225, 284 nm
Supplied as: A crystalline solid
Stability: ≥2 years



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

Laboratory Procedures

Troglitazone is supplied as a crystalline solid. A stock solution may be made by dissolving the troglitazone in an organic solvent purged with an inert gas. Troglitazone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of troglitazone in these solvents is approximately 300 µg/ml in ethanol and approximately 30 mg/ml in DMSO and DMF.

Troglitazone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, troglitazone should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Troglitazone has a solubility of approximately 100 µg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Troglitazone is a selective agonist of peroxisome proliferator-activated receptor γ (PPAR γ ; EC₅₀s = 0.78 and 0.55 μ M for the mouse and human receptors, respectively, in a transactivation assay).¹ It is selective for PPAR γ over PPAR α and PPAR δ , at which it is inactive at concentrations up to 10 μ M. Troglitazone (500 mg/kg twice per day) exhibits antihyperglycemic and antihyperlipidemic properties in Zucker diabetic fatty rats, reducing plasma glucose and triglyceride levels by 61 and 87% respectively.² It also induces cell cycle arrest at the G₁ phase in SK-HEP-1 and Hep3B hepatocellular carcinoma cells when used at a concentration of 10 μ M and increases apoptosis in these cells at concentrations of 30 μ M and higher.³

References

- Willson, T.M., Brown, P.J., Sternbach, D.D., et al. The PPARs: From orphan receptors to drug discovery. *J. Med. Chem.* **43**(4), 527-550 (2000).
- Henke, B.R., Blanchard, S.G., Brackeen, M.F., et al. N-(2-Benzoylphenyl)-L-tyrosine PPAR γ agonists. 1. Discovery of a novel series of potent antihyperglycemic and antihyperlipidemic agents. *J. Med. Chem.* **41**(25), 5020-5036 (1998).
- Yoshizawa, K., Cioca, D.P., Kawa, S., et al. Peroxisome proliferator-activated receptor γ ligand troglitazone induces cell cycle arrest and apoptosis of hepatocellular carcinoma cell lines. *Cancer* **95**(10), 2243-2251 (2002).

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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