Small Molecules

Troglitazone

NF-kB pathway inhibitor; Activates PPARγ

Catalog #	73892	5 mg
	73894	10 mg

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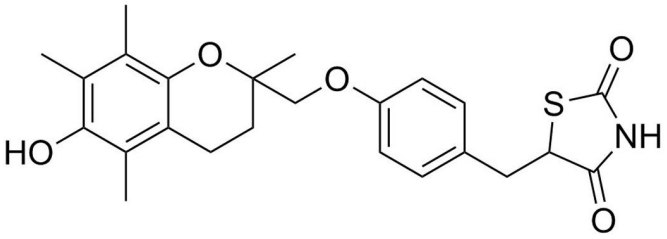
Product Description

Troglitazone is a potent and selective activator of peroxisome proliferator-activated receptor-γ (PPARγ) with EC_{50} = 0.55 and 0.78 µM for human and mouse, respectively. Troglitazone does not inhibit PPARα or PPARδ at up to 10 µM (Willson et al.). Troglitazone causes cell cycle arrest at phase G1, inducing caspase-dependent apoptosis in both HeLa and hepatocellular carcinoma cell lines (Chang et al.; Yoshizawa et al.).

Molecular Name:	Troglitazone
Alternative Names:	Resulin; Rezulin
CAS Number:	97322-87-7
Chemical Formula:	$C_{24}H_{27}NSO_5$
Molecular Weight:	441.5 g/mol
Purity:	≥ 98%
Chemical Name:	5-[[4-[(3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl)methoxy]phenyl]methyl]-2,4-thiazlidinedione
Structure:	

Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:	· DMSO ≤ 65 mM · Absolute ethanol ≤ 0.5 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 227 µL of DMSO. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application. Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

DIFFERENTIATION
· Stimulates adipogenesis in 3T3-L1 cells (Jeong & Yoon).
· Inhibits macrophage differentiation (Chen Y et al.).
CANCER RESEARCH
· Inhibits growth and induces apoptosis in non-small cell lung carcinoma, bladder cancer, cervical cancer, and prostate cancer cells (Chen H-M et al.; Santha et al.; Satoh et al.; Yan et al.).
· Promotes cytostatic effects in MDA-MB-231 and MCF-7 breast cancer cell lines (Berthe et al.).

References

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