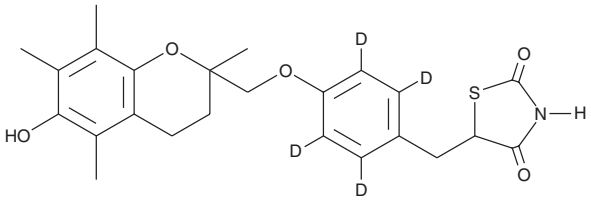
PRODUCT INFORMATION

Troglitazone-d_4

Item No. 28908

CAS Registry No.: 2749370-85-0
Formal Name: 5-[[4-[(3,4-dihydro-6-hydroxy-2,5,7,8-tetramethyl-2H-1-benzopyran-2-yl)methoxy]phenyl-d_4]methyl]-2,4-thiazolidinedione
MF: $C_{24}H_{23}D_4NO_5S$
FW: 445.6
Chemical Purity: ≥95% (Troglitazone)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as: A 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

Troglitazone-d_4 is intended for use as an internal standard for the quantification of troglitazone (Item No. 71750) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Troglitazone-d_4 is supplied as a solid. A stock solution may be made by dissolving the troglitazone-d_4 in the solvent of choice, which should be purged with an inert gas. Troglitazone-d_4 is soluble in methanol.

Description

Troglitazone is a selective agonist of peroxisome proliferator-activated receptor γ (PPARγ; EC_{50}s = 0.78 and 0.55 µM for the mouse and human receptors, respectively, in a transactivation assay).[1] It is selective for PPARγ over PPARα and PPARδ, at which it is inactive at concentrations up to 10 µM. 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 G_1 phase in SK-HEP-1 and Hep3B hepatocellular carcinoma cells when used at a concentration of 10 µM and increases apoptosis in these cells at concentrations of 30 µM and higher.[3]

References

1. 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).
2. Henke, B.R., Blanchard, S.G., Brackeen, M.F., *et al.* N-(2-Benzoylphenyl)-L-tyrosine PPARγ agonists. 1. Discovery of a novel series of potent antihyperglycemic and antihyperlipidemic agents. *J. Med. Chem.* **41(25),** 5020-5036 (1998).
3. 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).

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