

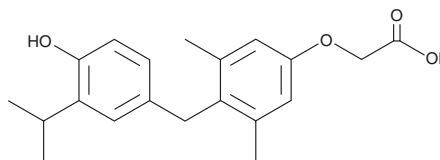
PRODUCT INFORMATION



Sobetirome

Item No. 30814

CAS Registry No.: 211110-63-3
Formal Name: 2-[4-[[4-hydroxy-3-(1-methylethyl)phenyl]methyl]-3,5-dimethylphenoxy]-acetic acid
Synonyms: GC-1, QRX 431
MF: C₂₀H₂₄O₄
FW: 328.4
Purity: ≥98%
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

Sobetirome is supplied as a solid. A stock solution may be made by dissolving the sobetirome in the solvent of choice, which should be purged with an inert gas. Sobetirome is soluble in ethanol and DMSO. The solubility of sobetirome in these solvents is approximately 45 and 30 mg/ml, respectively.

Description

Sobetirome is an agonist of thyroid hormone receptor β (TR β ; EC₅₀ = 7 nM in a reporter assay).¹ It selectively binds to TR β over TR α with K_d values of 0.1 and 1.8 nM, respectively. Sobetirome (97 nmol/kg, i.p.) increases hepatic levels of the HDL receptor SR-B1 and serum levels of C4, a marker of increased bile acid synthesis, in mice fed normal chow or high-cholesterol diets.² It reduces serum cholesterol and triglyceride levels in these same models. Sobetirome (154 nmol/kg, i.p.) also decreases plasma cholesterol levels, without increasing heart rate, in a mouse model of hypothyroidism induced by an iodine-deficient diet containing the thyroid hormone biosynthesis inhibitor 5-propyl-2-thio-uracil.³

References

1. Nguyen, N.-H., Apriletti, J.W., Cunha Lima, S.T., *et al.* Rational design and synthesis of a novel thyroid hormone antagonist that blocks coactivator recruitment. *J. Med. Chem.* **45**(15), 3310-3320 (2002).
2. Johansson, L., Rudling, M., Scanlan, T.S., *et al.* Selective thyroid receptor modulation by GC-1 reduces serum lipids and stimulates steps of reverse cholesterol transport in euthyroid mice. *Proc. Natl. Acad. Sci. USA* **102**(29), 10297-10302 (2005).
3. Trost, S.U., Swanson, E., Gloss, B., *et al.* The thyroid hormone receptor- β -selective agonist GC-1 differentially affects plasma lipids and cardiac activity. *Endocrinology* **141**(9), 3057-3064 (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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