Certificate of Analysis

Product Name: **GC 1** **Catalog No.: 4554** **Batch No.: 10**

CAS Number: 211110-63-3

IUPAC Name: 2-[4-[[4-Hydroxy-3-(1-methylethyl)phenyl]methyl]-3,5-dimethylphenoxy]acetic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{20}H_{24}O_4$.

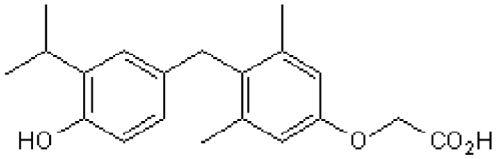
Batch Molecular Weight: 328.4

Physical Appearance: Off White solid

Solubility: DMSO to 50 mM
ethanol to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	73.15	7.37	0
Found	73.16	7.43	0

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Description:

GC 1 is a thyromimetic; high affinity agonist at thyroid hormone receptor (TR) β and TRα receptors (K_D values are 67 and 440 pM respectively). Displays 5- and 100-fold greater potency than the endogenous agonist T_3 in vitro at $TR\alpha_1$ and $TR\beta_1$ receptors respectively. Promotes reverse cholesterol transport in chow- and fat-fed mice. Induces proliferation of hepatocytes and pancreatic acinar cells in rats independent of prior tissue injury.

Physical and Chemical Properties:

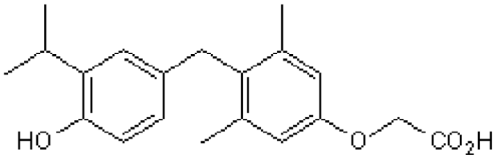
Batch Molecular Formula: $C_{20}H_{24}O_4$.

Batch Molecular Weight: 328.4

Physical Appearance: Off White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 50 mM
ethanol to 50 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Columbano *et al* (2006) The thyroid hormone receptor-β agonist GC-1 induces cell proliferation in rat liver and pancreas. Endocrinology ***147*** 3211. PMID: 16574785.

Johansson *et al* (2005) Selective thyroid receptor modulation by GC-1 reduces serum lipids and stimulates steps of reverse cholesterol transport in euthyroid mice. Proc.Natl.Acad.Sci. U S A ***102*** 10297. PMID: 16006512.

Chiellini *et al* (1998) A high-affinity subtype-selective agonist ligand for the thyroid hormone receptor. Chem.Biol. ***5*** 299. PMID: 9653548.