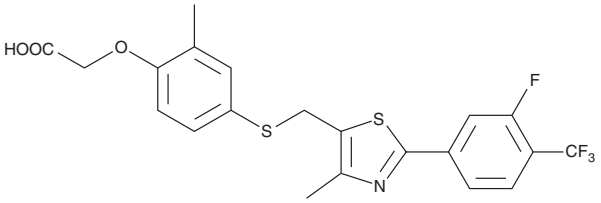
PRODUCT INFORMATION

GW 0742

Item No. 10006798

CAS Registry No.:	317318-84-6
Formal Name:	2-[4-[[[2-[3-fluoro-4-(trifluoromethyl) phenyl]-4-methyl-5-thiazolyl]methyl]thio]-2-methylphenoxy]-acetic acid
Synonym:	GW 610742
MF:	$C_{21}H_{17}F_4NO_3S_2$
FW:	471.5
Purity:	≥95%
UV/Vis.:	λ_{max}: 323 nm
Supplied as:	A crystalline 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

GW 0742 is supplied as a crystalline solid. A stock solution may be made by dissolving the GW 0742 in the solvent of choice. GW 0742 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of GW 0742 in these solvents is approximately 10, 25, and 30 mg/ml, respectively.

GW 0742 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, GW 0742 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. GW 0742 has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

The transcription factor peroxisome proliferator-activated receptor δ (PPARδ) is a member of the superfamily of nuclear hormone receptors and is implicated both in lipid metabolism and in the regulation of genes with potential roles in neurotoxicity. GW 0742 is a selective PPARδ agonist (EC_{50} = 1.1 nM) that exhibits 1,000-fold selectivity over the other human PPAR subtypes.[1] GW 0742 exhibits time-dependent neuroprotection in low KCl-induced apoptosis in cerebellar granule neuronal cultures. Despite the neuroprotective properties observed, prolonged (48h) incubation with GW 0742 produced significant inherent toxicity. This cell death was determined to be apoptotic as identified with the TUNEL assay.[2]

References

1. Sznaidman, M.L., Haffner, C.D., Maloney, P.R., *et al.* Novel selective small molecule agonists for peroxisome proliferator-activated receptor δ (PPARδ)-synthesis and biological activity. *Bioorg. Med. Chem. Lett.* **13(9)**, 1517-1521 (2003).
2. Smith, S.A., Monteith, G.R., Robinson, J.A., *et al.* Effect of the peroxisome proliferator-activated receptor β activator GW0742 in rat cultured cerebellar granule neurons. *J. Neurosci. Res.* **77(2)**, 240-249 (2004).

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