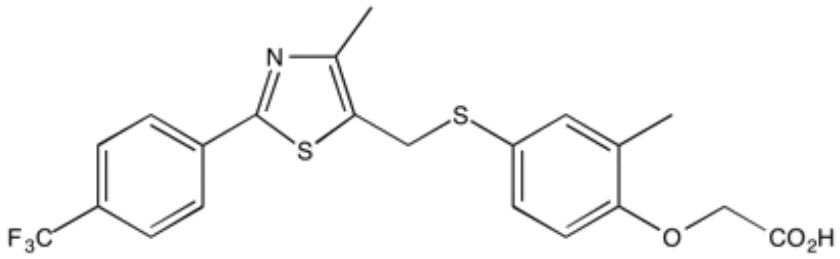
Catalog # 10-1542

GW-501516

CAS# 317318-70-0

2-[2-Methyl-4-[[[4-methyl-2-[4-(trifluoromethyl)phenyl]-5-thiazoyl]methyl]thio]phenoxy]acetic acid

Lot # X101425



Potent and selective PPARδ (NR1C2) agonist, EC_{50}=1.2 nM and 1000-fold selective over other PPAR subtypes.[1] Induces apolipoprotein A1-mediated cholesterol efflux *in vitro.*[1] Improves hematopoietic stem cell maintenance.[2] Prevents downregulation of AMPK caused by a high-fat diet in liver and increases fatty acid oxidation.[3] Upregulates human Sirt1 via Sp1 activation.[4] Along with exercise, GW-501516 synergistically increases running endurance.[5]

1) Oliver *et al.* (2001), *A selective peroxisome proliferator-activated receptor delta agonist promotes reverse cholesterol transport*; Proc. Natl. Acad. Sci. USA, **98** 5306
2) Ito *et al*. (2012), *A PML-PPAR-δ pathway for fatty acid oxidation regulates hematopoietic stem cell maintance*; Nat. Med., **18** 1350
3) Barroso *et al*. (2011), *The PPARβ/δ activator GW501516 prevents the down-regulation of AMPK caused by a high-fat diet in liver and amplifies the PGC-1α-Lipin 1-PPARα pathway leading to increased fatty acid oxidation.* Endocrinology, **152** 1848
4) Okazaki *et al*. (2010), *PPAR beta/delta regulates the human SIRT1 gene transcription via Sp1*; Endocr. J., **57** 403
5) Narkar *et al*. (2008), *AMPK and PPARdelata agonists are exercise mimetics*; Cell, **134** 405

PHYSICAL DATA

Molecular Weight:	453.50
Molecular Formula:	$C_{21}H_{18}F_3NO_3S_2$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	Soluble in DMSO (up to 40 mg/ml) or in Ethanol (up to 20 mg/ml).
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied, at -20°C for up to 1 year from the date of purchase.
	Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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