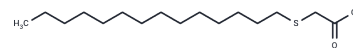


Tetradecylthioacetic acid

Chemical Properties

CAS No. :	2921-20-2
Formula:	C16H32O2S
Molecular Weight:	288.49
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Tetradecylthioacetic acid is a synthetic fatty acid with a sulfur substitution in the β -position. This modification renders TTA unable to undergo complete β -oxidation and increases its biological activity, including activation of peroxisome proliferator activated receptors (PPARs) with preference for PPAR α .
Targets(IC50)	PPAR
In vivo	Mice receiving HFD supplemented with 0.75% (w/w) TTA had significantly lower body weights compared to mice fed the diet without TTA. Plasma triacylglycerol (TAG) was reduced 3-fold with TTA treatment, concurrent with increase in liver TAG. Total cholesterol was unchanged in plasma and liver. However, TTA promoted a shift in the plasma lipoprotein fractions with an increase in larger HDL particles. Histological analysis of the small intestine revealed a reduced size of lipid droplets in enterocytes of TTA treated mice, accompanied by increased mRNA expression of fatty acid transporter genes. Expression of the cholesterol efflux pump Abca1 was induced in the small intestine, but not in the liver. Scd1 displayed markedly increased mRNA and protein expression in the intestine of the TTA group[1].

Solubility Information

Solubility	DMSO: 60 mg/mL (207.98 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4663 mL	17.3316 mL	34.6632 mL
5 mM	0.6933 mL	3.4663 mL	6.9326 mL
10 mM	0.3466 mL	1.7332 mL	3.4663 mL
50 mM	0.0693 mL	0.3466 mL	0.6933 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Lundåsen T, et al. The PPAR pan-agonist tetradecylthioacetic acid promotes redistribution of plasma cholesterol towards large HDL. PLoS One. 2020 Mar 16;15(3):e0229322.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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