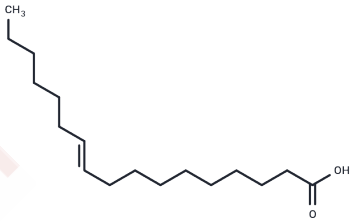
Data Sheet (Cat.No.T78467)

TargetMol

trans-10-Heptadecenoic acid

Chemical Properties



CAS No. : 126761-43-1

Formula: C17H32O2

Molecular Weight: 268.43

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	trans-10-Heptadecenoic acid is a trans-unsaturated fatty acid used as a molecular probe to study beta-oxidation mechanisms. It is metabolized via reductase-dependent and multifunctional enzyme-dependent pathways, participating in PHA synthesis and modulating intracellular carbon flux.
Targets(IC50)	Others
In vitro	In experiments using recombinant Saccharomyces cerevisiae expressing the peroxisomal PHA synthase, trans-10-Heptadecenoic acid was used to evaluate the β-oxidation process of trans-unsaturated fatty acids. The results showed that this compound is converted into polyhydroxyalkanoate under the action of 2,4-dienoyl-CoA reductase and Delta3, Δ2-enoyl-CoA isomerase; however, in the absence of these reductases, trans-10-heptadecenoic acid is degraded via the enoyl-CoA hydrolase II of the multifunctional enzyme (MFE). Studies have confirmed that this metabolic process leads to substantial intracellular carbon efflux via both reductase-dependent and direct MFE-dependent pathways [1].

Solubility Information

Solubility	DMSO: 30 mg/mL (111.76 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7254 mL	18.6268 mL	37.2537 mL
5 mM	0.7451 mL	3.7254 mL	7.4507 mL
10 mM	0.3725 mL	1.8627 mL	3.7254 mL
50 mM	0.0745 mL	0.3725 mL	0.7451 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

Robert J, et al. Analysis of the beta-oxidation of trans-unsaturated fatty acid in recombinant Saccharomyces cerevisiae expressing a peroxisomal PHA synthase reveals the involvement of a reductase-dependent pathway. Biochim Biophys Acta. 2005 May 15;1734(2):169-77.