

## Linolelaidic acid

## Chemical Properties

CAS No. : 506-21-8

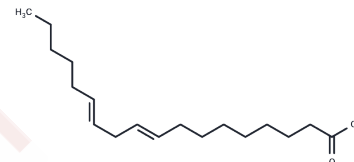
Formula: C18H32O2

Molecular Weight: 280.45

Store at low temperature

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	Linolelaidic acid ((9E,12E)-octadeca-9,12-dienoic acid) is a major positive regulator of CTL activity, an essential nutrient for humans, with anti-inflammatory and anti-parasitic properties. It improves metabolic adaptability, prevents fatigue, and stimulates memory-like phenotypes with exceptional effects. It induces apoptosis and can be used in infection studies.
Targets(IC50)	Apoptosis,Endogenous Metabolite,Parasite
In vitro	Linolelaidic acid (20 $\mu$ M) increased the mRNA and protein expression levels of PCNA, CDK2 and Cyclin E in human umbilical vein smooth muscle cells (HUVSMC). The proliferation effect of Linolelaidic acid on HUVSMC was stronger than that of oleic acid. [1] Linolelaidic acid stimulated the proliferation of MOLT-4 T lymphocytic leukemia cells at concentrations of 100 and 200 $\mu$ M, but inhibited cell growth at concentrations of 400 $\mu$ M. [2]
In vivo	Linolelaidic acid (10 mg/kg, orally, once daily for 4 days) demonstrated antiparasite activity in a mouse model of malaria C57BL/6 induced by P. berghei (ANKA) strain. [3]

## Solubility Information

Solubility	DMSO: 250 mg/mL (891.42 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	3.5657 mL	17.8285 mL	35.657 mL
5 mM	0.7131 mL	3.5657 mL	7.1314 mL
10 mM	0.3566 mL	1.7828 mL	3.5657 mL
50 mM	0.0713 mL	0.3566 mL	0.7131 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

Li XP, et al. Linolelaidic acid induces a stronger proliferative effect on human umbilical vein smooth muscle cells compared to elaidic acid. *Lipids*. 2013 Apr;48(4):395-403.

Sun M, Xu D, Liu D, et al. Stigmasterol from *Prunella vulgaris* L. Alleviates LPS-Induced Mammary Gland Injury by Inhibiting Inflammation and Ferroptosis. *Phytomedicine*. 2025: 156362.

Phoon MC, et al. Linoleic and linolelaidic acids differentially influence proliferation and apoptosis of MOLT-4 leukaemia cells. *Cell Biol Int*. 2001;25(8):777-84.

Melariri P, et al. In vitro and in vivo antimalarial activity of linolenic and linoleic acids and their methyl esters[]]. *Adv Stud Biol*, 2012, 4(7): 333-49.

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