

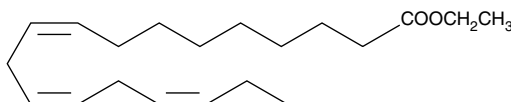
Product Information



Linolenic Acid ethyl ester

Item No. 10008199

CAS Registry No.: 1191-41-9
Formal Name: 9Z,12Z,15Z-octadecatrienoic acid, ethyl ester
Synonyms: Ethyl α -Linolenate, LAEE
MF: C₂₀H₃₄O₂
FW: 306.5
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that linolenic acid ethyl ester (LAEE) be stored as supplied at -20°C. It should be stable for at least one year.

LAEE is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of LAEE in these solvents is approximately 100 mg/ml.

LAEE is sparingly soluble in aqueous buffers. If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent solution into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

α -Linolenic acid (ALA) is an essential fatty acid found in leafy green vegetables. ALA, as part of a low saturated fat diet, helps prevent cardiovascular disease. ALA decreases blood pressure, serum cholesterol levels, and platelet aggregation.¹ LAEE is a neutral, more lipophilic form of the free acid that can be used as an exogenous source of ALA. This ethanol metabolite may contribute to ethanol-induced hepatic fibrogenesis through stimulation of intracellular signaling pathways in hepatic stellate cells (HSC). LAEE increases cyclin E expression and CDK2 activity as well as increases ERK and JNK activity.²

References

1. Allman, M.A., Pena, M.M., and Pang, D. Supplementation with flaxseed oil versus sunflowerseed oil in healthy young men consuming a low fat diet: Effects on platelet composition and function. *Eur. J. Clin. Nutr.* **49**, 169-178 (1995).
2. Li, J., Hu, W., Baldassare, J.J., *et al.* The ethanol metabolite, linolenic acid ethyl ester, stimulates mitogen-activated protein kinase and cyclin signaling in hepatic stellate cells. *Life Sci.* **73**, 1083-1096 (2003).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10008199

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

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