

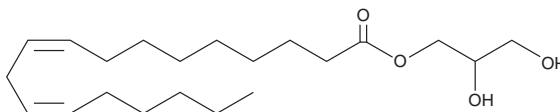
PRODUCT INFORMATION



1-Linoleoyl Glycerol

Item No. 10008869

CAS Registry No.: 2277-28-3
Formal Name: 9Z,12Z-octadecadienoic acid,
1-glyceryl ester
Synonym: 1-LG
MF: C₂₁H₃₈O₄
FW: 354.5
Purity: ≥90%
Supplied as: A solution in acetonitrile
Storage: -80°C
Stability: ≥6 months



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

1-Linoleoyl glycerol (1-LG) is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol and dimethyl formamide purged with an inert gas can be used. The solubility of 1-LG in these solvents is approximately 10 mg/ml.

1-LG is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 1-LG should be diluted with the aqueous buffer of choice. 1-LG has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Platelet-activating factor (PAF) is a biologically active phospholipid synthesized by a variety of stimulated cells that acts as a mediator of platelet aggregation, inflammation, and allergy.^{1,2} PAF is converted to the biologically inactive lyso-PAF by the enzyme PAF acetylhydrolase (PAF-AH). Recently, plasma PAF-AH has been linked to atherosclerosis and may be a positive risk factor for coronary heart disease in humans.³ 1-LG is a fatty acid glycerol that has been isolated from *S. chinensis* roots. It inhibits PAF-AH with an IC₅₀ of 45 μM.⁴ 1-LG has potential application in cholesterol lowering and antiatherogenic activity.

References

1. Prescott, S.M., Zimmerman, G.A., and McIntyre, T.M. Platelet-activating factor. *J. Biol. Chem.* **265**, 17381-17384 (1990).
2. Snyder, F. Platelet-activating factor and related acetylated lipids as potent biologically active cellular mediators. *Am. J. Physiol. Cell Physiol.* **259**, C697-C708 (1990).
3. Caslake, M.J. and Packard, C.J. Lipoprotein-associated phospholipase A₂ (platelet-activating factor acetylhydrolase) and cardiovascular disease. *Curr. Opin. Lipidol.* **14**, 347-352 (2003).
4. Lee, W.S., Kim, M.J., Beck, Y.-I., et al. Lp-PLA₂ inhibitory activities of fatty acid glycerols isolated from *Saururus chinensis* roots. *Bioorganic & Medicinal Chemistry Letters* **15**, 3573-3575 (2005).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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