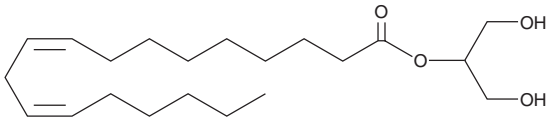
PRODUCT INFORMATION

2-Linoleoyl Glycerol

Item No. 62260

CAS Registry No.:	3443-82-1
Formal Name:	9Z,12Z-octadecadienoic acid, 2-glyceryl ester
Synonym:	2-LG
MF:	$C_{21}H_{38}O_4$
FW:	354.5
Purity:	≥95% (as a 9:1 mixture of the 2-LG and 1-LG)
Supplied as:	A solution in methyl acetate
Storage:	-80°C
Stability:	≥2 years



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

Laboratory Procedures

2-Linoleoyl glycerol (2-LG) is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of 2-LG in ethanol is approximately 25 mg/ml and approximately 30 mg/ml in DMSO and DMF.

2-LG is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the solution of 2-LG should be diluted with the aqueous buffer of choice. The solubility of 2-LG in PBS (pH 7.2) is approximately 140 µg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

2-Arachidonoyl glycerol (2-AG) has been isolated from porcine brain, and has been characterized as the natural endocannabnoid ligand for the CB_1 receptor.[1,2] The congener of 2-AG in which a linoleoyl group replaces the arachidonoyl group is 2-LG, and this compound also appears *in vivo* in conjunction with 2-AG.[3] Although the intrinsic activity of 2-LG is low, it potentiates the activity of other endocannabinoids, including 2-AG. This "entourage" effect has been attributed to blockade of the breakdown and reuptake pathways that normally function to reduce endocannabinoid levels rapidly upon release.

References

1. Sugiura, T., Kodaka, T., Kondo, S., *et al.* 2-Arachidonoylglycerol, a putative endogenous cannabinoid receptor ligand, induces rapid, transient elevation of intracellular free Ca^{2+} in neuroblastoma X glioma hybrid NG108-15 cells. *Biochem. Biophys. Res. Commun.* **229**, 58-64 (1996).
2. Sugiura, T., Kodaka, T., Kondo, S., *et al.* Is the cannabinoid CB_1 receptor a 2-arachidonoylglycerol receptor? Structural requirements for triggering a Ca^{2+} transient in NG108-15 cells. *J. Biochem.* **122**, 890-895 (1997).
3. Ben-Shabat, S., Fride, E., Sheskin, T., *et al.* An entourage effect: inactive endogenous fatty acid glycerol esters enhance 2-arachidonoyl-glycerol cannabinoid activity. *Eur. J. Pharmacol.* **353**, 23-31 (1998).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM