

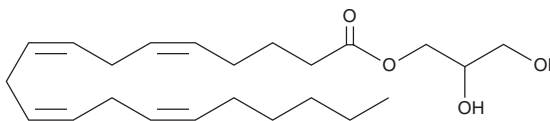
PRODUCT INFORMATION



1-Arachidonoyl Glycerol

Item No. 62150

CAS Registry No.: 35474-99-8
Formal Name: 5Z,8Z,11Z,14Z-eicosatetraenoic acid, 1-glyceryl ester
Synonym: 1-AG
MF: C₂₃H₃₈O₄
FW: 378.6
Purity: ≥95% (as a 9:1 mixture of the 1-AG and 2-AG)
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-Arachidonoyl glycerol (1-AG) 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. A solvent such as ethanol purged with an inert gas can be used. 1-AG is miscible with ethanol.

1-AG is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, evaporate the acetonitrile under a gentle stream of nitrogen and dissolve the 1-AG in ethanol and then dilute with the aqueous buffer of choice. 1-AG has a solubility of approximately 3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. Store aqueous solutions of 1-AG on ice and use within 12 hours of preparation. Although the aqueous solutions of 1-AG may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

Description

The glyceryl esters of arachidonic acid have been proposed as endogenous cannabinoid ligands.¹ 2-AG is 10 to 100 times more potent than 1-AG in ligand binding affinity and agonist activity at the CB₁ receptor, and is thus considered to be the natural ligand.² However, 2-AG is chemically unstable and undergoes rapid isomerization to 1-AG (synonymous with 1(3)-AG) both *in vitro* and *in vivo*. 1-AG is a frequent contaminant in synthetic 2-AG preparations, and can markedly reduce their cannabinergic potency. 1-AG is a weak CB₁ receptor agonist and may have other pharmacologic properties.

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 Ca²⁺ 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 CB₁ receptor a 2-arachidonoylglycerol receptor? Structural requirements for triggering a Ca²⁺ transient in NG108-15 cells. *J. Biochem.* **122**, 890-895 (1997).

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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