

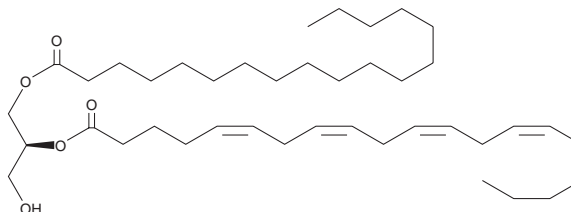
PRODUCT INFORMATION



1-Stearoyl-2-Arachidonoyl-*sn*-Glycerol

Item No. 10008650

CAS Registry No.: 65914-84-3
Formal Name: 1-octadecanoyl-2-(5Z,8Z,11Z,14Z)-eicosatetraenoyl-*sn*-glycerol
Synonym: SAG
MF: C₄₁H₇₂O₅
FW: 645.0
Purity: ≥95%
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

1-Stearoyl-2-arachidonoyl-*sn*-glycerol (SAG) 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 purged with an inert gas can be used. The solubility of SAG in these solvents is approximately 10, 0.3, and 0.2 mg/ml, respectively.

SAG is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of SAG should be diluted with the aqueous buffer of choice. The solubility of SAG in PBS (pH 7.2) is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Many protein kinase C (PKC) isoforms require activation via second messengers including Ca²⁺, diacylglycerol (DAG), and/or a phospholipid to phosphorylate target proteins and they initiate a variety of important signalling cascades.¹ SAG is a DAG that contains the ω-6 polyunsaturated fatty acid arachidonic acid in the *sn*-2 position and stearic acid in the *sn*-1 position of the glycerol backbone. It can potentially activate PKCα, PKCε, and PKCδ at nM concentrations.² Independent of PKC signalling, SAG competitively binds to the Ras activator RasGRP with a K_i value of 4.49 μM in Jurkat T-cells.³

References

1. Bell, R.M. and Burns, D.J. Lipid activation of protein kinase C. *J. Biol. Chem.* **266**(8), 4661-4664 (1991).
2. Madani, S., Hichami, A., Legrand, A., *et al.* Implication of acyl chain diacylglycerols in activation of different isoforms of protein kinase C. *FASEB J.* **15**(14), 2595-2601 (2001).
3. Madani, S., Hichami, A., Charkaoui-Malki, M., *et al.* Diacylglycerols containing ω-3 and ω-6 fatty acids bind to RasGRP and modulate MAP kinase activation. *J. Biol. Chem.* **279**(2), 1176-1183 (2004).

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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