

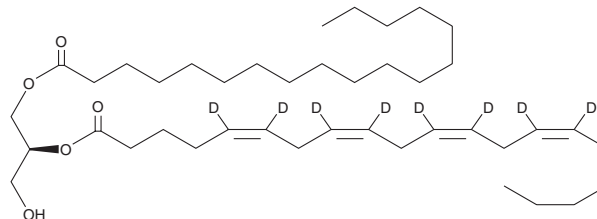
PRODUCT INFORMATION



1-Stearoyl-2-Arachidonoyl-d₈-sn-Glycerol

Item No. 10009872

CAS Registry No.: 2692624-31-8
Formal Name: (5Z,8Z,11Z,14Z)-5,8,11,14-eicosatetraenoic-5,6,8,9,11,12,14,15-d₈ acid, (1S)-1-(hydroxymethyl)-2-[(1-oxooctadecyl)oxy]ethyl ester
Synonym: SAG-d₈
MF: C₄₁H₆₄D₈O₅
FW: 653.1
Chemical Purity: ≥95% (1-Stearoyl-2-Arachidonoyl-sn-Glycerol)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀
Supplied as: A solution in acetonitrile
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-d₈-sn-glycerol (SAG-d₈) is intended for use as an internal standard for the quantification of SAG (Item No. 10008650) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

SAG-d₈ 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 purged with an inert gas can be used. The solubility of SAG-d₈ in ethanol is approximately 30 mg/ml.

Description

Many protein kinase C (PKC) isoforms require activation *via* second messengers including Ca²⁺, diacylglycerol (DAG), and/or a phospholipid in order to phosphorylate target proteins, initiating a variety of important signaling cascades.¹ 1-Stearoyl-2-arachidonoyl-sn-glycerol (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 potently activate PKCα, ε, and δ at nM concentrations.² Independent of PKC signaling, 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**, 4661-4664 (1991).
2. 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).
3. 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**, 2595-2601 (2001).

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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