

Product Name: 2-Arachidonylglycerol

Catalog No.: 1298

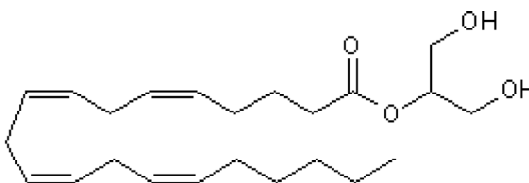
Batch No.: 26

CAS Number: 53847-30-6

IUPAC Name: (5Z,8Z,11Z,14Z)-5,8,11,14-Eicosatetraenoic acid, 2-hydroxy-1-(hydroxymethyl)ethyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₃H₃₈O₄
Batch Molecular Weight: 378.55
Physical Appearance: Light yellow oil
Solubility: ethanol to 100 mM
DMSO to 100 mM
Storage: Store at -80°C
Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

2-Arachidonylglycerol is an endogenous cannabinoid ligand that acts as a potent agonist at GPR55 (EC₅₀ values are 3, 519 and 618 nM at GPR55, CB₁ and CB₂ respectively; K_i values are 472 and 1400 nM at CB₁ and CB₂ respectively). Found in the brain at concentrations 1000-fold higher than that of anandamide. Effects are enhanced by combined administration with 2-palmitoylglycerol (Cat. No. 2206) in vivo. Also antagonizes bacterial quorum sensing receptor QseC. Protects mice from enteric infection by Enterobacteriaceae pathogens.

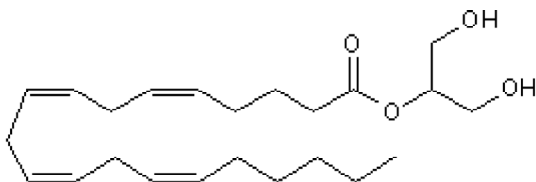
Physical and Chemical Properties:

Batch Molecular Formula: C₂₃H₃₈O₄

Batch Molecular Weight: 378.55

Physical Appearance: Light yellow oil

Batch Molecular Structure:



Storage: Store at -80°C. This product is packaged under an inert atmosphere.

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

ethanol to 100 mM

DMSO to 100 mM

CAUTION - This product is supplied as a lyophilized oil and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Ellermann *et al* (2020) Endocannabinoids inhibit the induction of virulence in enteric pathogens. *Cell*. PMID: 33031742.

Ryberg *et al* (2007) The orphan receptor GPR55 is a novel cannabinoid receptor. *Br.J.Pharmacol.* **152** 1092. PMID: 17876302.

Sugiura *et al* (2000) Evidence that 2-arachidonoylglycerol but not N-palmitoylethanolamine or anandamide is the physiological ligand for the cannabinoid CB₂ receptor. *J.Biol.Chem.* **275** 605. PMID: 10617657.

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