Product Name: 2-Arachidonylglycerol
Catalog No.: 1298
Batch No.: 25
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: C_{23}H_{38}O_{4}
   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

   TLC: R_f = 0.3 (Ethyl acetate:Petroleum ether [1:1])
   
   
   1H NMR: Consistent with structure
   Mass Spectrum: Consistent with structure
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Description:
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; Kᵢ 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.

Physical and Chemical Properties:
Batch Molecular Formula: C₃₂H₃₈O₄
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.

Other Information:
INFORMATION FOR CUSTOMERS IN CANADA ONLY
This product is a Schedule II CDSA controlled substance and customers in Canada require an import permit to purchase this material.

References:
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.