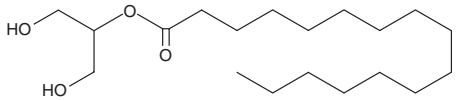
PRODUCT INFORMATION

2-Palmitoyl Glycerol

Item No. 17882

CAS Registry No.: 23470-00-0
Formal Name: 2-hydroxy-1-(hydroxymethyl)ethyl ester hexadecanoic acid
Synonyms: Glycerol-β-palmitate, 2-Hexadecanoyl Glycerol, 2-Monopalmitin, 2-PG
MF: $C_{19}H_{38}O_4$
FW: 330.5
Purity: ≥95% (85:15 mixture of the 2-PG and 1-PG)
Supplied as: A crystalline solid
Storage: -80°C
Stability: ≥1 year



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

2-Palmitoyl glycerol is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-palmitoyl glycerol in the solvent of choice, which should be purged with an inert gas. 2-Palmitoyl glycerol is soluble in the organic solvent dimethyl formamide at a concentration of approximately 50 mg/ml.

Description

2-Arachidonoyl glycerol (2-AG; Item No. 62160) is an endogenous agonist of the CB_1 and CB_2 cannabinoid receptors. 2-Palmitoyl glycerol is a fatty acid ester that does not bind directly to cannabinoid receptors, nor inhibit adenylyl cyclase, but rather potentiates the activity of 2-AG (and other endocannabinoids) to bind to CB_1 and CB_2 and inhibit adenylyl cyclase.[1] This "entourage" effect has been attributed to blockade of the breakdown and reuptake pathways that normally function to reduce endocannabinoid levels rapidly upon release.[1] 2-Palmitoyl glycerol and related endogenous fatty acid derivatives have been shown to interact with endocannabinoids in the modulation of pain sensitivity.[2]

References

1. Ben-Shabat, S., Fride, E., Sheskin, T., *et al.* An entourage effect: Inactive endogenous fatty acid glycerol esters enhance 2-arachidonoyl-glycerol cannabinoid activity. *Eur. J. Pharmacol.* **353(1)**, 23-31 (1998).
2. Walker, J.M., Krey, J.F., Chu, C.J., *et al.* Endocannabinoids and related fatty acid derivatives in pain modulation. *Chem. Phys. Lipids* **121(1-2)**, 159-172 (2002).

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