

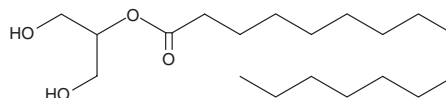
# PRODUCT INFORMATION



## 2-Palmitoyl Glycerol

Item No. 17882

**CAS Registry No.:** 23470-00-0  
**Formal Name:** 2-hydroxy-1-(hydroxymethyl)ethyl ester  
hexadecanoic acid  
**Synonyms:** Glycerol- $\beta$ -palmitate,  
2-Hexadecanoyl Glycerol,  
2-Monopalmitin, 2-PG  
**MF:** C<sub>19</sub>H<sub>38</sub>O<sub>4</sub>  
**FW:** 330.5  
**Purity:**  $\geq$ 95% (85:15 mixture of the 2-PG and 1-PG)  
**Supplied as:** A crystalline solid  
**Storage:** -80°C  
**Stability:**  $\geq$ 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<sub>1</sub> and CB<sub>2</sub> 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<sub>1</sub> and CB<sub>2</sub> and inhibit adenylyl cyclase.<sup>1</sup> This "entourage" effect has been attributed to blockade of the breakdown and reuptake pathways that normally function to reduce endocannabinoid levels rapidly upon release.<sup>1</sup> 2-Palmitoyl glycerol and related endogenous fatty acid derivatives have been shown to interact with endocannabinoids in the modulation of pain sensitivity.<sup>2</sup>

### References

1. Ben-Shabat, S., Frider, 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).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/04/2024

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM