

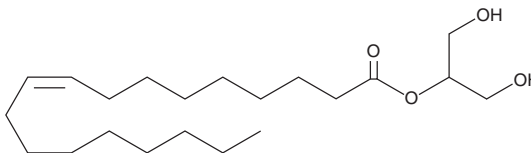
PRODUCT INFORMATION



2-Oleoyl Glycerol

Item No. 16537

CAS Registry No.: 3443-84-3
Formal Name: 2-hydroxy-1-(hydroxymethyl)ethyl ester-9Z-octadecenoic acid
Synonyms: 2-Monoolein, 2-OG
MF: C₂₁H₄₀O₄
FW: 356.5
Purity: ≥98%
Supplied as: A solution in ethanol
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-Oleoyl glycerol (2-OG) is supplied as a solution in ethanol. To change the solvent, simply evaporate the 2-OG under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of 2-OG in ethanol is approximately 15 mg/ml and approximately 10 mg/ml in DMSO and DMF.

2-OG is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 2-OG should be diluted with the aqueous buffer of choice. 2-OG has a solubility of 0.25 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

2-OG is a natural monoacylglycerol with an 18:1 oleoyl group at the *sn*-2 position of glycerol. 2-OG, like 2-arachidonoyl glycerol (2-AG; Item No. 62160), is metabolized by monoacylglycerol lipase, but, unlike 2-AG, it is not metabolized by cyclooxygenases or lipoxygenases.¹⁻³ 2-OG is an agonist of GPR119 (EC₅₀ = 2.5 μM), stimulating the release of glucagon-like peptide-1 from intestinal L-cells.⁴

References

1. Brengdahl, J. and Fowler, C.J. A novel assay for monoacylglycerol hydrolysis suitable for high-throughput screening. *Anal. Biochem.* **359**(1), 40-44 (2006).
2. Ghafouri, N., Tiger, G., Razdan, R.K., *et al.* Inhibition of monoacylglycerol lipase and fatty acid amide hydrolase by analogues of 2-arachidonoylglycerol. *Br. J. Pharmacol.* **143**(6), 774-784 (2004).
3. Woodhams, S.G., Wong, A., Barrett, D.A., *et al.* Spinal administration of the monoacylglycerol lipase inhibitor JZL184 produces robust inhibitory effects on nociceptive processing and the development of central sensitization in the rat. *Br. J. Pharmacol.* **167**(8), 1609-1619 (2012).
4. Hansen, K.B., Rosenkilde, M.M., Knop, F.K., *et al.* 2-Oleoyl glycerol is a GPR119 agonist and signals GLP-1 release in humans. *J. Clin. Endocrinol. Metab.* **96**(9), E1409-E1417 (2011).

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, 06/30/2023

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