

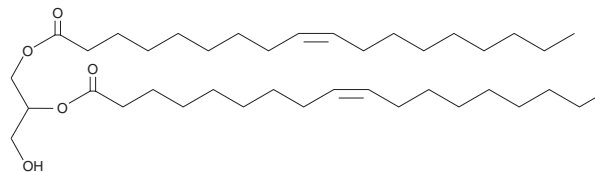
# PRODUCT INFORMATION



## 1,2-Dioleoyl-*rac*-glycerol

Item No. 10007863

**CAS Registry No.:** 2442-61-7  
**Formal Name:** 9Z-octadecenoic acid, 1,1'-[1-(hydroxymethyl)-1,2-ethanediyl] ester  
**Synonyms:** ( $\pm$ )-1,2-Diolein, *rac*-Glycerol 1,2-dioleate  
**MF:** C<sub>39</sub>H<sub>72</sub>O<sub>5</sub>  
**FW:** 621.0  
**Purity:**  $\geq$ 95%  
**Supplied as:** A solution in methyl acetate  
**Storage:** -80°C  
**Stability:**  $\geq$ 2 years



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

### Laboratory Procedures

1,2-Dioleoyl-*rac*-glycerol is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol and dimethyl formamide purged with an inert gas can be used. The solubility of 1,2-dioleoyl-*rac*-glycerol in these solvents is approximately 10 mg/ml.

1,2-Dioleoyl-*rac*-glycerol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 1,2-dioleoyl-*rac*-glycerol should be diluted with the aqueous buffer of choice. 1,2-Dioleoyl-*rac*-glycerol has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

1,2-Dioleoyl-*rac*-glycerol is a diacylglycerol that contains oleic acid at the *sn*-1 and *sn*-2 positions. It effectively binds the C1 domain to activate conventional protein kinase C forms and serves as a substrate for DAG kinases and multisubstrate lipid kinase.<sup>1-3</sup>

### References

1. Yamaguchi, Y., Shirai, Y., Matsubara, T., *et al.* Phosphorylation and up-regulation of diacylglycerol kinase  $\gamma$  via its interaction with protein kinase C  $\gamma$ . *J. Biol. Chem.* **281**(42), 31627-31637 (2006).
2. Zhou, Q., Raynor, R.L., Wood, M.G., Jr., *et al.* Structure-activity relationship of synthetic branched-chain distearoylglycerol (distearin) as protein kinase C activators. *Biochemistry* **27**, 7361-7365 (1988).
3. Epanand, R.M., Shulga, Y.V., Timmons, H.C., *et al.* Substrate chirality and specificity of diacylglycerol kinases and the multisubstrate lipid kinase. *Biochemistry* **46**, 14225-14231 (2007).

#### 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, 10/09/2023

#### 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