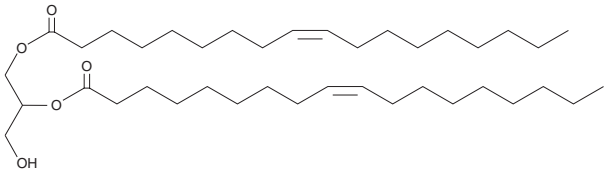
PRODUCT INFORMATION

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:	(±)-1,2-Diolein, *rac*-Glycerol 1,2-dioleate
MF:	$C_{39}H_{72}O_5$
FW:	621.0
Purity:	≥95%
Supplied as:	A solution in methyl acetate
Storage:	-80°C
Stability:	≥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.[1-3]

References

1. Yamaguchi, Y., Shirai, Y., Matsubara, T., *et al.* Phosphorylation and up-regulation of diacylglycerol kinase γ *via* its interaction with protein kinase C γ. *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. Epand, 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).

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