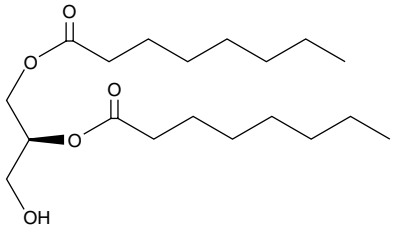
Product Information

1,2-Dioctanoyl-*sn*-glycerol

Item No. 62225

CAS Registry No:	60514-48-9
Formal Name:	1,2-*bis*(O-octanoyl)-*sn*-glycerol
MF:	$C_{19}H_{36}O_5$
FW:	344.5
Purity:	≥ 95%
Stability:	≥ 1 year at -20°C
Supplied as:	A solution in acetonitrile



Laboratory Procedures

For long term storage, we suggest that 1,2-dioctanoyl-*sn*-glycerol be stored as supplied at -20°C. It will be stable for at least one year.

1,2-Dioctanoyl-*sn*-glycerol is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 1,2-dioctanoyl-*sn*-glycerol in these solvents is approximately 7 mg/ml. 1,2-Dioctanoyl-*sn*-glycerol is stable for at least six months in these solvents if stored at -20°C.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of 1,2-dioctanoyl-*sn*-glycerol is needed, it can be prepared by evaporating the acetonitrile and directly dissolving the neat oil in aqueous buffers. The solubility of 1,2-dioctanoyl-*sn*-glycerol in PBS (pH 7.2) is approximately 250 µg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 1,2-dioctanoyl-*sn*-glycerol can be prepared by directly dissolving the neat oil in aqueous buffers. The solubility of 1,2-dioctanoyl-*sn*-glycerol in PBS (pH 7.2) is approximately 250 µg/ml. We do not recommend storing the aqueous solution for more than one day.

1,2-Dioctanoyl-*sn*-glycerol is a cell permeable analog of the protein kinase C-activating second messenger DAG. 1,2-Dioctanoyl-*sn*-glycerol and 1,2-dioleoyl-*sn*-glycerol were nearly equipotent in induction of the acrosome reaction in human sperm.[1]

Reference

1. Doherty, C.M., Tarchala, S.M., Radwanska, E., *et al.* Characterization of two second messenger pathways and their interactions in eliciting the human sperm acrosome reaction. *J. Androl.* **16**, 36-46 (1995).

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