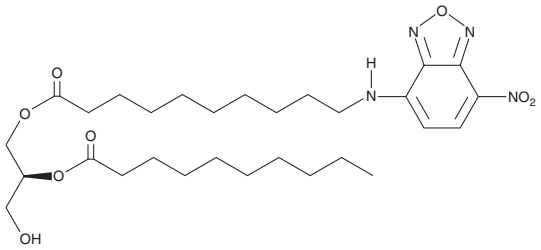
PRODUCT INFORMATION

1-NBD-decanoyl-2-decanoyl-*sn*-Glycerol

Item No. 9000341

Formal Name:	1-NBD-1,2-*bis*(O-decanoyl-*sn*-glycerol)
MF:	$C_{29}H_{46}N_4O_8$
FW:	578.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 229, 334, 464 nm
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

1-NBD-decanoyl-2-decanoyl-*sn*-glycerol is supplied as a solution in ethanol. To change the solvent, simply evaporate the 1-NBD-decanoyl-2-decanoyl-*sn*-glycerol 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 1-NBD-decanoyl-2-decanoyl-*sn*-glycerol in these solvents is approximately 3 mg/ml in DMSO and 10 mg/ml in ethanol and DMF.

Description

1-NBD-decanoyl-2-decanoyl-*sn*-glycerol has the fluorophore nitrobenzoxadiazole (NBD) attached to the ω-end of the terminal decanoyl chain of the model diacylglycerol (DAG), 1,2-didecanoyl-*sn*-glycerol. 1-NBD-decanoyl-2-decanoyl-*sn*-glycerol is likely to have excitation/emission maxima of approximately 470/541 nm, respectively, based on the maxima of various NBD-labeled phospholipids.[1] Fluorescently tagged lipids have been used to study their interactions with proteins, their utilization by cells and liposomes, and for the development of assays for lipid metabolism.[2-6]

References

1. Mazères, S., Schram, V., Tocanne, J.F., *et al.* 7-nitrobenz-2-oxa-1,3-diazole-4-yl-labeled phospholipids in lipid membranes: Differences in fluorescence behavior. *Biophys J.* **71(1)**, 327-335 (1996).
2. Kumagai, K., Yasuda, S., Okemoto, K., *et al.* CERT mediates intermembrane transfer of various molecular species of ceramides. *J. Biol. Chem.* **280(8)**, 6488-6495 (2005).
3. Luo, M., Jones, S.M., Peters-Golden, M., *et al.* Nuclear localization of 5-lipoxygenase as a determinant of leukotriene B4 synthetic capacity. *Proc. Nat. Acad. Sci. USA* **100(21)**, 12165-12170 (2003).
4. Moreno, M.J., Estronca, L.M.B.B., and Vaz, W.L.C. Translocation of phospholipids and dithionite permeability in liquid-ordered and liquid-disordered membranes. *Biophys. J.* **91(3)**, 873-881 (2006).
5. Loidl, A., Claus, R., Deigner, H.P., *et al.* High-precision fluorescence assay for sphingomyelinase activity of isolated enzymes and cell lysates. *J. Lipid Res.* **43(5)**, 815-823 (2002).
6. Tani, M., Okino, N., Mitsutake, S., *et al.* Specific and sensitive assay for alkaline and neutral ceramidases involving C12-NBD-ceramide. *J. Biochem.* **125(4)**, 746-749 (1999).

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