

PRODUCT INFORMATION



1,2,3-Tripalmitoyl-d₃₁ Glycerol

Item No. 28593

CAS Registry No.: 241157-04-0

Formal Name: hexadecanoic-d₃₁ acid,
1,2,3-propanetriyl ester

Synonyms: Glycerol Trihexadecanoate-d₃₁,
Glycerol Tripalmitate-d₃₁,
Glyceryl Tripalmitate-d₃₁,
Trihexadecanoyl Glycerol-d₃₁,
Tripalmitin-d₃₁, Tripalmitoylglycerol-d₃₁

MF: C₅₁H₅D₉₃O₆

FW: 900.9

Chemical Purity: ≥95% (1,2,3-Tripalmitoyl Glycerol)

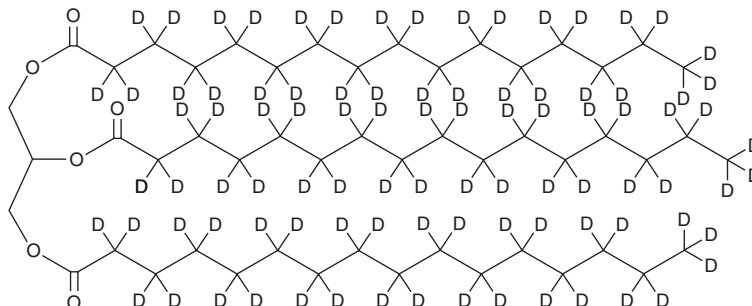
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₉₃); ≤1% d₀

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

1,2,3-Tripalmitoyl-d₃₁ glycerol is intended for use as an internal standard for the quantification of 1,2,3-tripalmitoyl glycerol (Item No. 23334) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

1,2,3-Tripalmitoyl-d₃₁ glycerol is supplied as a crystalline solid. A stock solution may be made by dissolving the 1,2,3-tripalmitoyl-d₃₁ glycerol in the solvent of choice, which should be purged with an inert gas. 1,2,3-Tripalmitoyl-d₃₁ glycerol is soluble in the organic solvent chloroform at a concentration of approximately 1 mg/ml.

Description

1,2,3-Tripalmitoyl glycerol is a triacylglycerol that contains palmitic acid (Item No. 10006627) at the *sn*-1, *sn*-2, and *sn*-3 positions and has been found in palm oil.¹ It inhibits glucose-stimulated insulin secretion and reduces viability of INS1 cells in a concentration-dependent manner.² Myocardial levels of 1,2,3-tripalmitoyl glycerol are elevated by greater than 5-fold in a rat model of diabetes induced by streptozotocin (Item No. 13104).³ 1,2,3-Tripalmitoyl glycerol has been used to form the lipid matrices of etoposide-incorporated nanoparticles.⁴ Formulations containing 1,2,3-tripalmitoyl glycerol have been used in cosmetic products as thickening and skin-conditioning agents.⁵

References

1. Lísá, M. and Holčápek, M. *J. Chromatogr. A* **1198-1199**, 115-130 (2008).
2. Moffitt, J.H., Fielding, B.A., Evershed, R., et al. *Diabetologia* **48(9)**, 1819-1829 (2005).
3. Han, X., Abendschein, D.R., Kelley, J.G., et al. *Biochem J.* **352(Pt. 1)**, 79-89 (2000).
4. Reddy, L.H., Sharma, R.K., Chuttani, K., et al. *AAPS J.* **6(3)**, e23 (2004).
5. Johnson, W., Jr., and C.I.R.E. Panel *Int. J. Toxicol.* **20(Suppl 4)**, 61-94 (2001).

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.

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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