

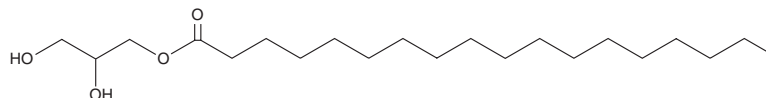
# PRODUCT INFORMATION



## 1-Stearoyl-*rac*-glycerol

Item No. 26827

**CAS Registry No.:** 123-94-4  
**Formal Name:** octadecanoic acid,  
2,3-dihydroxypropyl ester  
**Synonyms:** 18:0-MG, MG(18:0/0:0/0:0),  
1-Monostearin, NSC 3875  
**MF:** C<sub>21</sub>H<sub>42</sub>O<sub>4</sub>  
**FW:** 358.6  
**Purity:** ≥98%  
**Supplied as:** A 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-Stearoyl-*rac*-glycerol is supplied as a solid. A stock solution may be made by dissolving the 1-stearoyl-*rac*-glycerol in the solvent of choice, which should be purged with an inert gas. 1-Stearoyl-*rac*-glycerol is soluble in the organic solvent chloroform at a concentration of approximately 50 mg/ml.

### Description

1-Stearoyl-*rac*-glycerol is a monoacylglycerol that contains stearic acid (Item No. 10011298) at the *sn*-1 position. 1-Stearoyl-*rac*-glycerol levels are decreased in tumor tissue in a mouse model of azoxymethane-induced colorectal carcinogenesis.<sup>1</sup> Levels of 1-stearoyl-*rac*-glycerol are decreased in lung tissue from patients with adenocarcinoma, but are increased in the serum of patients with Buruli ulcer and in the cerebrospinal fluid of patients with the inflammatory demyelinating diseases multiple sclerosis (MS), neuromyelitis optica spectrum disorder (NMOSD), and idiopathic transverse myelitis (ITM).<sup>2-4</sup> 1-Stearoyl-*rac*-glycerol has been used in the composition of transfersomes for transdermal delivery of doxorubicin (Item No. 15007) in rats, leading to doxorubicin accumulation in lymph nodes, spleen, and heart.<sup>5</sup>

### References

1. Montrose, D.C., Zhou, X.K., Kopelovich, L., *et al.* Metabolic profiling, a noninvasive approach for the detection of experimental colorectal neoplasia. *Cancer Prev. Res. (Phila)*. **5(12)**, 1358-1367 (2012).
2. Wikoff, W.R., Grapov, D., Fahrman, J.F., *et al.* Metabolomic markers of altered nucleotide metabolism in early stage adenocarcinoma. *Cancer Prev. Res. (Phila)*. **8(5)**, 410-418 (2015).
3. Niang, F., Sarfo, F.S., Frimpong, M., *et al.* Metabolomic profiles delineate mycolactone signature in Buruli ulcer disease. *Sci. Rep.* **5:17693** (2015).
4. Park, S.J., Jeong, I.H., Kong, B.S., *et al.* Disease type- and status-specific alteration of CSF metabolome coordinated with clinical parameters in inflammatory demyelinating diseases of CNS. *PLoS One* **11(11)**, e0166277 (2016).
5. Kong, M., Hou, L., Wang, J., *et al.* Enhanced transdermal lymphatic drug delivery of hyaluronic acid modified transfersomes for tumor metastasis therapy. *Chem. Commun. (Camb)*. **51(8)**, 1453-1456 (2015).

#### 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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