

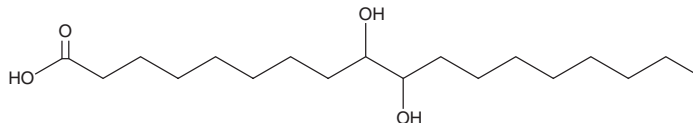
# PRODUCT INFORMATION



## 9,10-Dihydroxystearic Acid

Item No. 28612

**CAS Registry No.:** 120-87-6  
**Formal Name:** 9,10-dihydroxy-octadecanoic acid  
**Synonym:** NSC 60305  
**MF:** C<sub>18</sub>H<sub>36</sub>O<sub>4</sub>  
**FW:** 316.5  
**Purity:** ≥95%  
**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

9,10-Dihydroxystearic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 9,10-dihydroxystearic acid in the solvent of choice, which should be purged with an inert gas. 9,10-Dihydroxystearic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 9,10-dihydroxystearic acid in these solvents is approximately 5, 10, and 25 mg/ml, respectively.

9,10-Dihydroxystearic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 9,10-dihydroxystearic acid should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 9,10-Dihydroxystearic acid has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

9,10-Dihydroxystearic acid is an oxidation product of oleic acid (Item Nos. 90260 | 24659) that can be formed from oleic acid in HepG2 cells.<sup>1</sup> It activates peroxisome proliferator-activated receptor  $\alpha$  (PPAR $\alpha$ ) in CV-1 cells when used at concentrations ranging from 50 to 100  $\mu$ M.<sup>2</sup> 9,10-Dihydroxystearic acid (4% in the diet) decreases blood glucose levels, increases insulin sensitivity, and decreases body weight in high-fat diet-fed KKAy diabetic mice.

### References

1. Jing, H.-J., Zhang, Y.-H., Wang, J., *et al.* Conversion of oleic acid to 9,10-dihydroxystearic acid in human hepatic cancer HepG2 cells. *Junyi Jinxiu Xueyuan Xuebao* **31(6)**, 597-599 (2010).
2. Yu, X., Zhang, Y., Liu, Y., *et al.* Effects of 9,10-dihydroxystearic acid on glucose metabolism in KKAy mice. *Wei Sheng Yan Jiu* **39(4)**, 423-425 (2010).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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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