

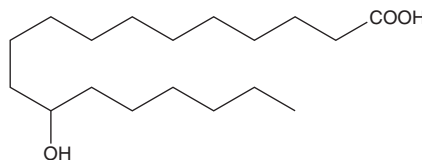
# PRODUCT INFORMATION



## 12-hydroxy Stearic Acid

Item No. 34558

CAS Registry No.: 106-14-9  
Formal Name: 12-hydroxy-octadecanoic acid  
Synonyms: 12-HSA, NSC 2385  
MF:  $C_{18}H_{36}O_3$   
FW: 300.5  
Purity:  $\geq 95\%$   
Supplied as: A solid  
Storage:  $-20^{\circ}\text{C}$   
Stability:  $\geq 4$  years



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

### Laboratory Procedures

12-hydroxy Stearic acid is supplied as a solid. A stock solution may be made by dissolving the 12-hydroxy stearic acid in the solvent of choice, which should be purged with an inert gas. 12-hydroxy Stearic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 12-hydroxy stearic acid in these solvents is approximately 10 mg/ml.

### Description

12-hydroxy Stearic acid is a hydroxy fatty acid produced by the hydrogenation of ricinoleic acid (Item No. 10009369).<sup>1</sup> It is a low molecular weight gelator that self-assembles to form organogels.<sup>2</sup> Administration of paclitaxel (Item No. 10461) in 12-hydroxy stearic acid-containing gel nanocarriers enhances tumor growth suppression in an H22 murine hepatocellular carcinoma model.<sup>3</sup> Formulations containing 12-hydroxy stearic acid have been used in cosmetic products as emollients.

### References

1. Fameau, A.-L. and Rogers, M.A. The curious case of 12-hydroxystearic acid – the Dr. Jekyll & Mr. Hyde of molecular gelators. *Curr. Opin. Colloid Interface Sci.* **45**, 68-82 (2020).
2. Burkhardt, M., Noirez, L., and Gradzielski, M. Organogels based on 12-hydroxy stearic acid as a leitmotif: Dependence of gelation properties on chemical modifications. *J. Colloid Interface Sci.* **466**, 369-376 (2016).
3. He, W., Lv, Y., Zhao, Y., *et al.* Core-shell structured gel-nanocarriers for sustained drug release and enhanced antitumor effect. *Int. J. Pharm.* **484(1-2)**, 163-171 (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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