

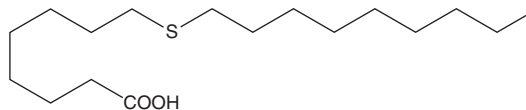
# Product Information



## 9-Thiastearic Acid

Catalog No. 10007417

**CAS Registry No.:** 106689-24-1  
**Formal Name:** 8-(nonylthio)-octanoic acid  
**MF:** C<sub>17</sub>H<sub>34</sub>O<sub>2</sub>S  
**FW:** 472.3  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that 9-thiastearic acid be stored as supplied at -20°C. It should be stable for at least two years.

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

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 9-thiastearic acid can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of 9-thiastearic acid in PBS (pH 7.2) is approximately 0.15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Heteroatom-substituted fatty acids have been observed to modulate the extension and desaturating of fatty acids, and to influence their distribution within phospholipids pools.<sup>1,2</sup> 9-Thiastearic acid inhibits desaturation of radiolabeled stearate to oleate in rat hepatocytes and hepatoma cells by more than 80% at a concentration of 25 μM.<sup>3</sup> This activity is associated with a hypolipidemic effect, making this 9-thiastearic acid a useful tool for evaluating new anti-obesity therapeutics.

### References

1. Wu, P., Grav, H.J., Horn, R., *et al.* Effects of chain length and sulphur position of thia fatty acids on their incorporation into phospholipids in 7800 C1 hepatoma cells and isolated rat hepatocytes, and their effects on fatty acid composition of phospholipids. *Biochem. Pharmacol.* **51**, 751-758 (1996).
2. Pascal, R.A., Jr. and Ziering, D.L. Synthesis of heteroatom-substituted analogues of stearic acid. *J. Lipid Res.* **27**, 221-224 (1986).
3. Høvik, K.E., Spydevold, Ø.S., and Bremer, J. Thia fatty acids as substrates and inhibitors of stearyl-CoA desaturase. *Biochim. Biophys. Acta* **1349**, 251-256 (1997).

### Related Products

Stearoyl Ethanolamide - Cat. No. 90245 • 3-Thiatetradecanoic Acid - Cat. No. 90500

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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