

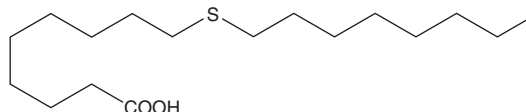
# PRODUCT INFORMATION



## 10-Thiastearic Acid

Item No. 10007417

CAS Registry No.: 105099-89-6  
Formal Name: 9-(octylthio)-nonanoic acid  
MF:  $C_{17}H_{34}O_2S$   
FW: 302.5  
Purity:  $\geq 98\%$   
Supplied as: A crystalline solid  
Storage:  $-20^{\circ}C$   
Stability:  $\geq 2$  years



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

### Laboratory Procedures

10-Thiastearic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 10-thiastearic acid in the solvent of choice, which should be purged with an inert gas. 10-Thiastearic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 10-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 10-thiastearic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 10-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.

### Description

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> 10-Thiastearic acid inhibits desaturation of radiolabeled stearate to oleate in rat hepatocytes and hepatoma cells by more than 80% at a concentration of 25  $\mu M$ .<sup>3</sup> This activity is associated with a hypolipidemic effect, making this 10-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(6)**, 751-758 (1996).
2. Pascal, R.A., Jr. and Ziering, D.L. Synthesis of heteroatom-substituted analogues of stearic acid. *J. Lipid Res.* **27(2)**, 221-224 (1986).
3. Hovik, K.E., Spydevold, O.S., and Bremer, J. Thia fatty acids as substrates and inhibitors of stearyl-CoA desaturase. *Biochim. Biophys. Acta* **1349(3)**, 251-256 (1997).

#### 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