

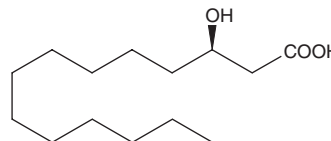
# PRODUCT INFORMATION



## (R)-3-hydroxy Myristic Acid

Item No. 16871

**CAS Registry No.:** 28715-21-1  
**Formal Name:** 3R-hydroxy-tetradecanoic acid  
**Synonyms:** (R)-3-hydroxy Tetradecanoic Acid,  
FA 14:0;O  
**MF:** C<sub>14</sub>H<sub>28</sub>O<sub>3</sub>  
**FW:** 244.4  
**Purity:** ≥98%  
**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

(R)-3-hydroxy Myristic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the (R)-3-hydroxy myristic acid in the solvent of choice, which should be purged with an inert gas. (R)-3-hydroxy Myristic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (R)-3-hydroxy myristic acid in ethanol and DMF is approximately 15 mg/ml and approximately 10 mg/ml in DMSO.

### Description

Lipopolysaccharides (LPS) are components of the cell walls of Gram-negative bacteria. LPS is composed of polysaccharides and lipid A, where lipid A is a phosphoglycolipid containing acyl chains composed of 10 to 16 carbons.<sup>1,2</sup> The lipid A component of LPS is detected by Toll-like receptor 4 of mammalian leukocytes and, thus, is a key determinant in immune response.<sup>1</sup> (R)-3-hydroxy Myristic acid is a form of the 14:0 lipid myristic acid (Item No. 13351) that is found in the lipid A component of some Gram-negative bacteria, including *Escherichia*, *Haemophilus*, *Actinobacillus*, and *Campylobacter* species.<sup>2,3</sup>

### References

1. Raetz, C.R., Reynolds, C.M., Trent, M.S., *et al.* Lipid A modification systems in Gram-negative bacteria. *Annu. Rev. Biochem.* **76**, 295-329 (2007).
2. Rietschel, E.T., Kirikae, T., Schade, F.U., *et al.* Bacterial endotoxin: Molecular relationships of structure to activity and function. *FEBS J.* **8(2)**, 217-225 (1994).
3. Masoud, H., Weintraub, S.T., Wang, R., *et al.* Investigation of the structure of lipid A from *Actinobacillus actinomycetemcomitans* strain Y4 and human clinical isolate PO 1021-7. *Eur. J. Biochem.* **200(3)**, 775-781 (1991).

#### 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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