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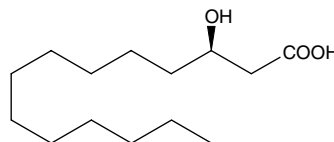
Product Information



R-3-Hydroxymyristic Acid

Item No. 16871

CAS Registry No.: 28715-21-1
Formal Name: 3R-hydroxy-tetradecanoic acid
MF: C₁₄H₂₈O₃
FW: 244.4
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that R-3-hydroxymyristic acid be stored as supplied at -20°C. It should be stable for at least two years.

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

R-3-hydroxymyristic acid is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

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.^{1,2} 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.¹ R-3-Hydroxymyristic 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.^{2,3}

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).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/16871

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

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 Safety Data Sheet, which has been sent via email to your institution.

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