

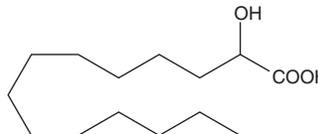
PRODUCT INFORMATION



2-hydroxy Myristic Acid

Item No. 90390

CAS Registry No.: 2507-55-3
Formal Name: 2-hydroxytetradecanoic acid
Synonym: FA 14:0;O, 2-hydroxy Tetradecanoic Acid
MF: C₁₄H₂₈O₃
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

2-hydroxy Myristic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-hydroxy myristic acid in the solvent of choice. 2-hydroxy Myristic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 2-hydroxy myristic acid in these solvents is approximately 37, 27, and 30 mg/ml, respectively.

2-hydroxy Myristic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 2-hydroxy myristic acid should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 2-hydroxy Myristic acid has a solubility of approximately 0.35 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

2-hydroxy Myristic acid is a hydroxy fatty acid that has been found in bovine, human, and horse milk, cow and buffalo cheeses, sea bass filet, seal oil, human vernix caseosa, and wool wax.¹ It inhibits cleavage between the enterovirus capsid proteins VP4 and VP2, a process required for enterovirus infectivity, as well as Junin and Tacaribe viral replication (IC₅₀s = 20.1 and 14.2 μM, respectively).^{2,3} 2-hydroxy Myristic acid was previously characterized as a weak inhibitor of peptide myristoylation (K_i = 200 μM) but has been shown to be inactive in ARL1 cells when used at 100 μM.^{4,5}

References

1. Jenske, R. and Vetter, W. Concentrations of medium-chain 2- and 3-hydroxy fatty acids in foodstuffs. *Food Chem.* **114**(3), 1122-1129 (2009).
2. Tan, Y.W., Hong, W.J., and Chu, J.J. Inhibition of enterovirus VP4 myristoylation is a potential antiviral strategy for hand, foot and mouth disease. *Antiviral Res.* **133**, 191-195 (2016).
3. Cordo, S.M., Candurra, N.A., and Damonte, E.B. Myristic acid analogs are inhibitors of Junin virus replication. *Microbes Infect.* **1**(8), 609-614 (1999).
4. Paige, L.A., Zheng, G.-Q., DeFrees, S.A., et al. Metabolic activation of 2-substituted derivatives of myristic acid to form potent inhibitors of myristoyl CoA:protein N-myristoyltransferase. *Biochemistry* **29**(46), 10566-10573 (1990).
5. Kallemeijn, W.W., Lueg, G.A., Faronato, M., et al. Validation and invalidation of chemical probes for the human N-myristoyltransferases. *Cell. Chem. Biol.* **26** (2019).

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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