

PRODUCT DATA SHEET

3-Hydroxyheptadecanoic acid

Catalog number: 1741

Common Name: 3-Hydroxy C17:0 acid

Source: synthetic

Solubility: ethanol, methanol

CAS number: N/A

Molecular Formula: C₁₇H₃₄O₃

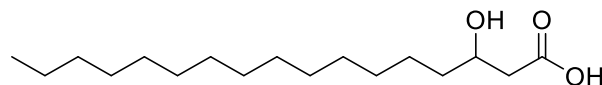
Molecular Weight: 286

Storage: -20°C

Purity: TLC >98%, GC >98%; identity confirmed by MS

TLC System: hexane/ethyl ether/acetic acid (65:35:2 by vol.)

Appearance: solid



Application Notes:

3-Hydroxyheptadecanoic acid is a high purity standard that is ideal as a standard or for biological systems. This odd numbered fatty acid is unusual in many biological systems and can therefore be used as a biomarker. 3-Hydroxyheptadecanoic acid has been used to characterize certain bacteria such as some gliding bacteria.¹ 3-Hydroxy fatty acids have been found to be converted to the *omega*-fatty acid by the enzyme CYP4F11 and then into dicarboxylic acids *in vivo*.² 3-hydroxy fatty acids are used as biomarkers for fatty acid oxidative disorders of both the long- and short-chain 3-hydroxy-acyl-CoA dehydrogenases.^{3,4}

Selected References:

1. P. Srisukchayakul et al. "*Rapidithrix thailandica* gen. nov., sp. nov., a marine gliding bacterium isolated from samples collected from the Andaman sea, along the southern coastline of Thailand" *IJSEM*, vol. 57 pp. 2275-2279, 2007
2. M. Dhar et al. "Omega oxidation of 3-hydroxy fatty acids by the human CYP4F gene subfamily enzyme CYP4F11" *Journal of Lipid Research*, vol. 49, pp. 612-624, 2008
3. P. Jones et al. "Improved Stable Isotope Dilution-Gas Chromatography-Mass Spectrometry Method for Serum or Plasma Free 3-Hydroxy-Fatty Acids and Its Utility for the Study of Disorders of Mitochondrial Fatty Acid β -Oxidation" *Clinical Chemistry*, vol. 46, pp. 149-155, 2000
4. P. Jones et al. "Accumulation of free 3-hydroxy fatty acids in the culture media of fibroblasts from patients deficient in long-chain 1-3-hydroxyacyl-CoA dehydrogenase: a useful diagnostic aid" *Clinical Chemistry*, vol. 47(7) pp. 1190-1194, 2001

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