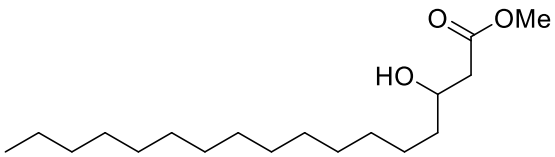
PRODUCT DATA SHEET

Methyl 3-hydroxyheptadecanoate

Catalog number: 1742
Common names: 3-Hydroxy C17:0 methyl ester
Source: synthetic
Solubility: ethanol, methanol
CAS number: 112538-92-8
Molecular Formula: $C_{18}H_{36}O_3$

Molecular Weight: 300
Storage: -20°C
Purity: TLC: >98%, GC: >98%; identity confirmed by MS
TLC System: hexane/ethyl ether (70:30)
Appearance: solid



Application Notes:

This product is a high purity 3-hydroxy fatty acid methyl ester that is ideal as a standard and for biological systems. This odd numbered fatty acid is unusual in many biological systems and can therefore often 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 *beta*-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 l-3-hydroxyacyl-CoA dehydrogenase: a useful diagnostic aid" *Clinical Chemistry*, vol. 47(7) pp. 1190-1194, *2001*

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