

PRODUCT DATA SHEET

3-Hydroxyhexanoic acid

Catalog number: 1747

Common Name: 3-Hydroxy C6:0 fatty acid

Source: synthetic

Solubility: chloroform, ethanol, methanol

CAS number: 10191-24-9

Molecular Formula: C₆H₁₂O₃

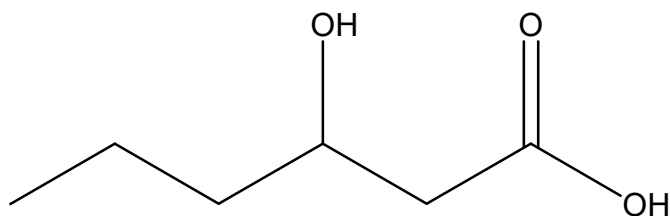
Molecular Weight: 132

Storage: -20°C

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

TLC System: hexane/ethyl ether/acetic acid (60:40:2 by vol.)

Appearance: liquid



Application Notes:

This 3-hydroxyhexanoic acid is a high purity standard that is useful for the investigation of disorders and diseases. Polyhydroxyalkenoates, polyesters produced by bacteria fermentation, are used for carbon and energy storage and are of interest in studies regarding their synthesis, properties and mechanisms. Short chain-length polyhydroxyalkenoate monomers such as 3-hydroxyhexanoic acid may have pharmaceutical properties. The biologically natural chiral (R)-3-hydroxyhexanoic acid is an intermediate in fatty acid biosynthesis. 3-hydroxyhexanoic acid has been found in patients with ketoacidosis.¹ 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.^{2,3}

Selected References:

1. T. Niwa, K. Yamada, T. Ohki, H. Furukawa "3-Hydroxyhexanoic acid: an abnormal metabolite in urine and serum of diabetic ketoacidotic patients" *Journal of Chromatography*, vol. 337 pp. 1-7, 1985
2. 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
3. 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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