

## PRODUCT DATA SHEET

### 3-Hydroxydodecanoic acid

**Catalog number:** 1731

**Common Name:** 3-Hydroxy C12:0 acid

**Source:** synthetic

**Solubility:** methanol, ethanol

**CAS number:** 1883-13-2

**Molecular Formula:** C<sub>12</sub>H<sub>24</sub>O<sub>3</sub>

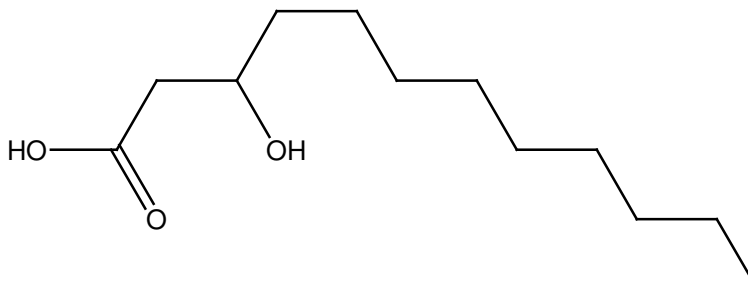
**Molecular Weight:** 216

**Storage:** -20°C

**Purity:** TLC >98%, GC >98%

**TLC System:** hexane/ethyl ether/acetic acid,  
(70:30:2 by vol.)

**Appearance:** solid



### **Application Notes:**

This 3-hydroxydodecanoic 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. Medium chain-length polyhydroxyalkenoate monomers such as 3-hydroxydodecanoic acid may have pharmaceutical properties. The biologically natural chiral (R)-3-hydroxydodecanoic acid is an intermediate in fatty acid biosynthesis. 3-Hydroxydodecanoic acid is the major fatty acid in some lipopolysaccharides.<sup>1</sup> 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.<sup>2,3</sup>

### **Selected References:**

1. K. Kunii et al. "A new extraction method for Acinetobacter species ODB-L2 rough form lipopolysaccharide from culture broth" *Microbios.*, vol. 105:412 pp. 153-61, 2001
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 1-3-hydroxyacyl-CoA dehydrogenase: a useful diagnostic aid" *Clinical Chemistry*, vol. 47(7) pp. 1190-1194, 2001

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