

PRODUCT DATA SHEET

22-Hydroxydocosanoic acid

Catalog number: 1818

Common Name: *omega*-Hydroxy C22:0 fatty acid

Source: synthetic

Solubility: chloroform/methanol, 2:1

CAS number: 506-45-6

Molecular Formula: C₂₂H₄₄O₃

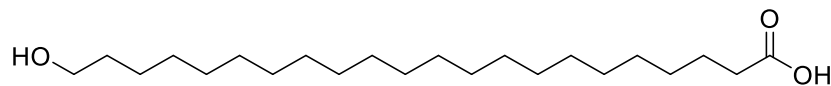
Molecular Weight: 356

Storage: room temperature

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

TLC System: chloroform/methanol/acetic acid (97:3:1 by vol.)

Appearance: solid



Application Notes:

This product is a high purity *omega*-hydroxy long chain fatty acid that is ideal as a standard and for biological studies. *Omega*-oxidation is a minor fatty acid pathway used for fatty acid metabolism and usually occurs in the smooth endoplasmic reticulum. Docosanoic acid is enzymatically converted to the 22-hydroxydocosanoic acid as well as to the docosanoic dicarboxylic acid as part of the *omega*-oxidation metabolic pathway.¹ 22-Hydroxydocosanoic acid is the major aliphatic constituent of green cotton fibers but a very minor component of white cotton fibers.² Stimulation of *omega*-hydroxylation has been proposed as a method for treating X-linked adrenoleukodystrophy, a disease that is characterized by elevated levels of very long chain fatty acids.³

Selected References:

1. R. Sanders et al. "Evidence for two enzymatic pathways for omega-oxidation of docosanoic acid in rat liver microsomes" *Journal of Lipid Research*, Vol. 46(5) pp. 1001-1008, 2005
2. L. Yatsu, K. Espelie, P. Kolattukudy "Ultrastructural and chemical evidence that the cell wall of green cotton fiber is suberized" *Plant Physiology*, Vol. 73(2) pp. 521-524, 1983
3. R. Sanders et al. "Omega-Oxidation of Very Long-Chain Fatty Acids in Human Liver Microsomes: Implications for X-Linked Adrenoleukodystrophy" *Journal of Biological Chemistry*, Vol. 281 pp. 13180-13187, 2006

This product is to be used for research only. It is not intended for drug or diagnostic use, human consumption or to be used in food or food additives. Matreya assumes no liability for any use of this product by the end user. We believe the information, offered in good faith, is accurate.