

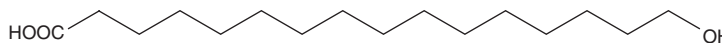
PRODUCT INFORMATION



16-hydroxy Hexadecanoic Acid

Item No. 9000789

CAS Registry No.: 506-13-8
Formal Name: 16-hydroxy-hexadecanoic acid
Synonyms: FA 16:0;O,
16-hydroxy Palmitic Acid,
Juniperic Acid
MF: C₁₆H₃₂O₃
FW: 272.4
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

16-hydroxy Hexadecanoic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 16-hydroxy hexadecanoic acid in the solvent of choice, which should be purged with an inert gas. 16-hydroxy Hexadecanoic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 16-hydroxy hexadecanoic acid in ethanol is approximately 2.5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

16-hydroxy Hexadecanoic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 16-hydroxy hexadecanoic acid should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 16-hydroxy Hexadecanoic acid has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

16-hydroxy Hexadecanoic acid is a metabolite of the saturated fatty acid palmitic acid (16:0) that has been hydroxylated on its terminal (ω) carbon. It is produced by ω -hydroxylation of palmitic acid by cytochrome P450 in both plants and animals.¹⁻⁴ In plants, it is commonly a component of cutin.^{1,5}

References

1. Li, H., Pinot, F., Sauveplane, V., *et al.* Cytochrome P450 family member CYP704B2 catalyzes the ω -hydroxylation of fatty acids and is required for anther cutin biosynthesis and pollen exine formation in rice. *Plant Cell* **22**(1), 173-190 (2010).
2. Benveniste, I., Saito, T., Wang, Y., *et al.* Evolutionary relationship and substrate specificity of *Arabidopsis thaliana* fatty acid ω -hydroxylase. *Plant Sci.* **170**(2), 326-8 (2006).
3. Roman, L.J., Palmer, C.N.A., Clark, J.E., *et al.* Expression of rabbit cytochromes P450A4 which catalyze the ω -hydroxylation of arachidonic acid, fatty acid, and prostaglandins. *Arch. Biochem. Biophys.* **307**(1), 57-65 (1993).
4. Aoyama, T., Hardwick, J.P., Imaoka, S., *et al.* Clofibrate-inducible rat hepatic P450s IVA1 and IVA3 catalyze the ω - and (ω -1)-hydroxylation of fatty acids and the (ω -1)-hydroxylation of prostaglandins E₁ and F_{2 α} . *J. Lipid Res.* **31**(8), 1477-82 (1990).
5. Peshel, S., Franke, R., Schreiber, L., *et al.* Composition of the cuticle of developing sweet cherry fruit. *Phytochemistry* **68**(7), 1017-25 (2007).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM