

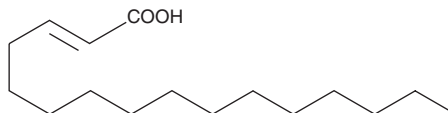
# PRODUCT INFORMATION



## $\Delta^2$ -trans-Hexadecenoic Acid

Item No. 11132

CAS Registry No.: 929-79-3  
Formal Name: 2E-hexadecenoic acid  
Synonym: FA 16:1  
MF: C<sub>16</sub>H<sub>30</sub>O<sub>2</sub>  
FW: 254.4  
Purity: ≥95%  
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

$\Delta^2$ -trans-Hexadecenoic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the  $\Delta^2$ -trans-hexadecenoic acid in the solvent of choice, which should be purged with an inert gas.  $\Delta^2$ -trans-Hexadecenoic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of  $\Delta^2$ -trans-hexadecenoic acid in these solvents is approximately 30 mg/ml.

$\Delta^2$ -trans-Hexadecenoic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers,  $\Delta^2$ -trans-hexadecenoic acid should first be dissolved in ethanol and then diluted with the aqueous buffer of choice.  $\Delta^2$ -trans-Hexadecenoic acid has a solubility of approximately 0.25 mg/ml in a 1:7 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Formation of *cis* monoenoic acids from unsaturated fatty acids, such as palmitoleic acid (9-*cis*-hexadecenoic acid) from palmitic acid occurs readily in animal tissues.<sup>1</sup>  $\Delta^2$ -trans-Hexadecenoic acid is an intermediate formed in the  $\beta$ -oxidation of palmitic acid.<sup>2</sup> In a model meant to simulate gastric ulceration,  $\Delta^2$ -trans-hexadecenoic acid at 10 mg/kg significantly inhibits gastric juice secretion in pylorus-ligated rats.<sup>3</sup>

### References

1. Nakano, M. and Fujino, Y. Enzymatic formation of hexadecenoic acid from palmitic acid. *Agr. Biol. Chem.* **39**(3), 707-710 (1975).
2. Jones, J.A. and Blecher, M. Synthesis and characterization of 3-ketohexadecanoic acid-1-14C, DL-3-hydroxyhexadecanoic acid-1-14C, and trans-2-hexadecenoic acid-1-14C. *J. Lipid Res.* **7**(3), 422-426 (1966).
3. Mimura, T., Kohda, I., Maeda, K., *et al.* Inhibitory effects of unsaturated fatty acids of trans-2-C10:1 to trans-2-C16:1 several C18:n on gastric secretion and experimental ulceration in rats. *J. Pharmacobiodyn.* **6**(8), 527-538 (1983).

#### 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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