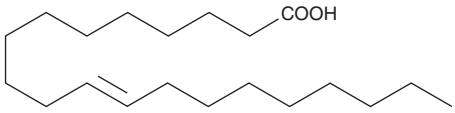
PRODUCT INFORMATION

11(E)-Eicosenoic Acid

Item No. 22578

CAS Registry No.:	62322-84-3
Formal Name:	11E-eicosenoic acid
Synonyms:	*trans*-11-Eicosenoic Acid, FA 20:1
MF:	$C_{20}H_{38}O_2$
FW:	310.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 204 nm
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

11(E)-Eicosenoic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 11(E)-eicosenoic acid in the solvent of choice. 11(E)-Eicosenoic acid is soluble in the organic solvent ethanol, which should be purged with an inert gas, at a concentration of approximately 20 mg/ml.

11(E)-Eicosenoic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 11(E)-eicosenoic acid should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 11(E)-Eicosenoic acid has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

11(E)-Eicosenoic acid is a very long-chain ω-9 fatty acid that is a *trans* monounsaturated isomer of arachidic acid (Item No. 9000339). 11(E)-Eicosenoic acid is one of several monounsaturated 20-carbon fatty acids.[1] The combined C20:1 isomers constitute 70% of the total fatty acid pool in jojoba seed oil isolated from plants in the Arizona desert. Unlike other eicosenoic fatty acids, 11(E)-eicosenoic acid does not inhibit leukotriene B_4 (K_i = 1,150 µM in a radioligand binding assay in pig neutrophil membranes) or affect telomerase activity.[2,3]

References

1. Miwa, T.K. Jojoba oil wax esters and derived fatty acids and alcohols: Gas chromatographic analyses. *J. Am. Chem. Soc.* **48(6)**, 259-264 (1971).
2. Yagaloff, K.A., Franco, L., Simko, B., *et al.* Essential fatty acids are antagonists of the leukotriene B_4 receptor. *Prostaglandins, Leukot. Essent. Fatty Acids* **52(5)**, 293-297 (1995).
3. Eitsuka, T., Nakagawa, K., Suzuki, T., *et al.* Polyunsaturated fatty acids inhibit telomerase activity in DLD-1 human colorectal adenocarcinoma cells: A dual mechanism approach. *Biochim Biophys. Acta.* **1737(1)**, 1-10 (2005).

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