

PRODUCT DATA SHEET

9(Z),11(Z)-Octadecadienoic acid

Catalog No: 1248

Common Name: 9-*cis*,11-*cis* CLA

Source: Synthetic

Solubility: chloroform, ethanol, methanol,
ethyl ether

CAS No: 544-70-7

Molecular Formula: C₁₈H₃₂O₂

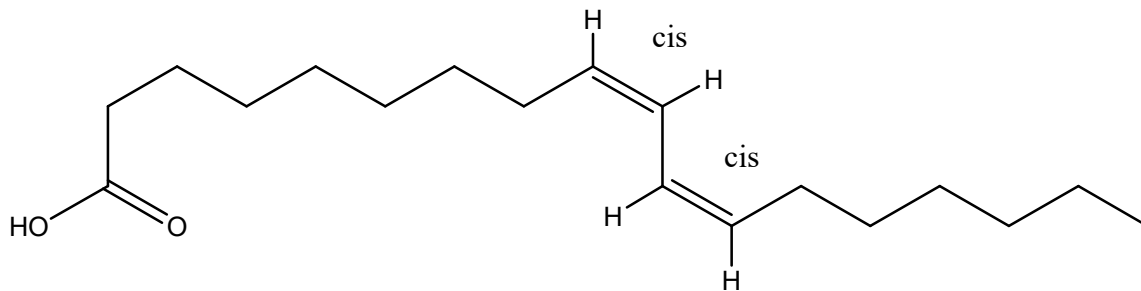
Molecular Weight: 280

Storage: -20°C

Purity: TLC >96%, GC >96%; identity
confirmed by MS

TLC System: hexane/ethyl ether/acetic acid
(80:20:1 by Vol.)

Appearance: solid



Application notes:

9(Z),11(Z)-Octadecadienoic acid is a conjugated linoleic acid (CLA), an isomer of linoleic acid. CLA is found mostly in lipids originating in ruminant animals including dairy products. It has several biological properties including anti-carcinogenic activity, suppressing *in vitro* growth of human melanoma, colorectal, and breast cancer cells, and exhibiting anti-atherogenic activity.¹ It is thought that CLA itself may not have anti-oxidant capabilities but may produce substances which protect cells from the detrimental effects of peroxides. Due to its being a minor component it is very helpful as a comparison to the major isomers 9(Z),11(E)-CLA and 10(E),12(Z)-CLA. 9(Z),11(Z)-CLA has been demonstrated to have a more potent antiproliferative effect than the more common 9(Z),11(E)-CLA isomer when incubated with human colon cancer cells.

Selected References:

1. Helen B. MacDonald "Conjugated Linoleic Acid and Disease Prevention: A Review of Current Knowledge" *Journal of the American College of Nutrition*, Vol. 19, No. 90002, 111S-118S, 2000
2. Mairéad Coakley, Mark C. Johnson, Emma McGrath, Shafiqur Rahman, R. Paul Ross, Gerald F. Fitzgerald, Rosaleen Devery, Catherine Stanton "Intestinal Bifidobacteria That Produce *trans*-9, *trans*-11 Conjugated Linoleic Acid: A Fatty Acid With Antiproliferative Activity Against Human Colon SW480 and HT-29 Cancer Cells" *Nutrition and Cancer*, 56(1) pp. 95-102, 2006

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