

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 anticarcinogenic 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:

 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

 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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