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PRODUCT DATA SHEET

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

Catalog number: 1245; 1245-1; 1245-10

Synonyms: 9-cis, 11-trans CLA; Bovinic acid;
Rumenic acid

Source: Synthetic

Solubility: Chloroform, Ethanol, Hexane,
Methanol, DMSO

CAS NO: 2540-56-9

Molecular Formula: C₁₈H₃₂O₂

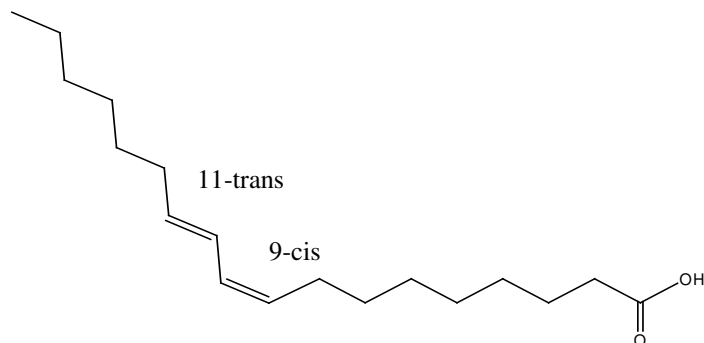
Molecular Weight: 280

Storage: -20°C

Purity: TLC: >98%; GC: >98%

TLC System: Hexane/ Ethyl ether/ Acetic acid
(80: 20: 1 by Vol.)

Appearance: Liquid



IUPAC Name: (9Z, 11E)octadeca-9,11-dienoic acid

Application notes:

9(Z),11(E)-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. 9(Z),11(E)-Octadecadienoic acid is the major natural isomer of CLA constituting 73% to 93% of the total CLA in dairy products² and it appears to be the most biologically active isomer. It appears to enhance animal growth and inhibit osteoclast formation and activity from human cells,³ as well as decrease LDL:HDL and total:HDL cholesterol levels in humans.⁴

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. M. Belury, "DIETARY CONJUGATED LINOLEIC ACID IN HEALTH: Physiological Effects and Mechanisms of Action" *Annual Review of Nutrition*, July Vol. 22: 505, 2002
3. Ilana Platt, Ahmed El-Soheby "Effects of 9cis,11trans and 10trans,12cis CLA on osteoclast formation and activity from human CD14+ monocytes" *Lipids in Health and Disease*, 8:15, 2009
4. S. Tricon, et al., "Opposing effects of cis-9,trans-11 and trans-10,cis-12 conjugated linoleic acid on blood lipids in healthy humans" *The American Journal of Clinical Nutrition*, 80:614, 2004

All chemicals listed are for investigational research purposes only. They are not intended for human consumption or to be used in food or food additives. None are for general drug or medicinal use on humans. We believe that the information, offered in good faith, is accurate.

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