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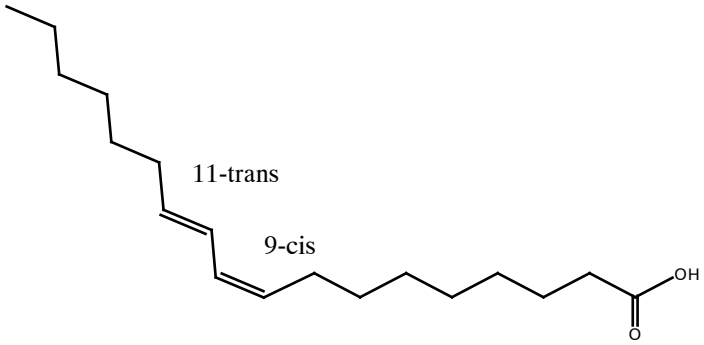
PRODUCT DATA SHEET

製品名: 9(Z),11(E)-Octadecadienoic acid

カタログ番号: 1245; 1245-1; 1245-10
別名: SPM; 9-cis, 11-trans CLA; Bovinic acid, Rumenic acid
由来: Synthetic
溶解度: chloroform, Ethanol, Hexane, Methanol, DMSO
CAS 番号: 2540-56-9

分子式: $C_{18}H_{82}O_2$
分子量: 280
保存温度: -20 ºC
純度: TLC >98%; GC: >98%
TLC 溶媒: Hexane/ Ethyl ether/ Acetic acid (80:20:1 by vol.)
形状: Liquid



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 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. 9(Z),11(E)-Octadecadienoic acid is the major natural isomer of CLA constituting 73% to 93% of the total CLA in dairy products[2] 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]

アプリケーションノート
9(Z),11(E)-オクタデカジエノイン酸は共役リノール酸（CLA）であり、リノール酸の異性体です。CLA は、そのほとんどが乳製品を含めた反芻動物由来の脂質に見られます。抗発がん活性、ヒト黒色腫や直腸・結腸、乳癌細胞の in vitro での成長抑制、抗アテローム形成活性といった様々な生物学的な特徴があります。CLA自体は抗酸化能力を持っていませんが、過酸化水素の有害な効果から細胞を保護する物質を産生していると思われます。9(Z),11(E)-オクタデカジエノイン酸は乳製品中にあるCLAの 73 % から 93 % を占める主要な天然異性体で、最も生物学的に活性のある異性体だと明らかにされています。動物の成長を促し、ヒト細胞由来の破骨細胞(Osteoclast)形成と活性を防ぎ、ヒトのLDL:HDLとtotal:HDLコレステロール量を減少させることも明らかにされています。

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-Sohemy "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*