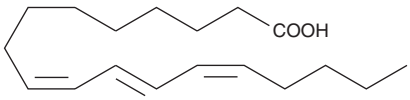
PRODUCT INFORMATION

9(Z),11(E),13(Z)-Octadecatrienoic Acid

Item No. 26057

CAS Registry No.: 544-72-9
Formal Name: 9Z,11E,13Z-octadecatrienoic acid
Synonyms: FA 18:3, Punicic Acid, Trichosanic Acid
MF: $C_{18}H_{30}O_2$
FW: 278.4
Purity: ≥98%
UV/Vis.: λ_{max}: 264, 274, 286 nm
Supplied as: A solution in methanol
Storage: -20°C
Stability: ≥1 year



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

9(Z),11(E),13(Z)-Octadecatrienoic acid is supplied as a solution in methanol. To change the solvent, simply evaporate the 9(Z),11(E),13(Z)-octadecatrienoic acid under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of 9(Z),11(E),13(Z)-octadecatrienoic acid in these solvents is approximately 20, 10, and 30 mg/ml, respectively.

Description

9(Z),11(E),13(Z)-Octadecatrienoic acid is an ω-5 long-chain polyunsaturated fatty acid and an isomer of 9(E),11(E),13(E)-octadecatrienoic acid (Item No. 22976) and of conjugated linoleic acids.[1] It has been found as a major component in pomegranate seed oil, making up approximately 65% of the fatty acid content.[2] 9(Z),11(E),13(Z)-Octadecatrienoic acid binds to the ligand-dependent transactivation domain (AF2) of PPARγ (IC_{50} = 2.5 µM) and increases PPARα and PPARγ activity in 3T3-L1 cells in a reporter assay.[1]

References

1. Hontecillas, R., O'Shea, M., Einerhand, A., *et al.* Activation of PPARγ and α by punicic acid ameliorates glucose tolerance and suppresses obesity-related inflammation. *J. Am. Coll. Nutr.* **28(2)**, 184-195 (2009).
2. Schubert, S.Y., Lansky, E.P., and Neeman, I. Antioxidant and eicosanoid enzyme inhibition properties of pomegranate seed oil and fermented juice flavonoids. *J. Ethnopharmacol.* **66(1)**, 11-17 (1999).

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