

Product Data Sheet

Product Name: Pinolenic Acid

Cat. No.: GC41647

Chemical Properties

Cas. No. 16833-54-8

Chemical Name 5Z,9Z,12Z-octadecatrienoic acid

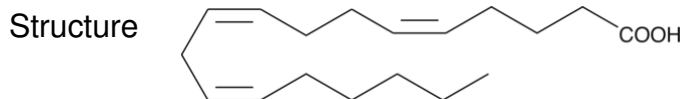
SMILES CCCCC/C=C\C/C=C\C/C=C\CCCC(=O)O

Formula $C_{18}H_{30}O_2$ M.Wt 278.4

Solubility 30mg/mL in DMSO or DMF Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.



Background

Pinolenic acid is a polyunsaturated fatty acid found in Korean pine (*Pinus orientalis*) and maritime pine (*Pinus pinaster*) seed oils. Both oils have been found to have lipid-lowering properties. A diet containing maritime pine seed oil (MPSO) lowered HDL and ApoA1 levels in transgenic mice expressing human ApoA1. MPSO was found to diminish cholesterol efflux in vitro.[1] Korean pine seed oil supplements may help in obesity by reduction of appetite. People taking this oil had an increase in the satiety hormones CCK and GLP-1 and a reduced desire to eat.[2] The activity of the oil is attributed to pinolenic acid. Pinolenic acid is not converted to arachidonic acid metabolically and can reduce arachidonic acid levels in the phosphatidylinositol fraction of HepG2 cells from 15.9% to 7.0%.[3]

Reference:

[1]. Asset, G., Leroy, A., Bauge, E., et al. Effects of dietary maritime pine (*Pinus pinaster*)-seed oil on

Caution: Product has not been fully validated for medical applications. For research use only.

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high-density lipoprotein levels and in vitro cholesterol efflux in mice expressing human apolipoprotein A-I. British Journal of Nutrition 84, 353-360 (2000).

[2]. Causey, J.L. Korean pine nut fatty acids induce satiety-producing hormone release in overweight human volunteers. The 231st ACS National Meeting,.

[3]. Tamotsu, T., Tatsunori, T., Morishige, J., et al. Non-methylene-interrupted polyunsaturated fatty acids: Effective substitute for arachidonate of phosphatidylinositol. Biochemical and Biophysical Research Communications 264, 683-688 (1999)..

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