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- Expressversand

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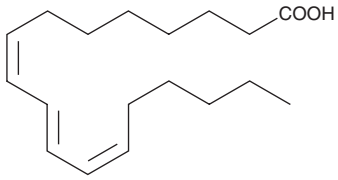
PRODUCT INFORMATION

Jacaric Acid

Item No. 16036

CAS Registry No.: 28872-28-8
Formal Name: 8Z,10E,12Z-octadecatrienoic acid
Synonym: 8(Z),10(E),12(Z)-octadecatrienoic acid
MF: $C_{18}H_{30}O_2$
FW: 278.4
Purity: ≥95%
UV/Vis.: λ_{max}: 273, 284 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Jacaric acid is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of jacaric acid in ethanol is approximately 100 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Jacaric acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanol solution of jacaric acid should be diluted with the aqueous buffer of choice. Jacaric acid has a solubility of 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Jacaric acid is a conjugated polyunsaturated fatty acid first isolated from seeds of *Jacaranda* plants.[1] Structurally, it is an 18-carbon ω-6 triene isomer of γ-linolenic acid (Item No. 90220). Jacaric acid induces cell cycle arrest and apoptosis in a variety of cancer cell lines (GI_{50} = 1-5 µM).[2-4] It increases the production of reactive oxygen species, and cytotoxicity is abolished by the antioxidant α-tocopherol, suggesting that apoptosis results from oxidative stress.[3,4] Jacaric acid is metabolized *in vivo* to conjugated linoleic acid (Item No. 90140), which is also cytotoxic to cancer cells.[5] Jacaric acid inhibits cyclooxygenase-1 *in vitro* (K_i =1.7 µM) and, with long term feeding, decreases stearoyl-CoA desaturase expression and activity in mice.[6,7]

References

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