

Product Data Sheet

Product Name: Geranylgeranoic Acid

Cat. No.: GC47399

Chemical Properties

Cas. No. 83807-40-3

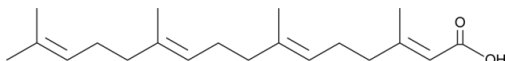
SMILES C/C(C)=C/CC/C(C)=C/CC/C(C)=C/CC/C(C)=C/C(O)=O

Formula C₂₀H₃₂O₂ M.Wt 304.5

Solubility Methyl Acetate: 1 mg/ml Storage Store at -80°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.

Structure 

Background

Geranylgeranoic acid (GGA) is an isoprenoid that has been found in *S. chinensis* and has anticancer activity.¹ It induces apoptosis in Huh7 and PLC/PRF/5 human hepatoma cells and MLE-10 transformed mouse hepatocytes, but not primary mouse hepatocytes, when used at concentrations ranging from 1 to 20 μM. GGA (10 μM) induces apoptosis in Huh7 cells via loss of the mitochondrial membrane potential and activation of interleukin-1β-converting enzyme (ICE) and cysteine protease precursor 32 (CPP32).² It also inhibits lysine-specific demethylase 1 (LSD1; IC₅₀ = 46.97 μM).³

1. Shidoji, Y., and Ogawa, H. Natural occurrence of cancer-preventive geranylgeranoic acid in medicinal herbs. *J. Lipid Res.* 45(6):1092-1103 (2004)
2. Shidoji, Y., Nakamura, N., Moriwaki, H., et al. Rapid loss in the mitochondrial membrane potential during geranylgeranoic acid-induced apoptosis. *Biochem. Biophys. Res. Commun.* 230(1):58-63 (1997)
3. Sakane, C., Okitsu, T., Wada, A., et al. Inhibition of lysine-specific demethylase 1 by the acyclic diterpenoid geranylgeranoic acid and its derivatives. *Biochem. Biophys. Res. Commun.* 444(1):24-29 (2014)

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA