

Geranylgeranoic Acid

Chemical Properties

CAS No. :	83807-40-3
Formula:	C ₂₀ H ₃₂ O ₂
Molecular Weight:	304.474
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Geranylgeranoic acid (GGA) is an isoprenoid that has been found in <i>S. chinensis</i> and has anticancer activity. 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). It also inhibits lysine-specific demethylase 1 (LSD1; IC ₅₀ = 46.97 μM). ³
Targets(IC50)	Others

Solubility Information

Solubility	Methyl Acetate: 1 mg/mL (3.28 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2844 mL	16.422 mL	32.844 mL
5 mM	0.6569 mL	3.2844 mL	6.5688 mL
10 mM	0.3284 mL	1.6422 mL	3.2844 mL
50 mM	0.0657 mL	0.3284 mL	0.6569 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Shidoji, Y., and Ogawa, H. Natural occurrence of cancer-preventive geranylgeranoic acid in medicinal herbs. *Lipid Res.* 45(6)1092-1103(2004)

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)

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)

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