

Dihomo- γ -linolenic acid

Chemical Properties

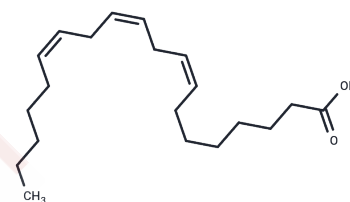
CAS No. : 1783-84-2

Formula: C₁₆H₂₆N₅O₅S₂

Molecular Weight: 306.48

Storage:

Store at low temperature, Keep away from moisture,
Keep away from direct sunlight
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	Dihomo- γ -linolenic acid (DGLA) is a fatty acid widely found in plants with antitumor and antiproliferative effects, inhibits the growth of xenograft tumor cells, and can be used in the study of inflammation-related diseases such as rheumatoid arthritis, atherosclerosis, and atopic dermatitis.
Targets(IC50)	Endogenous Metabolite
In vitro	In THP-1 macrophages, Dihomo- γ -linolenic acid (50 μ M; 24 hours) attenuates IFN- γ -induced phosphorylation of STAT1 at serine 727[2].
In vivo	In 48 four-week-old female nude mice, administration of 8 mg per mouse via oral gavage twice a week for 35 days suppressed the metastatic potential of D5D-KD tumors [3].

Solubility Information

Solubility	Ethanol: 100 mg/mL (326.29 mM), Sonication is recommended. DMSO: 140 mg/mL (456.8 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (10.77 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2629 mL	16.3143 mL	32.6286 mL
5 mM	0.6526 mL	3.2629 mL	6.5257 mL
10 mM	0.3263 mL	1.6314 mL	3.2629 mL
50 mM	0.0653 mL	0.3263 mL	0.6526 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

Wang X, et al. Multiple roles of dihomo- γ -linolenic acid against proliferation diseases. *Lipids Health Dis.* 2012 Feb 14;11:25.

Gallagher H, et al. Dihomo- γ -linolenic acid inhibits several key cellular processes associated with atherosclerosis. *Biochim Biophys Acta Mol Basis Dis.* 2019 Sep 1;1865(9):2538-2550.

Yang X, et al. Dihomo- γ -linolenic acid inhibits growth of xenograft tumors in mice bearing human pancreatic cancer cells (BxPC-3) transfected with delta-5-desaturase shRNA. *Redox Biol.* 2019 Jan;20:236-246.

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