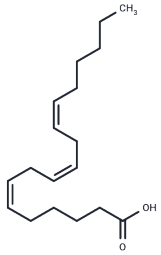
Data Sheet (Cat.No.T4868)

TargetMol

gamma-Linolenic acid

Chemical Properties



CAS No. : 506-26-3

Formula: C18H30O2

Molecular Weight: 278.43

Storage: Store at low temperature
Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	gamma-Linolenic acid (gamolenic acid), is an unsaturated fatty acid synthesized from linoleic acid (LA) by the enzyme delta-6-desaturase. Research on hepatocellular cell lines has shown γ-Linolenic Acid to have induced reactive oxygen species generation including lipid peroxidation, cell growth inhibition, and heme oxygenase-1 production for antioxidant protection against oxidative stress. Further experiments have noted that γ-Linolenic acid inhibits inflammatory responses through inactivation of NFκB and activator protein-1 by suppressed oxidative stress.
Targets(IC50)	Apoptosis,ERK,NF-κB,Endogenous Metabolite,JNK

Solubility Information

Solubility	Ethanol: 27.8 mg/mL (99.85 mM) DMSO: 55 mg/mL (197.54 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: 2 mg/mL (7.18 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5916 mL	17.9578 mL	35.9157 mL
5 mM	0.7183 mL	3.5916 mL	7.1831 mL
10 mM	0.3592 mL	1.7958 mL	3.5916 mL
50 mM	0.0718 mL	0.3592 mL	0.7183 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

Sinha R , Ahn J , Sampson J N , et al. Fecal Microbiota, Fecal Metabolome, and Colorectal Cancer Interrelations[J]. PLOS ONE, 2016, 11(3):e0152126.
Dercksen M , Kulik W , Mienie L J , et al. Polyunsaturated fatty acid status in treated isovaleric acidemia patients[J]. European Journal of Clinical Nutrition, 2016, 70(10).
Ziboh V A , Miller C C , Cho Y . Metabolism of polyunsaturated fatty acids by skin epidermal enzymes: generation of antiinflammatory and antiproliferative metabolites[J]. American Journal of Clinical Nutrition, 2000, 71(1 Suppl): 361S.
Kankaanpää P E , Salminen S J , Isolauri E , et al. The influence of polyunsaturated fatty acids on probiotic growth and adhesion. FEMS Microbiology Letters, 2001, 194(2):149-153.