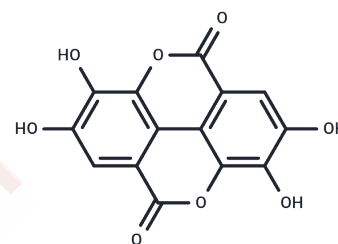


Ellagic acid

Chemical Properties

CAS No. :	476-66-4
Formula:	C ₁₄ H ₆ O ₈
Molecular Weight:	302.19
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	Ellagic acid (Gallogen), a thickened tetracyclic natural product, is a potent CK2 inhibitor (IC ₅₀ =40 nM; K _i =20 nM) with ATP-competitive properties. Ellagic acid is an antioxidant and also possesses antiproliferative activity.
Targets(IC ₅₀)	Hedgehog/Smoothed,Casein Kinase,Reactive Oxygen Species,Endogenous Metabolite,Syk,Carbonic Anhydrase,Phosphatase,PKA,PKC,ROS,Topoisomerase
In vitro	METHODS: Human pancreatic cancer cell lines PANC-1, AsPC-1 and MIA PaCA-2 were treated with Ellagic acid (10-1000 μM) for 24-72 h. Cell viability was measured by MTT assay. RESULTS: The proliferation of PANC-1 was inhibited by the addition of 10 μM Ellagic acid in a dose-dependent manner. The proliferation of AsPC-1 was inhibited by the addition of 100 μM Ellagic acid, while the proliferation of MIA PaCA-2 was inhibited only by the addition of 1000 μM Ellagic acid. [1] METHODS: Human lung cancer cells A549 were treated with Ellagic acid (5-20 μM) for 48 h, and the expression levels of target proteins were detected by Western Blot. RESULTS: Ellagic acid treatment significantly down-regulated the phosphorylation of PI3K and Akt in a dose-dependent manner. [2]
In vivo	METHODS: To investigate the hepatoprotective effects on alcohol-induced liver disease (ALD), Ellagic acid (50-100 mg/kg suspended in 0.5% CMC-Na) was administered by gavage once daily for four weeks to ICR mice receiving 50% (v/v) alcohol orally daily. RESULTS: Ellagic acid attenuated oxidative stress, inflammatory response, steatosis and gut microbiota dysbiosis in ALD mice. [3]

Solubility Information

Solubility	DMSO: 3.03 mg/mL (10.03 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 0.15 mg/mL (0.5 mM),Solution. <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	3.3092 mL	16.5459 mL	33.0918 mL
5 mM	0.6618 mL	3.3092 mL	6.6184 mL
10 mM	0.3309 mL	1.6546 mL	3.3092 mL
50 mM	0.0662 mL	0.3309 mL	0.6618 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

- Kim JY, et al. Determining the effect of ellagic acid on the proliferation and migration of pancreatic cancer cell lines. *Transl Cancer Res.* 2021 Jan;10(1):424-433.
- Hwang Y H, Jang S A, Kim T, et al. Anti-osteoporotic and Anti-adipogenic Effects of *Rhus chinensis* Nutgalls in Ovariectomized Mice Fed with a High-fat Diet. *Planta Medica.* 2019, 85(14/15): 1128-1135
- Liu Q, et al. Ellagic acid promotes A549 cell apoptosis via regulating the phosphoinositide 3-kinase/protein kinase B pathway. *Exp Ther Med.* 2018 Jul;16(1):347-352.
- Wu Z, Hu L, Ru K, et al. Ellagic Acid inhibits CDK12 to increase osteoblast differentiation and alleviate osteoporosis in hindlimb-unloaded and ovariectomized mice. *Phytomedicine.* 2023: 154745.
- Zhao L, et al. Protective Effects of Ellagic Acid Against Alcoholic Liver Disease in Mice. *Front Nutr.* 2021 Sep 14;8: 744520.
- Hu Q, Wang S, Cheng R, et al. Tannins in *Phyllanthus emblica* L. improves Cisplatin efficacy in lung cancer cells by boosting endoplasmic reticulum stress to trigger Immunogenic Cell Death. *Phytomedicine.* 2023: 155219.
- Seo J, Hwang Y H, Lee A, et al. Ethanolic Extract of *Bergenia purpurascens* Exhibits Antimelanogenic Effects in B16F10 Cells through Multiple Mechanisms That Suppress Tyrosinase. *Journal of Agricultural and Food Chemistry.* 2024

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