Data Sheet (Cat.No.T0877)

TargetMol

Gallic acid

Chemical Properties

CAS No. : 149-91-7

Formula: C7H6O5

Molecular Weight: 170.12

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	Gallic acid (Benzoic acid) is found in almost all plants. Plants known for their high gallic acid content include gallnuts,grapes,tea,hops and oak bark.
Targets(IC50)	Apoptosis,Ferroptosis,Reactive Oxygen Species,Endogenous Metabolite,COX,ROS
In vitro	Gallic acid does not protect against H(2)O(2)-induced PC12 cell death. It reduced the viability of PC12 cells in a dose-dependent manner. Gallic acid also induces cleavage of poly (ADP-ribose) polymerase, which is strongly related to apoptosis in neurons. Gallic acid induces the phosphorylation of c-Jun N-terminal protein kinase (JNK) and the downregulation of Bcl-2 in PC12 cells. Gallic acid leads to a progressive reduction in the viability of vector-transfected PC12 cells, which is delayed in PC12 cells that overexpressed Bcl-2[2].
In vivo	Gallic acid effectively protects rat erythrocytes. The antioxidant effect of the compound at the tested dosage in vivo was more prevalent than its prooxidative effects. Gallic acid has ameliorative effect on lipid peroxidation in vivo[1].
Cell Research	Cell viability is measured using the MTT assay. PC12 cells are incubated at 37?C with Water2 or gallic acid at different concentrations for 24 h with or without pretreatment with resveratrol. They are then treated with the MTT solution (final concentration, 1 mg/mL) for 2 h. The dark-blue formazan crystals that formed in intact cells are dissolved in DMSO, and the absorbance at 570 nm is measured using a micro-ELISA reader.(Only for Reference)

Solubility Information

Solubility	H2O: 7 mg/mL (41.15 mM),Sonication is recommended. Ethanol: 32 mg/mL (188.1 mM),Sonication is recommended. DMSO: 255 mg/mL (1498.94 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: 5 mg/mL (29.39 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	5.8782 mL	29.391 mL	58.782 mL
5 mM	1.1756 mL	5.8782 mL	11.7564 mL
10 mM	0.5878 mL	2.9391 mL	5.8782 mL
50 mM	0.1176 mL	0.5878 mL	1.1756 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

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