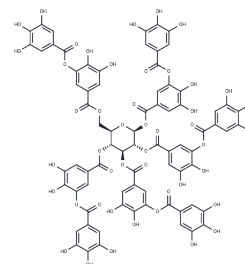


Tannic acid

Chemical Properties

CAS No. :	1401-55-4
Formula:	C76H52O46
Molecular Weight:	1701.206
Storage:	Keep away from moisture Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	Tannic acid (Gallotannic acid) is a novel hERG channel blocker.
Targets(IC50)	CXCR,Potassium Channel
In vitro	<p>METHODS: Rat cardiomyocytes H9C2 were treated with Tannic acid (5-50 μM) for 24 h. Cell viability was determined by CCK-8 Assay.</p> <p>RESULTS: Treatment of H9C2 cells with Tannic acid concentration \geq 30 μM resulted in a significant decrease in cell viability. [1]</p> <p>METHODS: Human lung cancer cells A549 were treated with Tannic acid (20-60 μM) for 24-48 h. Cell cycle was measured by Flow cytometry.</p> <p>RESULTS: Tannic acid inhibited cell viability in a dose-dependent manner at 24 h, with higher inhibition after 48 h. The IC50 values for Tannic acid were estimated to be in the range of 40-60 μM at 24 h and 20-40 μM at 48 h. [1]</p> <p>METHODS: Human lung cancer cells A549 were treated with Tannic acid (20-60 μM) for 24-48 h. Cell cycle was measured by Flow cytometry. [2]</p>
In vivo	<p>METHODS: To investigate the effects on oxidative stress mice, Tannic acid (2.5-10 mg/kg) was administered orally to diquat-induced oxidative stress C57BL/6J mouse model once daily for ten days.</p> <p>RESULTS: Tannic acid pretreatment in the oxidative stress mouse model failed to alter antioxidant enzymes but modulated jejunal morphology, colon length, antioxidant pathways, and intestinal barrier in the diquat oxidative model. [3]</p>

Solubility Information

Solubility	DMSO: 270.00 mg/mL (158.71 mM),Sonication is recommended. H2O: 17.24 mg/mL (10.13 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: 5.00 mg/mL (2.94 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</i>

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In vivo Formulation	<i>vary and should be modified based on specific experimental conditions.</i>
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.5878 mL	2.9391 mL	5.8782 mL
5 mM	0.1176 mL	0.5878 mL	1.1756 mL
10 mM	0.0588 mL	0.2939 mL	0.5878 mL
50 mM	0.0118 mL	0.0588 mL	0.1176 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

Yang YP, et al. Tannic acid alleviates lipopolysaccharide-induced H9C2 cell apoptosis by suppressing reactive oxygen species-mediated endoplasmic reticulum stress. *Mol Med Rep.* 2021 Jul;24(1):535.

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Li X W, Yuan S C, Wang M, et al. Rosmarinic acid ameliorates autoimmune responses through suppression of intracellular nucleic acid-mediated type I interferon expression. *Biochemical and Biophysical Research Communications.* 2023

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