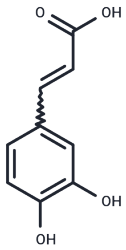
Data Sheet (Cat.No.T2807)

TargetMol

Caffeic Acid

Chemical Properties



CAS No. : 331-39-5

Formula: C9H8O4

Molecular Weight: 180.16

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	Caffeic acid is a dual inhibitor of 5-lipoxygenase and TRPV1 ion channels.
Targets(IC50)	Endogenous Metabolite,Lipoxygenase,TRP/TRPV Channel
In vitro	**METHODS**: Human A549 cells were treated with Caffeic Acid for 48 h, and cell growth inhibition was measured using MTT assay. **RESULTS**: Caffeic Acid inhibited the growth of A549 cells (IC50=0.7 mM). [1] **METHODS**: Human AGS and HCT-116 cells were treated with Caffeic Acid for 96 hours, and cell growth inhibition was detected using MTT assay. **RESULTS**: Caffeic Acid inhibited the growth of AGS (IC50=129 μM) and HCT-116 (IC50=29.73 μM) cells. [2]
In vivo	**METHODS**: To study the anti-pruritus effect of Caffeic Acid, Caffeic Acid (500 mg/kg) was orally administered to mice induced by histamine and chloroquine. **RESULTS**: Caffeic acid pretreated mice showed significantly less histamine-induced scratching and chloroquine-induced scratching. [3]

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 250 mg/mL (1387.66 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 (27.75 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	5.5506 mL	27.7531 mL	55.5062 mL
5 mM	1.1101 mL	5.5506 mL	11.1012 mL
10 mM	0.5551 mL	2.7753 mL	5.5506 mL
50 mM	0.111 mL	0.5551 mL	1.1101 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

Cassien M, et al. On the vasoprotective mechanisms underlying novel β-phosphorylated nitrones: Focus on free radical characterization, scavenging and NO-donation in a biological model of oxidative stress. Eur J Med Chem. 2016 Aug 25;119:197-217.

Jang S A, Hwang Y H, Yang H, et al. Ethanolic extract of Pyrrosia lingua (Thunb.) Farw. ameliorates OVX-induced bone loss and RANKL-induced osteoclastogenesis. Biomedicine & Pharmacotherapy. 2022, 147: 112640.

Ben Salem S, Jabrane A, Harzallah-Skhiri F, Ben Jannet H. New bioactive dihydrofuranocoumarins from the roots of the Tunisian Ferula lutea (Poir.) Maire. Bioorg Med Chem Lett. 2013 Jul 15;23(14):4248-52.

Pradhananga S,et al. Caffeic acid exhibits anti-pruritic effects by inhibition of multiple itch transmission pathways in mice. Eur J Pharmacol. 2015 Sep 5;762:313-21.