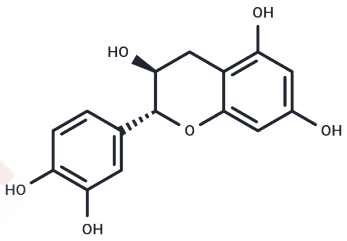
Data Sheet (Cat.No.T0822)

TargetMol

Catechin

Chemical Properties



CAS No. : 154-23-4

Formula: C15H14O6

Molecular Weight: 290.27

Storage: Keep away from direct sunlight
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	Catechin (Cianidanol) is a flavan-3-ol, a type of natural phenol and antioxidant.
Targets(IC50)	Apoptosis,Endogenous Metabolite,COX,Influenza Virus
In vitro	The catechin flavonoid reduces proliferation and induces apoptosis of murine lymphoma cells LB02 through modulation of antiapoptotic proteins[1]. Treatment of human prostate cancer cells with catechin induces apoptosis and results in effects on a variety of survival signals suggesting the potential of these compounds as chemopreventive agents for prostate cancer[2]. Catechin is well known to inhibit cyclooxygenase activity with reported IC50 values ranging from 40 μM to 943 μM. It has also been reported to act as an inhibitor of COX-1 and COX-2 with IC50 of about 80 μM and 130 μM[3].
In vivo	Dietary catechin significantly delayed tumor onset[5]. Continued intake of catechin, a potential antioxidant, prevents memory regression and DNA oxidative damage in senescence-accelerated (SAMP10) mice. It does not prolong the lifetime of SAMP10 mice, but it does delay brain senescence[6]. (+)-Catechin inhibits intestinal tumor formation and suppresses Focal adhesion kinase activation in the Min/+ Mouse[7].
Cell Research	LB02 cells were resuspended in RPMI 10% FBS in a concentration of 5x105 cells/mL. The cultures were performed in 96-well round-bottomed microtitre plates in presence of different concentrations of catechin or rutin (10, 50, 100 or 200 μg/mL). After 48 h at 37 °C in a humidified atmosphere with 5% CO2 in the air, cultures were pulsed with 1 μCi of 3H-thymidine/well and maintained for an additional 18 h period prior to a semiautomatic method harvest. (Only for Reference)

Solubility Information

Solubility	DMSO: 260 mg/mL (895.72 mM),Sonication is recommended. H2O: 25 mg/mL (86.13 mM),Sonication is recommended. Ethanol: 54 mg/mL (186.03 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 (17.23 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	3.4451 mL	17.2253 mL	34.4507 mL
5 mM	0.689 mL	3.4451 mL	6.8901 mL
10 mM	0.3445 mL	1.7225 mL	3.4451 mL
50 mM	0.0689 mL	0.3445 mL	0.689 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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Shim K S, Hwang Y H, Jang S A, et al. . Water Extract of Lysimachia christinae Inhibits Trabecular Bone Loss and Fat Accumulation in Ovariectomized Mice[J]. Nutrients. 2020, 12(7): 1927.

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