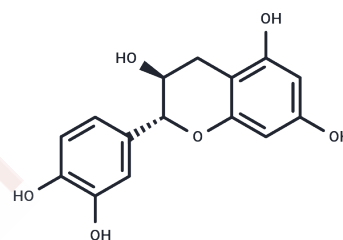


## Catechin

## Chemical Properties

CAS No. :	154-23-4
Formula:	C <sub>15</sub> H <sub>14</sub> O <sub>6</sub>
Molecular Weight:	290.27
Appearance:	no data available
Storage:	keep away from direct sunlight Powder: -20°C for 3 years   In solvent: -80°C for 1 year



## 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 $\mu$ M to 943 $\mu$ M. It has also been reported to act as an inhibitor of COX-1 and COX-2 with IC50 of about 80 $\mu$ M and 130 $\mu$ M[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 5x10 <sup>5</sup> 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 $\mu$ g/mL). After 48 h at 37 °C in a humidified atmosphere with 5% CO <sub>2</sub> in the air, cultures were pulsed with 1 $\mu$ Ci 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: 50 mg/mL (172.25 mM),Sonication is recommended. H <sub>2</sub> O: 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)
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## 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.

## Reference

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