Web: www.taiclone.com
Tel: +886-2-2735-9682
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(+) -Catechin hydrate

Catalog No: tcsc0008908

Available Sizes

Size: 100mg

Specifications

CAS No:
225937-10-0

Formula:
$C_{15}H_{14}O_6.xH_2O$

Pathway:
Immunology/Inflammation

Target:
COX

Purity / Grade:
>98%

Solubility:
DMSO : 150 mg/mL (Need ultrasonic and warming)

Observed Molecular Weight:
1000

Product Description

(+)-Catechin hydrate inhibits cyclooxygenase-1 (**COX-1**) with an **IC_{50}** of 1.4 μM.

IC50 & Target: IC50: 1.4 uM (COX-1)[1]

In Vitro: (+)-Catechin exhibits >95% inhibitory activity at 70 μg/mL against cyclooxygenase-1 (COX-1) with an IC_{50} of 1.4 μM[1]. A dose-dependent reduction in color is observed after 24 hours of treatment with (+)-Catechin, and 54.76% of the cells are dead at the highest concentration of (+)-Catechin tested (160 μg/mL) whereas the IC_{50} of (+)-Catechin is achieved at 127.62 μg/mL (+)-Catechin. A dose- and time-dependent increase in the induction of apoptosis is observed when MCF-7 cells are treated with (+)-

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Catechin. When compare to the control cells at 24 hours, 40.7 and 41.16% of the cells treated with 150 µg/mL and 300 µg/mL (+)-Catechin, respectively, undergo apoptosis. The expression levels of *Caspase-3*, *-8*, and *-9* and *p53* in MCF-7 cells treated with 150 µg/mL (+)-Catechin for 24 h increase by 5.81, 1.42, 3.29, and 2.68 fold, respectively, as compare to the levels in untreated control cells[2].

In Vivo: Animals treated with (+)-Catechin at the lowest tested dose, i.e., 50 mg/kg, p.o. have spent comparatively more time in exploring the novel object in the choice trial, however, the difference is not statistically significant. (+)-Catechin prevents the time-induced episodic memory deficits in a dose-dependent manner, the most effective being 200 mg/kg, p.o.. Treatment with (+)-Catechin prevents the rise in MPO level compare to DOX alone treatment group (21.98±9.44 and 36.76±4.39% in the hippocampus and the frontal cortex respectively)[3].