Web: www.taiclone.com
Tel: +886-2-2735-9682
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β-Caryophyllene

Catalog No: tcsc0016839

Available Sizes

Size: 500mg

Specifications

CAS No:
87-44-5

Formula:
$C_{15}H_{24}$

Pathway:
GPCR/G Protein

Target:
Cannabinoid Receptor

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Alternative Names:
(−)-trans-Caryophyllene;(−)-β-caryophyllene;(-)-(E)-Caryophyllene

Observed Molecular Weight:
204.35

Product Description

β-Caryophyllene is a **CB2 receptor** agonist.

IC50 & Target: CB2 receptor[1]

In Vitro: Among the tested cancer cells, β-Caryophyllene demonstrates selective anti-proliferative effect against three cancer cell

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lines, namely HCT 116 (colon cancer, IC_{50}=19 μM), PANC-1 (pancreatic cancer, IC_{50}=27 μM), and HT29 (colon cancer, IC_{50}=63 μM) cells, whereas β-Caryophyllene exhibits either moderate or poor cytotoxic effects against ME-180, PC3, K562 and MCF-7. Results show that β-Caryophyllene possesses higher selectivity towards the colorectal cancer cells (HCT 116), with selectivity index (SI)=27.9, followed by PANC-1 and HT 29 cells with SI=19.6 and 8, respectively. The apoptotic index estimated for β-Caryophyllene treatment on HCT 116 cells after 24 h treatment is 64±0.04. β-Caryophyllene at 10 μM concentration, causes significant nuclei condensation after 6 h of treatment. β-caryophyllene exhibits a dose and time-dependent inhibitory effect on the motility of HCT 116 cells[2].

In Vivo: Treatment with β-Caryophyllene at different doses does not show any effects on swimming speed during the test. Oral treatment with β-Caryophyllene ameliorates the rise in β-amyloid deposition in the transgenic mice in a roughly dose-dependent manner, and the two higher doses exhibit almost equal effects in modifying the β-amyloid burden. The number of activated astroglial cells is higher in vehicle-treated mouse brains than in β-Caryophyllene-treated mouse brains with different doses. β-Caryophyllene is effective at reducing the enhancement of the COX-2 protein level found in vehicle-treated APP/PS1 mice[1]. Animals treated with β-Caryophyllene display higher values of object recognition index than their vehicle-treated counterparts [t(14)=4.204, P0.05). Treatment with β-Caryophyllene does not significantly alter these seizure-induced neurochemical changes[3].