

β-Caryophyllene

Catalog No: tcsc0016839



Available Sizes

Size: 500mg



Specifications

CAS No:

87-44-5

Formula:

C₁₅H₂₄

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

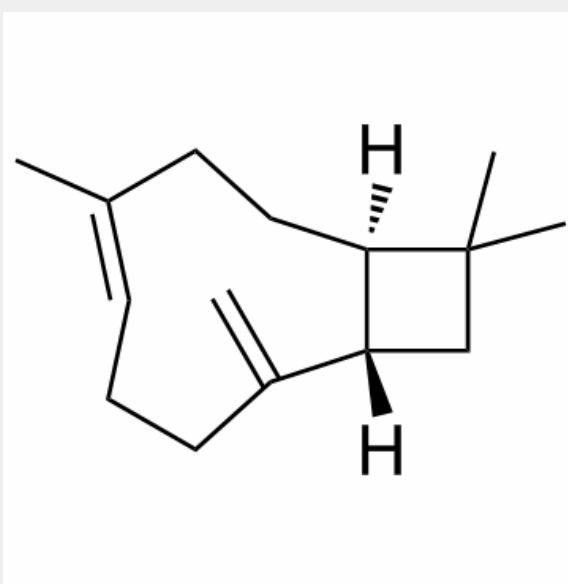
β-Caryophyllene is a **CB2 receptor** agonist.

IC50 & Target: CB2 receptor^[1]

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

lines, namely HCT 116 (colon cancer, $IC_{50}=19\ \mu M$), PANC-1 (pancreatic cancer, $IC_{50}=27\ \mu M$), and HT29 (colon cancer, $IC_{50}=63\ \mu M$) 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 $10\ \mu M$ 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 [$t(14)=4.204$, $P<0.05$]. Treatment with β -Caryophyllene does not significantly alter these seizure-induced neurochemical changes^[3].



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