

# β-Caryophyllene

## Catalog No: tcsc0016839



### Available Sizes

**Size:** 500mg



### Specifications

**CAS No:**

87-44-5

**Formula:**

C<sub>15</sub>H<sub>24</sub>

**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

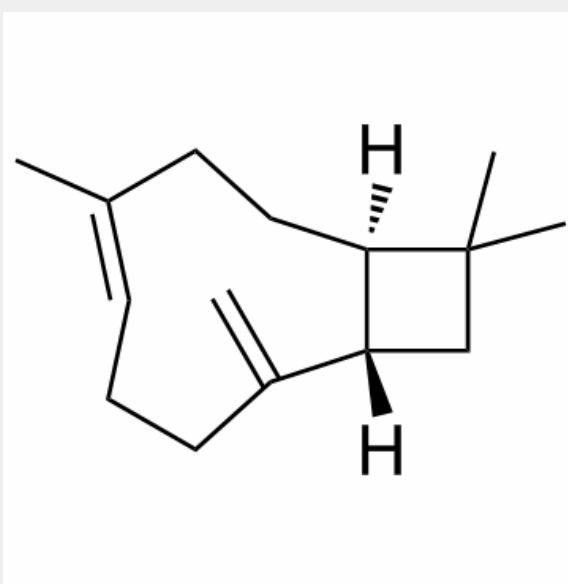
β-Caryophyllene is a **CB2 receptor** agonist.

IC50 & Target: CB2 receptor<sup>[1]</sup>

**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  $\beta$ -Caryophyllene exhibits either moderate or poor cytotoxic effects against ME-180, PC3, K562 and MCF-7. Results show that  $\beta$ -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  $\beta$ -Caryophyllene treatment on HCT 116 cells after 24 h treatment is  $64\pm0.04$ .  $\beta$ -Caryophyllene at  $10\ \mu M$  concentration, causes significant nuclei condensation after 6 h of treatment.  $\beta$ -caryophyllene exhibits a dose and time-dependent inhibitory effect on the motility of HCT 116 cells<sup>[2]</sup>.

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



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!