Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Capsaicin

Catalog No: tcsc1518

Available Sizes

Size: 50mg

Size: 100mg

Specifications

CAS No:
404-86-4

Formula:
$C_{18}H_{27}NO_3$

Pathway:
Membrane Transporter/Ion Channel;Autophagy

Target:
TRP Channel;Autophagy

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 44 mg/mL (144.07 mM)

Alternative Names:
(E)-Capsaicin;8-Methyl-N-vanillyl-trans-6-nonenamide

Observed Molecular Weight:
305.41

Product Description

Capsaicin is a **TRPV1** agonist with **EC_{50}** of 0.29±0.05 μM in HEK293 cells.

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IC50 & Target: EC50: 290 nM (hTRPV1, in HEK293 cell)[1]

In Vitro: Capsaicin is an agonist of transient receptor potential vanilloid subtype 1 (TRPV1), which is expressed in nociceptive sensory neurons and a range of secretory epithelia, including salivary glands. Capsaicin activates TRPV1, which modulates the permeability of tight junctions (TJ) by regulating the expression and function of putative intercellular adhesion molecules in an ERK-dependent manner[2]. Capsaicin is found to inhibit the growth and proliferation of FaDu cells in a dose- and time-dependent manner. Cells treated with 50, 100, 200, and 300 μM Capsaicin show an augmented decrease in cell growth as the Capsaicin dose increases. In addition, the percentage of viable cells decreases as the incubation time increases. The observed IC_{50} value is around 150 μM[3].

In Vivo: Capsaicin (CAP)-treated animals (Group IV) show increased DNA fragmentation suggesting apoptosis when compare with B(a)P-induced lung cancer-bearing animals (Group II) that show reduced DNA fragmentation. CAP-treated Group IV animals show markedly increased expressions of p53, Bax and caspase-3 with remarkable decrease in the levels of anti-apoptotic protein Bcl-2, when compare with B(a)P-administered lung cancer animals of Group II[4]. Capsaicin causes a dose-dependent reduction of tear secretion in female Wistar/ST rats. Significant effects are observed at doses of 20, 50 and 100 mg/kg. In addition, Capsaicin also causes corneal lesions, and significant effects are observed at doses of 50 and 100 mg/kg[5].