

Salinomycin

Catalog No: tcsc1299



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg



Specifications

CAS No:

53003-10-4

Formula:

$C_{42}H_{70}O_{11}$

Pathway:

Stem Cell/Wnt;Anti-infection;Autophagy;Stem Cell/Wnt;Autophagy

Target:

β-catenin;Bacterial;Autophagy;Wnt;Mitophagy

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 36.7 mg/mL (48.87 mM)

Alternative Names:

Procoxacin

Observed Molecular Weight:

751

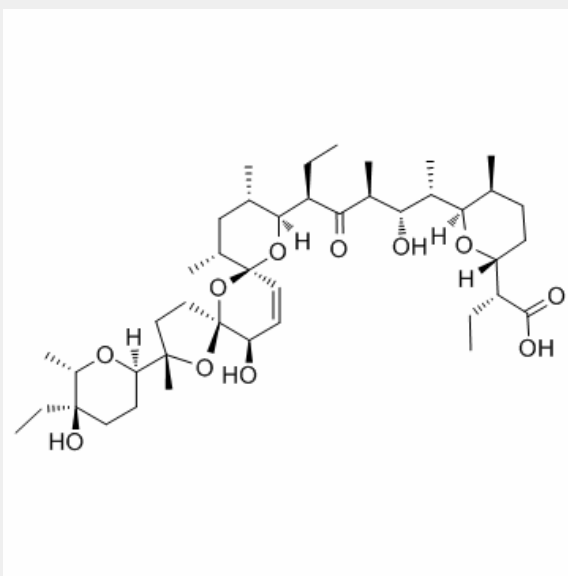
Product Description

Salinomycin is an inhibitor of **Wnt/β-catenin** signaling, which acts on the Wnt/Fzd/LRP complex. Salinomycin strongly suppresses Wnt1-stimulated reporter activity with an **IC₅₀** of 163 nM, and reduces β-catenin levels.

IC50 & Target: IC50: 163 nM (Wnt1-stimulated reporter)^[1]

In Vitro: Salinomycin is a potent inhibitor of the Wnt signaling cascade. Incubation of the malignant lymphocytes with Salinomycin induces apoptosis within 48 h, with a mean IC₅₀ of 230 nM. Salinomycin is also an antibiotic potassium ionophore, has been reported recently to act as a selective breast cancer stem cell inhibitor^[1]. Salinomycin is a novel and an effective anticancer drug, inhibits SW620 cells and Cisp-resistant SW620 cells with IC₅₀ of 1.54±0.23 μM and 0.32±0.05 μM, respectively. Salinomycin is found to have the ability to kill both cancer stem cells (CSCs) and therapy-resistant cancer cells. After continuous Salinomycin treatment for 48 h, the apoptotic cells are observed under the microscope and counted randomly at least 100 cells in one field. The number of apoptotic cells which are stained by Hoechst33342 is significantly increased in Cisp-resistant SW620 cells (20.20±3.72) than that of SW620 cells (9.40±2.07) per 100 cells (p[2].

In Vivo: After administration of 4 mg/kg Salinomycin (Sal), 8 mg/kg Salinomycin and 10 uL/g saline water for 6 weeks, the mice are sacrificed. The size of the liver tumors in the Salinomycin treatment groups diminishes compare with the control group. The mean diameter of the tumors decreases from 12.17 mm to 3.67 mm (p2×0.5) of the tumors decreases from 819 mm³ to 25.25 mm³ (p[3]. Salinomycin is a kind of monocarboxylic acid polyether type antibiotics, produced by the fermentation of *Streptomyces albus*, possesses a specific cyclic structure, and can form a complex compound with the pathogenic microorganisms and the extracellular cations of coccidian, especially K⁺, Na⁺, Rb⁺, to alter the intracellular and extracellular ion concentrations^[4].



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