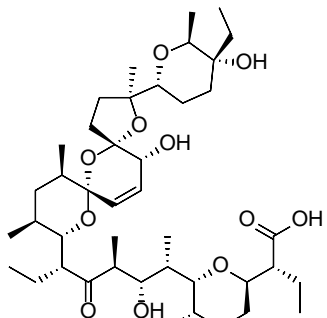


Product data sheet



MedKoo Cat#: 406545 Name: Salinomycin CAS: 53003-10-4 Chemical Formula: C ₄₂ H ₇₀ O ₁₁ Exact Mass: 750.4918 Molecular Weight: 751.011	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Salinomycin is an antibacterial and coccidiostat ionophore agent. Salinomycin suppresses T24 cells by regulating KDM1A and the unfolded protein response pathway. Salinomycin alleviates osteoarthritis progression via inhibiting Wnt/ β -catenin signaling. Vitamin D3 and Salinomycin synergy in MCF-7 cells cause cell death via endoplasmic reticulum stress in monolayer and 3D cell culture. Salinomycin induces cell cycle arrest and apoptosis and modulates hepatic cytochrome P450 mRNA expression in HepG2/C3a cells. Salinomycin inhibits proliferation and induces apoptosis of human hepatocellular carcinoma cells in vitro and in vivo,

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	20.0	26.63
DMF:PBS (pH 7.2) (1:4)	0.2	0.27
DMSO	47.23	62.89
Ethanol	12.5	16.64

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.33 mL	6.66 mL	13.32 mL
5 mM	0.27 mL	1.33 mL	2.66 mL
10 mM	0.13 mL	0.67 mL	1.33 mL
50 mM	0.03 mL	0.13 mL	0.27 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Qu H, Ma B, Yuan HF, Wang ZY, Guo SJ, Zhang J. Effect of salinomycin on metastasis and invasion of bladder cancer cell line T24. *Asian Pac J Trop Med.* 2015 Jul;8(7):578-82. doi: 10.1016/j.apjtm.2015.06.004. Epub 2015 Jul 9. PMID: 26276292.
2. Verdoodt B, Vogt M, Schmitz I, Liffers ST, Tannapfel A, Mirmohammadsadegh A. Salinomycin induces autophagy in colon and breast cancer cells with concomitant generation of reactive oxygen species. *PLoS One.* 2012;7(9):e44132. doi: 10.1371/journal.pone.0044132. Epub 2012 Sep 19. PMID: 23028492; PMCID: PMC3446972.

In vivo study

1. Klose J, Trefz S, Wagner T, Steffen L, Preißendörfer Charrier A, Radhakrishnan P, Volz C, Schmidt T, Ulrich A, Dieter SM, Ball C, Glimm H, Schneider M. Salinomycin: Anti-tumor activity in a pre-clinical colorectal cancer model. *PLoS One.* 2019 Feb 14;14(2):e0211916. doi: 10.1371/journal.pone.0211916. PMID: 30763370; PMCID: PMC6375586.

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2. Wang F, He L, Dai WQ, Xu YP, Wu D, Lin CL, Wu SM, Cheng P, Zhang Y, Shen M, Wang CF, Lu J, Zhou YQ, Xu XF, Xu L, Guo CY. Salinomycin inhibits proliferation and induces apoptosis of human hepatocellular carcinoma cells in vitro and in vivo. PLoS One. 2012;7(12):e50638. doi: 10.1371/journal.pone.0050638. Epub 2012 Dec 20. PMID: 23284640; PMCID: PMC3527475.

7. Bioactivity

Biological target:

Salinomycin (Procoxacin), a polyether potassium ionophore antibiotic, selectively inhibits the growth of gram-positive bacteria.

In vitro activity

The metastasis and invasion abilities of serum bladder cancer cell line T24 after salinomycin treatment in the experiment group were significantly reduced when compared with those in the control group, and the tumor metastasis lesions were decreased from an average of 1.59 to 0.6 ($P < 0.05$). Salinomycin can suppress the metastasis and invasion of bladder cancer cells, of which the mechanism is probably associated with the inhibition of EMT of tumor cells.

Reference: Asian Pac J Trop Med. 2015 Jul;8(7):578-82. <https://pubmed.ncbi.nlm.nih.gov/26276292/>

In vivo activity

The anti-tumor effect of Sal (Salinomycin) was further verified in vivo using the hepatoma orthotopic tumor model and the data obtained showed that the size of liver tumors in Sal-treated groups decreased compared to controls. Immunohistochemistry and TUNEL staining also demonstrated that Sal inhibits proliferation and induces apoptosis in vivo.

Reference: PLoS One. 2012;7(12):e50638. <https://pubmed.ncbi.nlm.nih.gov/23284640/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.