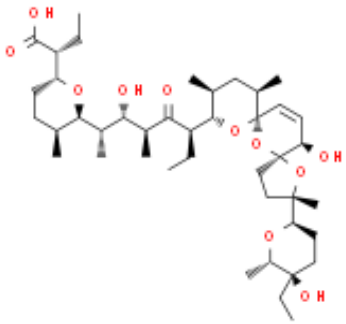
Product Data Sheet

Cas No.:	53003-10-4	Cat. No:	PC15836
Product Name:	Salinomycin		
Product synonym:	盐霉素;间三氟甲基肉桂酰氯;盐霉素钠;盐霉素钠盐;3-三氟甲基肉桂酰氯;沙利霉素;盐霉;盐霉素,沙利霉素;优素精;球虫粉;沙里诺霉素		
Chemical name:	Salinomycin		
MF:	C42H70O11	FW:	750.9986
Purity:	≥98%	Batch No.:	-
Storage:			
Structural formula:			
λmax:	-	Formulation:	-
Solubility :			
SMILES :	O1[C@@]2([C@@]([H])(C([H])=C([H])[C@@]3([C@]([H])(C([H])([H])[H])C([H])([H])[C@]([H])(C([H])([H])[H])[C@@]([H])([C@@]([H])(C([H])([H])C([H])([H])[H])C([C@@]([H])(C([H])([H])[H])[C@]([H])([C@]([H])(C([H])([H])[H])[C@@]4([H])[C@@]([H])(C([H])([H])[H])C([H])([H])C([H])([H])[C@]([H])([C@]([H])(C(=O)O[H])C([H])([H])C([H])([H])[H])O4)O[H])=O)O3)O2)O[H])C([H])([H])C([H])([H])[C@@]1(C([H])([H])[H])[C@@]1([H])C([H])([H])C([H])([H])[C@](C([H])([H])C([H])([H])[H])([C@]([H])(C([H])([H])[H])O1)O[H]		
InChI Code:	-		
InChI Key:			
WARNING This product is not for human or veterinary use.			

Product Description

聚醚离子载体抗生素，抗癌,Salinomycin是具有强大的抗菌 (anti-bacterial) 活性的抗球虫药，和靶向人类癌症干细胞的新型抗癌剂。

生物活性	Salinomycin (Procoxacin), a polyether potassium ionophore antibiotic, selectively inhibits the growth of **gram-positive bacteria**. Salinomycin is a potent inhibitor of **Wnt/β-catenin** signaling, blocks Wnt-induced LRP6 phosphorylation. Salinomycin (Procoxacin) shows selective activity against human cancer stem cells.

<table>
<tr><td>体外研究(In Vitro)</td><td>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 IC_{50} of 230 nM. Salinomycin is also an antibiotic potassium ionophore, has been reported recently to act as a selective breast cancer stem cell inhibitor.
Salinomycin is a novel and an effective anticancer drug, inhibits SW620 cells and Cisp-resistant SW620 cells with IC_{50} 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 ($p<0.05$). After treatment with Salinomycin for 48 h, flow cytometric analysis is used to detect the cell apoptosis both in SW620 cells and Cisp-resistant SW620 cells. The cell apoptotic rate in Cisp-resistant SW620 cells (37.82±3.63%) is significantly higher than that of SW620 cells (16.78±2.56%) ($p<0.05$).

Medlife has not independently confirmed the accuracy of these methods. They are for reference only.</td></tr>
<tr><td>体内研究(In Vivo)</td><td>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 ($p<0.05$) and the mean volume (V=length×width×0.5) of the tumors decreases from 819 mm to 25.25 mm ($p<0.05$). Next, the tumors are harvested, followed by HE staining, immunohistochemistry, and TUNEL assays, to assess the anti-tumor activity of Salinomycin. HE staining shows that the structure of the liver cancer tissue:nuclei of different sizes, hepatic cord structure is destroyed. Immunohistochemistry shows that PCNA expression is lower after Salinomycin treatment. HE staining and TUNEL assays indicates the Salinomycin-treated groups has higher apoptosis rates than control. Furthermore, immunohistochemistry shows an increased Bax/Bcl-2 ratio after Salinomycin treatment. The protein expression of β-catenin decreases in the Salinomycin treatment groups compared with control.
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.

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<tr><td>包装储存</td><td><table>
<tr><td>Powder</td><td>-20°C</td><td>3 years</td></tr>
<tr><td></td><td>4°C</td><td>2 years</td></tr>
<tr><td>In solvent</td><td>-80°C</td><td>6 months</td></tr>
<tr><td></td><td>-20°C</td><td>1 month</td></tr>
</table></td></tr>
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溶解度数据

体外研究:

DMSO : ≥ 36.7 mg/mL (48.87 mM)

* "≥" means soluble, but saturation unknown.

配制储备溶液	质量 溶剂体积 浓度	1 mg	5 mg	10 mg
	1 mM	1.3316 mL	6.6578 mL	13.3156 mL
	5 mM	0.2663 mL	1.3316 mL	2.6631 mL
	10 mM	0.1332 mL	0.6658 mL	1.3316 mL

* 产品不同，其溶解度不同。建议根据产品选择合适的溶剂配制储备溶液；配成溶液后，**建议分装保存，避免反复冻融造成的产品失效**。

  储备液的保存方式和期限： -80°C, 6 months; -20°C, 1 month。-80°C 储存时，建议在 6 个月内使用，-20°C 储存时，建议在 1 个月内使用。

体内研究:

建议根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都建议先按照 **体外研究** 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，**澄清的储备液可以根据储存条件，适当保存**；体内实验的工作液，**建议您现用现配，当天使用**； 以下溶剂前显示的百分比是指**该溶剂在您配制终溶液中的体积占比**；如在配制过程中出现沉淀、析出现象，可以通过**加热和/或超声的方式助溶**

1. 建议依照次序添加每种溶剂： 10% DMSO 40% PEG300 5% Tween-80 45% saline

   Solubility: ≥ 2.5 mg/mL (3.33 mM); Clear solution

   此方案可获得 ≥ 2.5 mg/mL (3.33 mM，饱和度未知) 的澄清溶液。

   以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入50 μL Tween-80，混合均匀；然后继续加入 450 μL生理盐水定容至 1 mL。

   将 0.9 g 氯化钠，完全溶解于 100 mL ddH?O 中，得到澄清透明的生理盐水溶液

2. 建议依照次序添加每种溶剂： 10% DMSO 90% corn oil

   Solubility: ≥ 2.5 mg/mL (3.33 mM); Clear solution

   此方案可获得 ≥ 2.5 mg/mL (3.33 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。

   以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL玉米油中，混合均匀。

3. 建议依照次序添加每种溶剂： 5% DMSO 40% PEG300 5% Tween-80 50% saline

   Solubility: 2.5 mg/mL (3.33 mM); Suspended solution; Need ultrasonic

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