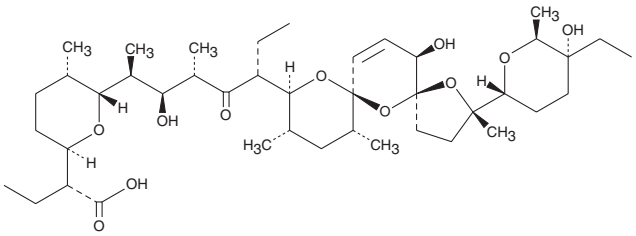
PRODUCT INFORMATION

Salinomycin

Item No. 13579

CAS Registry No.: 53003-10-4
Formal Name: α-ethyl-6-[5-[2-(5-ethyltetrahydro-5-hydroxy-6-methyl-2H-pyran-2-yl)-15-hydroxy-2,10,12-trimethyl-1,6,8-trioxadispiro[4.1.5.3]pentadec-13-en-9-yl]-2-hydroxy-1,3-dimethyl-4-oxoheptyl]tetrahydro-5-methyl-2H-pyran-2-acetic acid
MF: $C_{42}H_{70}O_{11}$
FW: 774.0
Purity: ≥90%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Salinomycin is supplied as a crystalline solid. A stock solution may be made by dissolving the salinomycin in the solvent of choice. Salinomycin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of salinomycin in these solvents is approximately 10, 5, and 20 mg/ml, respectively.

Salinomycin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, salinomycin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Salinomycin has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cancer stems cells (CSCs) are a subpopulation of cells within tumors that drive tumor growth and recurrence. They are resistant to many current cancer treatments. Salinomycin is an antibacterial and coccidiostat compound that shows selective toxicity for the CSCs that exist as a subpopulation within HMLER breast cancer cells (IC_{50}s = ~24 *versus* ~90 µM).[1] At 8 µM, salinomycin treatment of 4T1 and MCF-7-Ras breast cancer cell lines results in a ~2-fold and ~3-fold, respective reduction of CSCs relative to controls.[1] Treatment of 5 mg/kg salinomycin in mice implanted with SUM159 human breast cancer cells inhibits mammary tumor growth and induces increased epithelial differentiation of tumor cells.[1]

Reference

1. Gupta, P.B., Onder, T.T., Jiang, G., *et al*. Identification of selective inhibitors of cancer stem cells by high-throughput screening. *Cell* **138**, 645-59 (2009).

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