Salinomycin sodium
PRODUCT DATA SHEET
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Product Name: Salinomycin sodium
Product Number: S002
CAS Number: 55721-31-8
Molecular Formula: C\textsubscript{42}H\textsubscript{69}NaO\textsubscript{11}
Molecular Weight: 772.98 (anhydrous basis)
Form: Powder
Appearance: White crystalline powder
Source: *Streptomyces albus*
pH: 6.5-8.5
Melting Point: 140-142°C
Storage Conditions: 2-8°C
Description: Salinomycin is a coccidiostat ionophore antibiotic.

TOKU-E offers two forms of salinomycin: salinomycin (S001) and salinomycin sodium (S002). Salinomycin is slightly soluble in methanol at 10 mg/mL. Salinomycin sodium is insoluble in water, freely soluble in acetone, and 200 mg/mL soluble in ethanol.

This product is considered a dangerous good. Quantities above 1 g may be subject to additional shipping fees. Please contact us for specific questions.

*Fangyuan Xie et al.* used salinomycin from TOKU-E to study its efficacy toward liver cancer cells when used in combination with chloroquine. Read more here: "Codelivery of salinomycin and chloroquine by liposomes enables synergistic antitumor activity in vitro."

**Mechanism of Action:** Salinomycin interacts with the gram positive cell membrane which decreases control of ion permeability. This effect allows ions (K\textsuperscript{+}, Na\textsuperscript{+}, Ca\textsuperscript{+}, Mg\textsuperscript{2+}) to accumulate inside the cell to toxic levels.

**Spectrum:** Salinomycin targets primarily the gram positive cell wall to allow ion transport into the cell. Gram negative organisms are unaffected by salinomycin because of their additional outer membrane.
**Microbiology Applications** Salinomycin is commonly used in clinical in vitro microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against gram positive microbial isolates. Medical microbiologists use AST results to recommend antibiotic treatment options for infected patients. Representative MIC values include:

- *Clostridium perfringins* 0.12 µg/mL – 0.25 µg/mL
- For a complete list of salinomycin MIC values, click here.

**References:**

