

PRODUCT INFORMATION



Monensin (sodium salt)

Item No. 16488

CAS Registry No.: 22373-78-0
Formal Name: 2-[5-ethyltetrahydro-5-[tetrahydro-3-methyl-5-[tetrahydro-6-hydroxy-6-hydroxymethyl-3,5-dimethyl-2H-pyran-2-yl]-2-furyl]-2-furyl]-9-hydroxy-β-methoxy-α,γ,2,8-tetramethyl-1,6-dioxaspiro[4.5]decane-7-butyric acid, monosodium salt

Synonyms: Monensin A, NSC 343257

MF: C₃₆H₆₁O₁₁ • Na

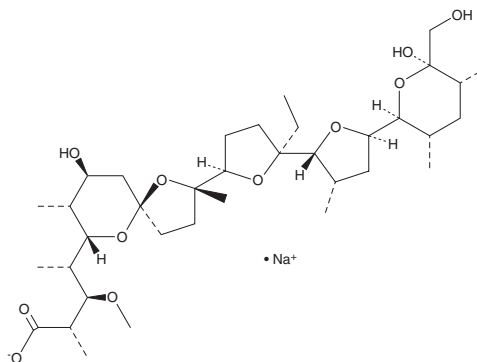
FW: 692.9

Purity: ≥98%

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

Monensin (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the monensin (sodium salt) in the solvent of choice, which should be purged with an inert gas. Monensin (sodium salt) is soluble in organic solvents such as ethanol and dimethyl formamide. The solubility of monensin (sodium salt) in these solvents is approximately 15 and 1 mg/ml, respectively.

Monensin (sodium salt) is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Monensin is a naturally occurring ionophorous antibiotic that preferentially forms complexes with monovalent cations to enable transport across lipid membranes.¹ Through its ability to affect pH and the sodium-potassium balance of a cell, monensin can induce cell death in Gram-positive bacteria such as *Micrococcus*, *Bacillus*, and *Staphylococcus* (MICs = 1-12.5 µg/ml), reduce proliferation of *P. falciparum* and *Coccidium* protozoa, and also prevent replication of certain viruses.¹

Reference

1. Aowicki, D. and Huczynski, A. Structure and antimicrobial properties of monensin A and its derivatives: Summary of the achievements. *Biomed. Res. Int.* **2013**, 1-14 (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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