

PRODUCT INFORMATION



Sisomicin

Item No. 21046

CAS Registry No.: 32385-11-8

Formal Name: O-3-deoxy-4-C-methyl-3-(methylamino)- β -L-arabinopyranosyl-(1 \rightarrow 6)-O-[2,6-diamino-2,3,4,6-tetra-deoxy- α -D-glycero-hex-4-enopyranosyl-(1 \rightarrow 4)]-2-deoxy-D-streptomine

Synonyms: Antibiotic 6640, SCH 13475

MF: $C_{19}H_{37}N_5O_7$

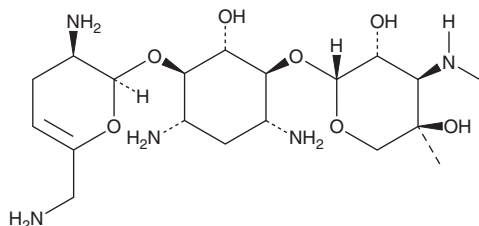
FW: 447.5

Purity: $\geq 98\%$

Supplied as: A solid

Storage: $-20^{\circ}C$

Stability: ≥ 4 years



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

Laboratory Procedures

Sisomicin is supplied as a solid. A stock solution may be made by dissolving the sisomicin in the solvent of choice, which should be purged with an inert gas. Sisomicin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of sisomicin in ethanol and DMF is approximately 25 mg/ml and approximately 30 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of sisomicin can be prepared by directly dissolving the solid in aqueous buffers. The solubility of sisomicin in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Sisomicin is a broad-spectrum aminoglycoside antibiotic originally isolated from *M. inyoensis*.¹ It is active against Gram-positive and Gram-negative bacteria including *B. subtilis*, *S. aureus*, *E. coli*, and *P. aeruginosa* among others (MICs = 0.01-0.75 μ g/ml) but is less active against *P. multocida* and *V. coli* (MICs = 7.5 and 2.4 μ g/ml, respectively). Sisomicin is protective against Gram-positive and Gram-negative bacterial infections in mice with 50% protective dose (PD₅₀) values ranging from 0.5 to 6 mg/kg.

Reference

1. Weinstein, M.J., Marquez, J.A., Testa, R.T., et al. Antibiotic 6640, a new *Micromonospora*-produced aminoglycoside antibiotic. *J. Antibiot. (Tokyo)* **23(11)**, 551-554 (1970).

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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