

★ Storage

Store at -20°C.

Contents

- Product Manual
- Spectinomycin Solution, 100mg/ml in DMSO/H₂O(1:1)

ALL PRODUCTS SOLD BY GenDEPOT ARE INTENDED FOR RESEARCH USE ONLY UNLESS OTHERWISE INDICATED. THIS PRODUCT IS NOT INTENDED FOR DIAGNOSTIC OR DRUG PURPOSE

★ Shipping Condition

Ship with ice pack.

★ Introduction

Spectinomycin is an aminocyclitol antibiotic naturally produced by *Streptomyces spectabilis*. Spectinomycin shows in vitro inhibitory effect (31.2µg/mL) against gram-negative and gram-positive bacteria like *Escherichia coli*, *Klebsiella*, *Enterobacter*, and *Staphylococcus epidermidis*. It acts as a protein synthesis inhibitor by binding to the bacterium's 30S ribosomal subunit. Specifically, it interacts with 16S rRNA during the elongation process and blocks elongation factor G (EF-G), which is responsible for the translocation catalysis of peptidyl-tRNA.

Spectinomycin is used as a selective resistance marker (Spc) in *Leptospira* spp. The Spc marker can be used for transformation screening in leptospire from both plasmids or chromosomal integration. Spectinomycin resistance occurs through mutation of *rpsE* gene which encodes the protein S5, or via the *aadA* bacterial gene which encodes the enzyme Aminoglycoside-3"-adenyltransferase. Spectinomycin can be also used in amplification of low copy number plasmid carrying replicons (100µg/mL).

In the clinic, Spectinomycin is used as a treatment against *Neisseria gonorrhoeae* for both gonorrheal urethritis and cervicitis. Spectinomycin is also a plastid protein synthesis inhibitor. It is used as a specific marker (0.2-5 mg/mL) for cell layer to monitor leaf development, and is also used to generate plants deficient for the plastid-encoded RNA polymerase on MS-agar media (0.5mg/mL).

Spectinomycin was also studied for cattle respiratory tract infections by *Pasteurella multocida* and *Mannheimia haemolytica*.

★ Related Products

Product Name	Cat No
Albumin	A0100
Ceracryo Cell Freezing Media, Xeno Free	C0667
Cellmaxin, 10mg/ml	C3314
Cellmaxin Plus, 10.5mg/ml	C3319
Dulbecco's Phosphate-Buffered Saline(dPBS)	CA008
Scrapcase, Non-animal Original Dissociation Reagent (1X)	CA110
Ceracol Collagen Type I Solution, 1mg/ml	CA081
Fibronectin, Bovine, Stabilized Solution, 1mg/ml	CA082
Fibronectin, Human, Stabilized Solution, 1mg/ml	CA083
Insulin-Transferrin-Selenium Solution I (1,000X), Animal Free	CA200
Fetal Bovine Serum, Premium, US Origin	F0600
FBS, Mouse Embryonic Stem Cell and iPSC Optimized	F0650
FBS Opti-Gold	F0900
FBS OptiGold, Premium, Heat Inactivated	F0910
LIF, Mouse Recombinant, 10 MIU/ml	L4501
WATER, 0.1um Final Filtered, cell culture tested	W0900