Spectinomycin dihydrochloride pentahydrate

Cell Culture Tested

Product Code: TC034

Product Description:
Molecular Weight: 495.5
Molecular Formula: C\textsubscript{14}H\textsubscript{24}N\textsubscript{2}O\textsubscript{7} \cdot 2HCl \cdot 5H\textsubscript{2}O
CAS Number: 22189-32-8

Spectinomycin dihydrochloride pentahydrate is an aminocyclitol antibiotic which is closely related to the aminoglycosides, produced by a species of soil microorganism \textit{Streptomyces spectabilis}. It has a broad spectrum of activity against many Gram-positive and Gram-negative bacteria.

It exerts bactericidal effect by inhibiting protein synthesis at prokaryotic ribosomal level. It binds to 30S ribosomal subunit and interferes with the translocation of peptidyl tRNA, thereby inhibiting protein synthesis.

In cell culture, it is used as an anti-bacterial agent to prevent contamination. Spectinomycin is used as a selection agent for resistant bacteria and plant cells.

Directions:
For cell culture applications, spectinomycin is used at concentration of 7.5 to 20mg/L.

Preparation instructions:
Spectinomycin dihydrochloride pentahydrate is soluble in water (50mg/ml). Spectinomycin solutions are sterilized by filtering through a sterile membrane filter with a porosity of 0.22micron or less.

Quality Control:
Appearance
White to off white powder.

Solubility
Clear colorless to light yellow solution at 0.5gm in 100ml of water.

Water (KF)
NMT 20%

Potency
NLT 603µg/mg

Antibiotic sensitivity
Complies

Cell Culture Test
Passes

Storage and Shelf Life:
Store spectinomycin dihydrochloride pentahydrate powder at 2°C to 8°C.
Stock solutions should be stored at 2°C to 8°C for several weeks. Their stability can be extended by storing at -20°C. Shelf life is 36 months.
Use before expiry date given on the product label.

Disclaimer:
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