

Penicillin-Streptomycin, 100x

(penicillin:10,000u/ml, streptomycin: 10mg/ml)

CytoSpring

320 Logue Ave, Ste 140
Mountain View, CA 94043
Email: info@cytospring.com
Tel/Fax 650-988-6699
cytospring.com

Product Information

Background The combination of antibiotics penicillin and streptomycin are frequently used in tissue culture to prevent and eliminate bacterial contamination. Penicillin is originally derived from fungi *Penicillium*¹. It kills gram-positive bacteria by interfering the synthesis of peptidoglycan, a component of bacterial cell wall, and indirectly by triggering the release of enzymes that further alter the cell wall. In the presence of penicillin, the multiplying bacteria lengthen, but cannot divide. Eventually the weak cell wall ruptures, resulting to bacterial death.

Streptomycin was originally purified from the actinobacterium *Streptomyces griseus*, a gram-positive bacterium with a spirilla-like structure which looks like fungi. Contrary to penicillin, streptomycin does not cause lysis of susceptible bacteria. Streptomycin belongs to the family of aminoglycoside antibiotics. It works well against gram-negative and gram-positive bacteria. It binds to the 30S subunit of the susceptible bacterial ribosome, leading to inhibition of protein synthesis and cell death².

Storage Product is shipped on dry ice and storage at -5 to -20° C is recommended. Both penicillin and streptomycin are stable for ~ 4 days in media at 37°C. To preserve activity, aliquot and store at – 20° C once thawed.

Product The table below lists the penicillin and streptomycin product that CytoSpring carries. This product is in 0.9% sodium chloride. It is sterile-filtered through a 0.2 um pore size membrane, suitable for cell culture and/or other applications.

Product #	P0111
Description	Pen-Strep, 100x
Conc. penicillin G	10,000u/ml
Conc. streptomycin sulfate	10,000ug/ml
Conc. sodium chloride	0.9% w/v
volume	100ml

Reference

1. Fleming A. On a remarkable bacteriolytic element found in tissues and secretions. Proc. R. Soc. Lond. B. 1922, 93:306-317.
2. Thorsten Schantz; Kee-Woei Ng A manual for primary human cell culture. World Scientific. 2004, p. 89.