



Penicillin-Streptomycin Solution (100X) PRODUCT DATA SHEET

issue date 01/06/2020

Product Name:	Penicillin-Streptomycin Solution (100X)
Product Number:	P030
Form:	Solution
Appearance:	Clear solution
Water Content (Karl Fischer):	6.0-6.7
Storage Conditions:	-20 °C
Description:	<p>Pencillin-Streptomycin (Pen/Strep) is an antibacterial solution comprised of penicillin (10,000 units/mL), a beta-lactam, and streptomycin (10,000 ug/mL), an aminoglycoside in 0.9% NaCl.</p> <p>Dr. Chung et al. used penicillin-streptomycin from TOKU-E in their RPMI 1640 medium to culture HT-29 colon cancer cells. Read more here: "<u>Rab11 collaborates E-cadherin to promote collective cell migration and indicates a poor prognosis in colorectal carcinoma</u>"</p>
Mechanism of Action:	Penicillin, the beta lactam, breaks peptidoglycan links in non-resistant cell walls and triggers autolysins which kill the cell. Streptomycin, the aminoglycoside, binds to the ribosomes and inhibits protein synthesis.
Spectrum:	Penicillin-streptomycin solution targets the cell wall of both Gram-positive and Gram-negative bacteria.
References:	<p>Guzmán, F (2008) Beta Lactams Antibiotics (penicillins and Cephalosporins) Mechanism of Action." Med. Pharmacol. Pharmacology Corner,</p> <p>De Britto AJ, Gracelin DHS and Kumar PBJR (2012) Pteris biaurita L.: A potential antibacterial fern against Xanthomonas and Aeromonas bacteria. J. Pharm. Res. 5(1):678-680</p> <p>Pitout JD, Sanders CC, Sanders WE (1997) Antimicrobial resistance with focus on beta-lactam resistance in gram-negative bacilli. Am J Med 103</p> <p>Svensson L, Finlay BB, Bass D, Von Bonsdorff H, Greenberg HB (1991) Symmetric infection of rotavirus on polarized human intestinal epithelial (Caco-2) cells. J. Virol. 65(8):4190-4197</p>