



Penicillin-Streptomycin Solution (100X) PRODUCT DATA SHEET

issue date 10/18/2018

Product Name:	Penicillin-Streptomycin Solution (100X)
Product Number:	P030
Form:	Solution
Appearance:	Clear solution
Water Content (Karl Fisher):	6.0-6.7
Storage Conditions:	-20 °C
Description:	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.

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: "[Rab11 collaborates E-cadherin to promote collective cell migration and indicates a poor prognosis in colorectal carcinoma](#)"

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, Flavio, MD. "Beta Lactams Antibiotics (penicillins and Cephalosporins) Mechanism of Action." Medical Pharmacology. Pharmacology Corner, 29 Nov. 2008. Web. 21 Aug. 2012.</p> <p>Pitout JD, Sanders CC, Sanders WE Jr. Antimicrobial resistance with focus on beta-lactam resistance in gram-negative bacilli. Am J Med 1997; 103:51.</p> <p>De Britto A.J., Gracelin D.H.S. and Kumar P.B.J.R, 2012, Pteris biaurita L.: A potential antibacterial fern against Xanthomonas and Aeromonas bacteria. Journal of Pharmacy Research 2012,5(1),678-680</p>