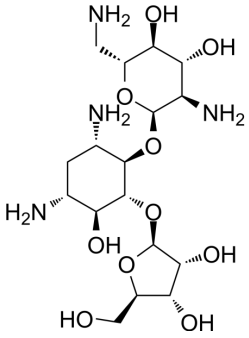
Ribostamycin

Cat. No.:	HY-142127
CAS No.:	25546-65-0
Molecular Formula:	$C_{17}H_{34}N_4O_{10}$
Molecular Weight:	454.47
Target:	Bacterial; Antibiotic; PDI
Pathway:	Anti-infection; Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Ribostamycin (Vistamycin) is a broad-spectrum aminoglycoside antibiotic. Ribostamycin is effective against Gram-Negative and Gram-Positive bacterial infection. Ribostamycin also inhibits the chaperone activity of PDI[1][2].
IC_{50} & Target	Aminoglycoside
In Vitro	Ribostamycin inhibits Borrelia burgdorferi with a MIC_{90} of 32 mg/L[2]. Ribostamycin (1-100 μM, 0-15 min) inhibits the chaperone activity of PDI[3]. Ribostamycin inhibits Escherichia coli strains with a MIC of 0.9-7.2 μM[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Ribostamycin (40 mg/kg, intramuscular injection, per day for 14 days) causes little nephrotoxicity in rats(evaluated by urinalysis)[5]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[4]

Cell Line:	Escherichia coli strains
Concentration:	0-64 μg/mL
Incubation Time:	14 h
Result:	Inhibited Escherichia coli strains with a MIC of 0.9-7.2 μM.

REFERENCES

[1]. Zheng T, et al. Linear self-assembly formation between gold nanoparticles and aminoglycoside antibiotics. Colloids Surf B Biointerfaces. 2018 Apr 1;164:185-191.

[2]. Hunfeld KP, et al. In vitro activity of mezlocillin, meropenem, aztreonam, vancomycin, teicoplanin, ribostamycin and fusidic acid against Borrelia burgdorferi. Int J Antimicrob Agents. 2001 Mar;17(3):203-8.

[3]. Horibe T, et al. Ribostamycin inhibits the chaperone activity of protein disulfide isomerase. Biochem Biophys Res Commun. 2001 Dec 21;289(5):967-72.

[4]. Kong J, et al. Exploration of Antibiotic Activity of Aminoglycosides, in Particular Ribostamycin Alone and in Combination With Ethylenediaminetetraacetic Acid Against

Pathogenic Bacteria. Front Microbiol. 2020 Jul 29;11:1718.

[5]. Kitasato I, et al. Comparative nephrotoxicity of ribostamycin and gentamicin in rats evaluated by urinalysis. Drugs Exp Clin Res. 1989;15(6-7):273-89.

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