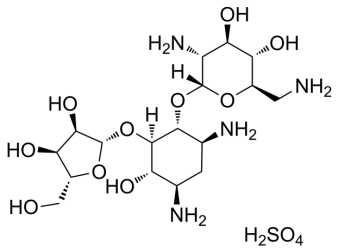
Ribostamycin sulfate

Cat. No.:	HY-B1228
CAS No.:	53797-35-6
Molecular Formula:	$C_{17}H_{36}N_4O_{14}S$
Molecular Weight:	552.55
Target:	Bacterial; Antibiotic; PDI
Pathway:	Anti-infection; Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 130 mg/mL (235.27 mM; Need ultrasonic)
DMSO : < 1 mg/mL (insoluble or slightly soluble)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8098 mL	9.0490 mL	18.0979 mL
	5 mM	0.3620 mL	1.8098 mL	3.6196 mL
	10 mM	0.1810 mL	0.9049 mL	1.8098 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 50 mg/mL (90.49 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Ribostamycin sulfate (Vistamycin sulfate) is a broad-spectrum antimicrobial, inhibits bacterial protein synthesis at the level of 30S and 50S ribosomal subunit binding, also inhibits the chaperone activity of protein disulfide isomerase (PDI), used in pharmacokinetic and nephrotoxicity studies

In Vitro

Ribostamycin is as an intermediate in the biosynthesis of neomycin[1].
Ribostamycin inhibited the chaperone activity of protein disulfide isomerase (PDI), but it did not inhibit the isomerase activity[3].
Ribostamycin is effective against both gram-positive and gram-negative cocci and bacilli including drug-resistant strains.
Ribostamycin is especially effective against the gentamicin-resistant bacterium Klebsiella pneumoniae, which possesses aminoglycoside-modifying enzymes[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Pharm Biomed Anal. 2017 Aug 24;146:96-102.

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REFERENCES

[1]. Baud H, et al. Ribostamycin, as an intermediate in the biosynthesis of neomycin. J Antibiot (Tokyo). 1977 Sep;30(9):720-3.

[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.

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