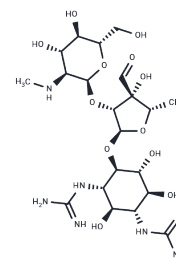


Streptomycin

Chemical Properties

CAS No. :	57-92-1
Formula:	C ₂₁ H ₃₉ N ₇ O ₁₂
Molecular Weight:	581.57
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Streptomycin (Agrept) is an aminoglycoside antibiotic derived from Streptomyces, a blocker of stretch-activated and mechanically-sensitive ion channels in neurons and cardiomyocytes, with anti-tuberculosis activity. It strongly binds to nucleic acids, interferes with protein synthesis, and can be used to study Mycobacterium tuberculosis infections.
Targets(IC50)	Antibacterial, Antibiotic
In vitro	Streptomycin is a protein synthesis inhibitor that binds irreversibly to the small 16S rRNA of the 30S ribosome subunit, interfering with the binding of formyl-methionyl-trNA to the 30S subunit. It is often used in combination with penicillin in standard antibiotic mixtures to prevent bacterial infection in cell cultures. [1]
In vivo	Administration of Streptomycin (644 ± 26 mg/kg/ day) reduced the number of muscle fibers that increased membrane permeability after centrifugal contraction (ECC), but did not improve the degree of fiber swelling in existing EBD-positive fibers. [2]

Solubility Information

Solubility	H ₂ O: 247.5 mg/mL (425.57 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7195 mL	8.5974 mL	17.1948 mL
5 mM	0.3439 mL	1.7195 mL	3.439 mL
10 mM	0.1719 mL	0.8597 mL	1.7195 mL
50 mM	0.0344 mL	0.1719 mL	0.3439 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Sharma D, et al. Mutational analysis of S12 protein and implications for the accuracy of decoding by the ribosome. *J Mol Biol.* 2007 Dec 7;374(4):1065-76.

Hayao K, et al. Effects of Streptomycin Administration on Increases in Skeletal Muscle Fiber Permeability and Size Following Eccentric Muscle Contractions. *Anat Rec (Hoboken).* 2018 Jun;301(6):1096-1102.

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