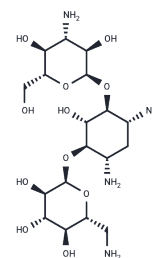


## Kanamycin A

## Chemical Properties

CAS No. :	59-01-8
Formula:	C <sub>18</sub> H <sub>36</sub> N <sub>4</sub> O <sub>11</sub>
Molecular Weight:	484.5
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Kanamycin A (KanamycinA) is an aminoglycoside antibiotic with antibacterial and antiviral activity that inhibits bacterial and viral replication.
Targets(IC50)	Antibacterial,Antibiotic
In vitro	Kanamycin A (0.1-100 µg/mL; 2 weeks of treatment) showed good antimicrobial activity against a wide range of mycobacterial strains in vitro with a minimum inhibitory concentration (MIC) of 1-5 µg/mL. [1]
In vivo	Kanamycin A administered intravenously at doses of 2 mg/kg and 4 mg/kg once a day, six times a week for three weeks effectively inhibited the growth of Mycobacterium bovis in the lungs and spleens of mice. [1] Kanamycin A administered intravenously in a single dose (3 hours post-infection) at 1.25 mg/kg and 5 mg/kg significantly reduced the colonization of K. pneumoniae DT-S in the lungs, trachea and blood of mice and this reduction was proportional to the administered dose, while increasing the survival rate of mice. [2]

## Solubility Information

Solubility	H <sub>2</sub> O: 60 mg/mL (123.84 mM),Sonication is recommended. DMSO: Soluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.064 mL	10.3199 mL	20.6398 mL
5 mM	0.4128 mL	2.064 mL	4.128 mL
10 mM	0.2064 mL	1.032 mL	2.064 mL
50 mM	0.0413 mL	0.2064 mL	0.4128 mL

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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

- YANAGISAWA K, et al. Studies on kanamycin, a new antibiotic against tubercle bacilli. I. Effect on virulent tubercle bacilli in vitro and in mice. *J Antibiot (Tokyo)*. 1957 Nov;10(6):233-5.
- Nishi T, et al. Experimental respiratory tract infection with *Klebsiella pneumoniae* DT-S in mice: chemotherapy with kanamycin. *Antimicrob Agents Chemother*. 1980 Mar;17(3):494-505.
- Misumi M, et al. Interaction of kanamycin and related antibiotics with the large subunit of ribosomes and the inhibition of translocation. *Biochem Biophys Res Commun*. 1978 Sep 29;84(2):358-65.
- Feng Y, et al. Rapid diagnosis of drug resistance to fluoroquinolones, amikacin, capreomycin, kanamycin and ethambutol using genotype MTBDRsl assay: a meta-analysis. *PLoS One*. 2013;8(2):e55292.

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