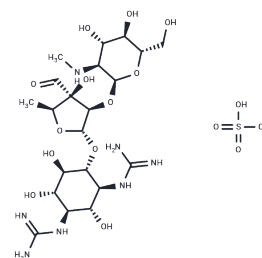


## Streptomycin sulfate

## Chemical Properties

CAS No. : 3810-74-0  
 Formula: C<sub>21</sub>H<sub>39</sub>N<sub>7</sub>O<sub>12</sub>·3/2H<sub>2</sub>SO<sub>4</sub>  
 Molecular Weight: 728.68  
 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 sulfate (Phytomycin) is a sulfate salt of streptomycin that is a protein synthesis inhibitor.
Targets(IC50)	ribosome,Antibacterial,Antibiotic
In vitro	Strain RB1 exhibits an increased susceptibility to streptomycin that correlates positively with the concentration of CV in the growth medium. Furthermore, as the CV concentration rises, both cytochrome aa3 levels and the bacterium's sensitivity to streptomycin simultaneously escalate. It is noteworthy that cytochrome aa3 plays a critical role in the uptake of streptomycin by B. subtilis[1]. Additionally, streptomycin affects tRNA selection, with resistance mutations predominantly located in protein S12; these mutations are typically associated with enhanced specificity in the tRNA selection process[2].

## Solubility Information

Solubility	H <sub>2</sub> O: 242.5 mg/mL (332.79 mM),Sonication is recommended. DMSO: Insoluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3723 mL	6.8617 mL	13.7234 mL
5 mM	0.2745 mL	1.3723 mL	2.7447 mL
10 mM	0.1372 mL	0.6862 mL	1.3723 mL
50 mM	0.0274 mL	0.1372 mL	0.2745 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

- McEnroe AS, et al. Correlation between cytochrome aa3 concentrations and streptomycin accumulation in *Bacillus subtilis*. *Antimicrob Agents Chemother*. 1984 Oct;26(4):507-12.
- Qu H, Yu Q, Jia B, et al. HIF-3 $\alpha$  affects preeclampsia development by regulating EVT growth via activation of the Flt-1/JAK/STAT signaling pathway in hypoxia. *Molecular Medicine Reports*. 2021, 23(1): 1-1.
- Sharma, D., et al., Mutational analysis of S12 protein and implications for the accuracy of decoding by the ribosome. *J Mol Biol*, 2007. 374(4): p. 1065-76.
- Huang L, Li Q. Notoginsenoside R1 promotes differentiation of human alveolar osteoblasts in inflammatory microenvironment through inhibiting NF- $\kappa$ B pathway and activating Wnt/ $\beta$ -catenin pathway. *Molecular Medicine Reports*. 2020, 22(6): 4754-4762
- Li Q, Bian Y, Li Q. Down-Regulation of TMPO-AS1 Induces Apoptosis in Lung Carcinoma Cells by Regulating miR-143-3p/CDK1 Axis. *Technology in cancer research & treatment*. 2021, 20: 1533033820948880.
- Zhai J, Jiang C, Long C. Two-step Method for the Construction and Start-up of a Fungal-Bacterial Biofilter for Treating Gaseous Toluene[J]. *Environmental Progress & Sustainable Energy*. 2020: e13404.
- Mo L, Hong S, Li Y, et al. Sevoflurane inhibited inflammatory response induced by TNF- $\alpha$  in human trophoblastic cells through p38MAPK signaling pathway[J]. *Journal of Receptors and Signal Transduction*. 2020: 1-6.
- Mo L, Hong S, Li Y, et al. Sevoflurane inhibited inflammatory response induced by TNF- $\alpha$  in human trophoblastic cells through p38MAPK signaling pathway. *Journal of Receptors and Signal Transduction*. 2020: 1-6
- Li Q, Bian Y, Li Q. Down-Regulation of TMPO-AS1 Induces Apoptosis in Lung Carcinoma Cells by Regulating miR-143-3p/CDK1 Axis[J]. *Technology in cancer research & treatment*. 2021, 20: 1533033820948880.
- Zhai J, Jiang C, Long C. Two-step Method for the Construction and Start-up of a Fungal-Bacterial Biofilter for Treating Gaseous Toluene. *Environmental Progress & Sustainable Energy*. 2020: e13404
- Zhang Y, Cai Y, Wang T, et al. A common tolerance mechanism of bacterial biofilms to antibiotics. *bioRxiv*. 2023: 2023.01. 30.526163.
- Huang L, Li Q. Notoginsenoside R1 promotes differentiation of human alveolar osteoblasts in inflammatory microenvironment through inhibiting NF- $\kappa$ B pathway and activating Wnt/ $\beta$ -catenin pathway[J]. *Molecular Medicine Reports*. 2020, 22(6): 4754-4762.
- Ma X, Li H, Ji J, et al. Overexpression of outer membrane protein A (OmpA) increases aminoglycoside sensitivity in mycobacteria. *BMC microbiology*. 2024, 24(1): 472.

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