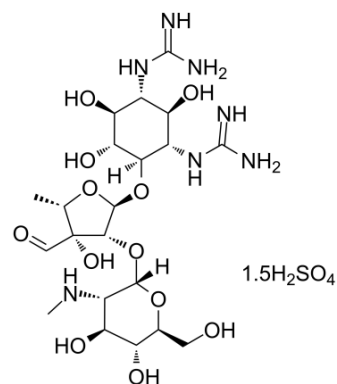


## Streptomycin sulfate

Cat. No.:	HY-B0472
CAS No.:	3810-74-0
Molecular Formula:	C <sub>21</sub> H <sub>42</sub> N <sub>7</sub> O <sub>18</sub> S <sub>1.5</sub>
Molecular Weight:	728.69
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : ≥ 100 mg/mL (137.23 mM)  
 DMSO : < 1 mg/mL (insoluble or slightly soluble)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
	1 mM		1.3723 mL	6.8616 mL	13.7233 mL
	5 mM		0.2745 mL	1.3723 mL	2.7447 mL
	10 mM		0.1372 mL	0.6862 mL	1.3723 mL

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

### BIOLOGICAL ACTIVITY

#### Description

Streptomycin sulfate is an aminoglycoside antibiotic, that inhibits protein synthesis.

#### In Vitro

Strain RB1 shows enhanced susceptibility to streptomycin as the concentration of CV in the growth medium increases. As the CV concentration in the growth medium increases, both cytochrome aa3 levels and streptomycin susceptibility increase. Cytochrome aa3 is necessary for accumulation of streptomycin by *B. subtilis*<sup>[1]</sup>. Streptomycin influences tRNA selection. Streptomycin resistance mutations generally map to protein S12 and most of these variants exhibit increased levels of discrimination in the tRNA selection process<sup>[2]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### CUSTOMER VALIDATION

- Life Sci. 2020 Sep 21;118473.

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- ACS Omega. 2020 Nov 7.
  - PLoS One. 2020 Sep 3;15(9):e0235824.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

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[1]. McEnroe AS, et al. Correlation between cytochrome aa3 concentrations and streptomycin accumulation in Bacillus subtilis. Antimicrob Agents Chemother. 1984 Oct;26(4):507-12.

[2]. 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.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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