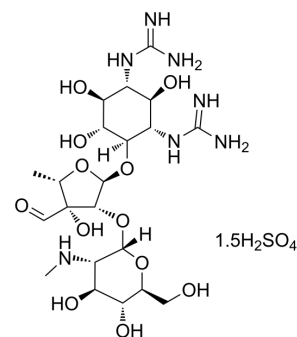


Streptomycin sulfate

Cat. No.:	HY-B0472
CAS No.:	3810-74-0
Molecular Formula:	C ₂₁ H ₄₂ N ₇ O ₁₈ S ₁₋₅
Molecular Weight:	728.69
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
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

H₂O : ≥ 100 mg/mL (137.23 mM)
 DMSO : < 1 mg/mL (insoluble or slightly soluble)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	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.

In Vivo

1. Add each solvent one by one: PBS
 Solubility: 100 mg/mL (137.23 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

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

IC₅₀ & Target

Aminoglycoside

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*^[1]. 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^[2].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Autophagy. 2021 Jul 20;1-19.
- Genome Biol. 2023 Apr 30;24(1):98.
- Food Chem. 2022 Sep 26;403:134399.
- Free Radic Biol Med. 2023 Apr 10;S0891-5849(23)00373-8.
- Life Sci. 2020 Nov 15;261:118473.

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REFERENCES

- [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.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA