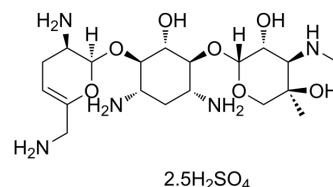


## Sisomicin sulfate

<b>Cat. No.:</b>	HY-B1222
<b>CAS No.:</b>	53179-09-2
<b>Molecular Formula:</b>	C <sub>19</sub> H <sub>37</sub> N <sub>5</sub> O <sub>7</sub> · 5/2 H <sub>2</sub> SO <sub>4</sub>
<b>Molecular Weight:</b>	692.72
<b>Target:</b>	Bacterial; Antibiotic
<b>Pathway:</b>	Anti-infection
<b>Storage:</b>	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 125 mg/mL (180.45 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	<b>Preparing Stock Solutions</b>		1 mg	5 mg	10 mg
		1 mM	1.4436 mL	7.2179 mL	14.4358 mL
		5 mM	0.2887 mL	1.4436 mL	2.8872 mL
10 mM	0.1444 mL	0.7218 mL	1.4436 mL		
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (144.36 mM); Clear solution; Need ultrasonic				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Sisomicin sulfate is a broad-spectrum aminoglycoside antibiotic produced by <i>Micromonospora inyoensis</i> . Sisomicin sulfate is highly active against Gram-positive bacteria <sup>[1][2][3][4]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	Aminoglycoside
<b>In Vitro</b>	Sisomicin sulfate (6.25 µg/mL) completely inhibits the growth of various clinical isolates bacterial, such as <i>Klebsiella</i> , <i>Salmonella</i> , <i>Citrobacter</i> , and <i>Staphylococcus aureus</i> <sup>[1]</sup> . Sisomicin sulfate (20 µg/mL; 30 min) has insignificant impairment on polymorphonuclear neutrophil (PMN) <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Sisomicin sulfate (4 mg/kg; ip; single dose) appears to accumulate and persist in the kidneys, showing potential renal toxicity in rats <sup>[4]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## CUSTOMER VALIDATION

- ACS Biomater Sci Eng. 2024 Apr 24.
- ACS Infect Dis. 2024 Apr 12;10(4):1327-1338.
- Curr Microbiol. 2021 Dec 14;79(1):12.

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## REFERENCES

- [1]. P Noone, et al. Sisomicin, netilmicin and dibekacin. A review of their antibacterial activity and therapeutic use. *Drugs*. 1984 Jun;27(6):548-78.
- [2]. Crowe CC, et al. Sisomicin: evaluation in vitro and comparison with gentamicin and tobramycin. *Antimicrob Agents Chemother*. 1973 Jan;3(1):24-8.
- [3]. Le Moli S, et al. In vitro and in vivo effect of sisomicin and gentamycin on polymorphonuclear chemotaxis and phagocytosis. *Int J Immunopharmacol*. 1983;5(1):49-54.
- [4]. Fabre J, et al. Persistence of sisomicin and gentamicin in renal cortex and medulla compared with other organs and serum of rats. *Kidney Int*. 1976 Dec;10(6):444-9.
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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](mailto:tech@MedChemExpress.com)

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