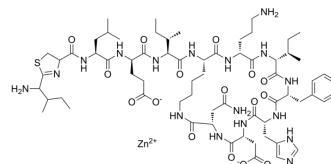


Bacitracin Zinc

Cat. No.:	HY-B0278
CAS No.:	1405-89-6
Molecular Formula:	C ₆₆ H ₁₀₁ N ₁₇ O ₁₆ SZn
Molecular Weight:	1486.06
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

1M HCl : 50 mg/mL (33.65 mM; Need ultrasonic)
 H₂O : < 0.1 mg/mL (ultrasonic) (insoluble)
 DMSO : < 1 mg/mL (insoluble or slightly soluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	0.6729 mL	3.3646 mL	6.7292 mL
	5 mM	0.1346 mL	0.6729 mL	1.3458 mL
	10 mM	0.0673 mL	0.3365 mL	0.6729 mL

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

BIOLOGICAL ACTIVITY

Description

Bacitracin Zinc is a complex formed by the binding of Bacitracin (HY-107193) with zinc ions. Bacitracin Zinc is an orally active polypeptide antibiotic with bactericidal properties. Bacitracin Zinc can cause DNA and deoxyribose damage, as well as improve the gut microbiota of broiler and beef cattle^{[1][2]}.

In Vivo

Bacitracin Zinc (30 mg/kg; 6 weeks; p.o.) can improve the production performance and gut microbiota of broiler chickens attacked by *Eimeria acervulina* and *Eimeria tenella*^[1].
 Bacitracin Zinc (6.62 mg/kg; twice daily; 82 days; p.o.) can affect the production performance, hepatic gluconeogenesis, lipid metabolism, and intramuscular fat content of beef cattle^[2].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Broilers challenged with <i>Eimeria acervulina</i> and <i>Eimeria tenella</i> ^[1] .
Dosage:	30 mg/kg

Administration:	Oral gavage (p.o.); 6 weeks
Result:	Increased proliferation of beneficial clostridia in the small intestine of broiler chickens 7 days after <i>Eimeria acervulina</i> and <i>Eimeria tenella</i> attack, including <i>Staphylococcus</i> , <i>Enterococcus</i> , and <i>Clostridium</i> .
Animal Model:	Nellore × Angus (F1) young bulls (n = 72; BW 368 ± 16.3 kg) ^[2] .
Dosage:	6.62 mg/kg
Administration:	Oral gavage (p.o.); twice daily; 82 days
Result:	Improved the average daily weight gain (ADG) and feed efficiency of beef cattle.

REFERENCES

[1]. Bortoluzzi C, et al. Hops β -acids and zinc bacitracin affect the performance and intestinal microbiota of broilers challenged with *Eimeria acervulina* and *Eimeria tenella*[J]. *Animal Feed Science and Technology*, 2015, 207: 181-189.

[2]. Júnior J M O, et al. Effect of the combined use of monensin with virginiamycin or bacitracin on beef cattle performance, liver gluconeogenesis, lipid metabolism and intramuscular fat content[J]. *Animal Feed Science and Technology*, 2023, 304: 115735.

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