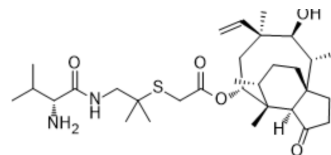


Valnemulin

Cat. No.:	HY-113829
CAS No.:	101312-92-9
Molecular Formula:	C ₃₁ H ₅₂ N ₂ O ₅ S
Molecular Weight:	564.82
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Valnemulin is an orally active broad-spectrum antibiotic against Gram-negative and Gram-positive bacteria, anaerobic bacteria, Mycoplasma, and Spirochetes. Valnemulin ameliorates enteric diseases, acute polyarthritis and enzootic pneumonia in pigs ^[1] . Valnemulin exhibits anti-inflammatory efficacy against lipopolysaccharide (HY-D1056)-induced lung injury ^[2] .	
In Vitro	Valnemulin exhibits antimicrobial efficacy against Mycoplasma hyopneumoniae and Mycoplasma hyosynoviae, with MIC ₉₀ s of 0.0005 µg/mL and 0.0001 to 0.00025 µg/mL, respectively ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Valnemulin (100 mg/kg, i.g., single dose) exhibits lung protective effects in LPS-induced acute lung injury in BALB/c mice ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Lipopolysaccharide induced acute lung injury in BALB/c mice ^[2] .
	Dosage:	100 mg/kg
	Administration:	i.g., single dose
	Result:	Reduced levels of neutrophils, lymphocytes and macrophages, and expressions of TNF-α, IL-6, and IL-1β in bronchoalveolar lavage fluid (BALF). Increased superoxidase dismutase (SOD) activity in BALF, decreased myeloperoxidase (MAO) activity in lung.

REFERENCES

[1]. Hannan PC, et al., In vitro susceptibilities of recent field isolates of Mycoplasma hyopneumoniae and Mycoplasma hyosynoviae to valnemulin (Econor), tiamulin and enrofloxacin and the in vitro development of resistance to certain antimicrobial agents in Mycoplasma hyopneumoniae. Res Vet Sci. 1997 Sep-Oct;63(2):157-60.

[2]. Chen Z, et al., Preventive effects of valnemulin on lipopolysaccharide-induced acute lung injury in mice. Inflammation. 2010 Oct;33(5):306-14.

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

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