Colistin

Cat. No.:	HY-113678
CAS No.:	1066-17-7
Molecular Formula:	$C_{53}H_{100}N_{16}O_{13}$ (for E_1)
Molecular Weight:	1170
Target:	Antibiotic; Bacterial
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

Colistin (Polymyxin E) is an orally active polypeptide antibiotic. Colistin has excellent activity against various Gram-negative rod-shaped bacteria, including multidrug-resistant Pseudomonas aeruginosa, Acinetobacter baumannii and Klebsiella pneumoniae. Colistin is associated with nephrotoxicity. Colistin can be used for the research of infections caused by Gram-negative bacilli[1][2].

In Vivo

Colistin (Polymyxin E) (16 mg/kg/day, i.p.) shows the enrichment of cell cycle arrest genes and suggests that injury or cellular stress caused by colistin is acting through p53 to inhibit cell cycle progression[1].

Colistin (16 mg/kg/day, i.p.) has elevated blood urea nitrogen (BUN), creatinine, and pathologic evidence of acute tubular necrosis and apoptosis[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57/BL6 mice[1]
Dosage:	16 mg/kg/day
Administration:	16 mg/kg/day, i.p.
Result:	Detected apoptosis, necrosis PCNA staining in mice.

CUSTOMER VALIDATION

- Nat Commun. 2022 Mar 2;13(1):1116.
- Adv Sci (Weinh). 2020 Jul 21;7(17):2001374.
- Clin Microbiol Infect. 2020 Sep;26(9):1264-1265.
- J Antibiot (Tokyo). 2019 Aug;72(8):600-604.
- Animal Diseases. 02 November 2021.

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REFERENCES

[1]. Silpak Biswas, et al. Colistin: an update on the antibiotic of the 21st century. Expert Rev Anti Infect Ther. 2012 Aug;10(8):917-34.

[2]. Jian Li, et al. Pharmacokinetics of colistin methanesulphonate and colistin in rats following an intravenous dose of colistin methanesulphonate.

[3]. Michael T Eadon, et al. Cell cycle arrest in a model of colistin nephrotoxicity. Physiol Genomics. 2013 Oct 1;45(19):877-88.

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