

Amphomycin

Cat. No.:	HY-P3078
CAS No.:	1402-82-0
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

Amphomycin

BIOLOGICAL ACTIVITY

Description	Amphomycin is a lipopeptide antibiotic that inhibits peptidoglycan synthesis and blocks cell wall development. Amphomycin exhibits potent antibacterial activities against methicillin-resistant <i>S. aureus</i> (MRSA), vancomycin-resistant enterococci (VRE), penicillin-gentamicin-erythromycin-resistant <i>S. pneumoniae</i> , and linezolid-quinupristin-dalfopristin-resistant enterococci ^{[1][2][3]} .	
IC₅₀ & Target	Lipopeptide	
In Vitro	Amphomycin (40 μg/mL; 60 min) leads <i>S. aureus</i> to exhibit cell wall thinning and Park's nucleotide accumulation ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay ^[1]	
	Cell Line:	<i>S. aureus</i> whole cells
	Concentration:	40 μg/mL
	Incubation Time:	60 min
	Result:	Resulted in the thinning of cell wall and the accumulation of Park's nucleotide.
In Vivo	Amphomycin (50 mg/kg; p.o.; single) shows low oral availability and (5-10mg/kg; i.v.; single) exhibits a long half-life (5.2-8.0 h in mice and 4.6-7.1 h in rats) ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

REFERENCES

- [1]. Singh M, et al. Solid-state NMR characterization of amphomycin effects on peptidoglycan and wall teichoic acid biosyntheses in *Staphylococcus aureus*. *Sci Rep*. 2016 Aug 19;6:31757.
- [2]. Pasetka CJ, et al. Novel antimicrobial lipopeptides with long in vivo half-lives. *Int J Antimicrob Agents*. 2010 Feb;35(2):182-5.
- [3]. Tanaka H, et al. Amphomycin inhibits phospho-N-acetylmuramyl-pentapeptide translocase in peptidoglycan synthesis of *Bacillus*. *Biochem Biophys Res Commun*. 1979 Feb 14;86(3):902-8.

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