Cefilavancin

Cat. No.:	HY-19466
CAS No.:	1393900-12-3
Molecular Formula:	$C_{87}H_{95}Cl_3N_{16}O_{28}S_2$
Molecular Weight:	1983.26
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Cefilavancin (TD-1792) is a potent multivalent glycopeptide-cephalosporin heterodimer antibiotic with effective activity against Gram-positive bacteria. Cefilavancin has been used to research skin infections[1][2][3].
IC_{50} & Target	Glycopeptide
In Vitro	Cefilavancin (TD-1792) has highly active against Methicillin-susceptible Staphylococcus aureus (MIC_{90} = 15 ng/mL), Methicillin-resistant Staphylococcus aureus, and heterogeneous Vancomycin-intermediate Staphylococcus aureus (MIC_{90} = 30 ng/mL)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Cefilavancin (0.03-10 mg/kg; s.c.) produces a dose-dependent reduction of thigh bacterial burden in infected mice[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female NSA mice (18-30 g; neutropenia induced by administering cyclophosphamide, then injected bacteria into the posterior thigh)[3]
Dosage:	0.03-10 mg/kg
Administration:	s.c.; single dosage (every 24 h) or two (every 12 h), three (every 8 h), or four (every 6 h) divided doses
Result:	Produced a maximal of approximately 1- to 2-log_{10} kill against MRSA ATCC 33591, MSSA ATCC 29213, and MRSE MED 820 and ≥3-log_{10} kill against VISA HIP 5836, MSSE SU03, PSSP MED35, PSSP MED1119, and Streptococcus pyogenes MED 2040 strains.

REFERENCES

[1]. Blais J, et al. Antistaphylococcal activity of TD-1792, a multivalent glycopeptide-cephalosporin antibiotic. Antimicrob Agents Chemother. 2012 Mar;56(3):1584-7.

[2]. Stryjewski ME, et al. TD-1792 versus vancomycin for treatment of complicated skin and skin structure infections. Antimicrob Agents Chemother. 2012 Nov;56(11):5476-83.

[3]. Hegde SS, et al. Pharmacodynamics of TD-1792, a novel glycopeptide-cephalosporin heterodimer antibiotic used against Gram-positive bacteria, in a neutropenic murine thigh model. Antimicrob Agents Chemother. 2012 Mar;56(3):1578-83.

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