Tedizolid

Cat. No.:	HY-14855			
CAS No.:	856866-72-3			
Molecular Formula:	C ₁₇ H ₁₅ FN ₆ O ₃			
Molecular Weight:	370.34			
Target:	Bacterial; Antibiotic			
Pathway:	Anti-infection			
Storage:	Powder	-20°C	3 years	
		4°C	2 years	
	In solvent	-80°C	2 years	
		-20°C	1 year	

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SOLVENT & SOLUBILITY

In Vitro	DMSO : 10 mg/mL (27.00 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg	
		1 mM	2.7002 mL	13.5011 mL	27.0022 mL	
		5 mM	0.5400 mL	2.7002 mL	5.4004 mL	
		10 mM	0.2700 mL	1.3501 mL	2.7002 mL	
	Please refer to the solubility information to select the appropriate solvent.					
In Vivo	 Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 1 mg/mL (2.70 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 1 mg/mL (2.70 mM); Clear solution 					

Description	Tedizolid (TR 700; Torezolid; DA-7157) is a novel oxazolidinone, acting through inhibition of bacterial protein synthesis by binding to 23S ribosomal RNA (rRNA) of the 50S subunit of the ribosome.			
IC ₅₀ & Target	Oxazolidinone			
In Vitro	Tedizolid (0.25 μg/mL) inhibits all 28 clinical isolates of PRSP, and is 4-fold more potent than linezolid against PRSP ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			
In Vivo	For mice infected with PSSP type III, the 100% survival rate is achieved with tedizolid phosphate at a minimum total daily dose of 10 mg/kg. Lungs of infected mice treated with tedizolid phosphate show less severe inflammation and edema, as			

indicated by the mean scores for inflammation and edema $^{[1]}$.

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PROTOCOL

Animal Administration ^[1]

To induce a systemic S. pneumoniae infection, male ICR mice (weight, 18 to 20 g) are inoculated intraperitoneally with 1 of 4 PRSP isolates (DR9, DR10, DR11, or DR14) suspended in 10% mucin. The suspension contained sufficient bacteria to kill 100% of untreated control mice. At 1 h postinfection, mice receives a single dose of either tedizolid phosphate or linezolid, and survival is assessed daily for 7 days postinfection. Treatments are delivered both orally and intravenously at each of four doses (40 mg/kg of body weight, 13.33 mg/kg, 4.44 mg/kg, and 1.48 mg/kg), with 8 mice per group defined by dose, delivery method, and infecting strain. The 50% effective dose (ED₅₀), i.e., the dose allowing survival of 50% of the infected mice, is calculated for each delivery route using probit analysis.

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CUSTOMER VALIDATION

- Nat Commun. 2023 Jun 22;14(1):3705.
- J Antimicrob Chemother. 2021 Jan 19;76(2):292-296.
- Front Microbiol. 2018 Sep 7;9:2095.
- Antimicrob Agents Chemother. 2023 Mar 15;e0165522.
- Antimicrob Agents Chemother. 2023 Jan 23;e0145922.

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REFERENCES

[1]. Choi S, et al. Activity of Tedizolid Phosphate (TR-701) in Murine Models of Infection with Penicillin-resistant and Penicillin-sensitive Streptococcus pneumoniae. Antimicrob Agents Chemother. 2012 Jun 19.

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

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