Tedizolid phosphate

Cat. No.: HY-14855B

CAS No.: 856867-55-5

Molecular Formula: $C_{17}H_{16}FN_6O_6P$

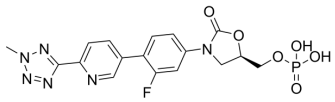
Molecular Weight: 450

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 36 mg/mL (80.00 mM)

H_2O : 0.1 mg/mL (0.22 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Mass / Solvent / Concentration	1 mg	5 mg	10 mg
1 mM	2.2222 mL	11.1111 mL	22.2222 mL
5 mM	0.4444 mL	2.2222 mL	4.4444 mL
10 mM	0.2222 mL	1.1111 mL	2.2222 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (4.62 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.62 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.62 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Tedizolid phosphate (TR-701FA) is a novel oxazolidinone with activity against Gram-positive pathogens.

IC_{50} & Target

Oxazolidinone

In Vitro

Tedizolid phosphate (TR-701FA; 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 (TR-701FA) 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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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 (ED_{50}), i.e., the dose allowing survival of 50% of the infected mice, is calculated for each delivery route using probit analysis. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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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