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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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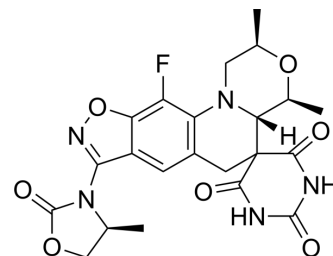
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Zoliflodacin

Cat. No.:	HY-17647		
CAS No.:	1620458-09-4		
Molecular Formula:	C ₂₂ H ₂₂ FN ₅ O ₇		
Molecular Weight:	487.44		
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 : 140 mg/mL (287.21 mM; Need ultrasonic)				
	Preparing Stock Solutions	Mass	1 mg	5 mg	10 mg
		Solvent			
		Concentration			
		1 mM	2.0515 mL	10.2577 mL	20.5153 mL
		5 mM	0.4103 mL	2.0515 mL	4.1031 mL
		10 mM	0.2052 mL	1.0258 mL	2.0515 mL
	Please refer to the solubility information to select the appropriate solvent.				
In Vivo	<p>1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (4.27 mM); Clear solution</p> <p>2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.27 mM); Clear solution</p> <p>3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.27 mM); Clear solution</p>				

BIOLOGICAL ACTIVITY

Description	Zoliflodacin (ETX0914;AZD0914) is a novel spiropyrimidinetrione bacterial DNA gyrase/topoisomerase inhibitor. Zoliflodacin has potent in vitro antibacterial activity against Gram-positive and Gram-negative organisms, including <i>S. aureus</i> with the MIC ₉₀ of 0.25 µg/mL.
IC ₅₀ & Target	MIC ₉₀ : 0.25 µg/mL (<i>S. aureus</i>) ^[1]
In Vitro	Zoliflodacin has antibacterial activity against key Gram-positive (<i>Staphylococcus aureus</i> , <i>Staphylococcus epidermidis</i> , <i>Streptococcus pneumoniae</i> , <i>Streptococcus pyogenes</i> , and <i>Streptococcus agalactiae</i>), fastidious Gram-negative (<i>Haemophilus influenzae</i> , <i>Neisseria gonorrhoeae</i>), atypical (<i>Legionella pneumophila</i>), and anaerobic (<i>Clostridium difficile</i>)

bacterial species, including isolates with known resistance to fluoroquinolones. The antibacterial activity of Zoliflodacin is shown to be via inhibition of DNA biosynthesis and accumulation of double-strand cleavages; this mechanism of action differs from those of other marketed antibacterial compounds, including fluoroquinolones. Zoliflodacin stabilizes and arrests the cleaved covalent complex of gyrase with double-strand broken DNA under permissive conditions and thus blocks religation of the double-strand cleaved DNA to form fused circular DNA^[1].

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

PROTOCOL

Cell Assay^[1]

Zoliflodacin broth macrodilution MICs are determined and used as the starting point for both in vitro time-kill and postantibiotic-effect (PAE) tests. In vitro static time-kill studies are conducted with glass tubes (18 by 150 mm, without agitation) containing 10-mL volumes of cation-adjusted Mueller-Hinton broth with logarithmically growing cultures (starting inoculum of 1×10^6 CFU/mL) against levofloxacin-susceptible and levofloxacin-resistant *S. aureus*. Zoliflodacin is tested at concentrations equivalent to 0.5, 1, 2, 4, and 8 times the MIC; samples are plated for colony counts at 0, 2, 4, 6, 8, and 24 h by using 100 μ L aliquots spotted onto 25-ml sheep blood agar plates as described previously. Compounds are considered bactericidal at the lowest drug concentration that reduced viable organism counts by $\geq 3 \log_{10}$ in 24 h. Time-kill studies are conducted in duplicate; tests are combined, and mean values are reported^[1].

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

CUSTOMER VALIDATION

- ACS Infect Dis. 2023 Feb 20.
- Sci Rep. 2024 Jan 12;14(1):1179.

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

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