

## Contezolid acefosamil sodium

### Chemical Properties

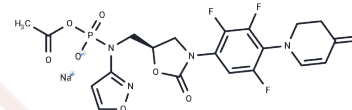
CAS No. : 1807365-35-0

Formula: C<sub>20</sub>H<sub>17</sub>F<sub>3</sub>N<sub>4</sub>NaO<sub>8</sub>P

Molecular Weight: 552.33

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



### Biological Description

Description	Contezolid acefosamil sodium (MRX-4) is a novel orally active oxazolidinone antibiotic under investigation for the treatment of complicated skin and soft tissue infections (cSSTI) caused by drug-resistant Gram-positive bacteria. It possesses strong efficacy against these pathogens while significantly minimizing the risks of myelosuppression and monoamine oxidase inhibition (MAOI) [1][2].
Targets(IC50)	Others,Antibacterial,Antibiotic,Monoamine Oxidase
In vitro	Contezolid (MRX-I) demonstrates strong efficacy against a broad spectrum of Gram-positive clinical isolates, including staphylococci, streptococci, and enterococci. Its potency extends to multidrug-resistant (MDR) organisms, such as MRSA, methicillin-resistant Streptococcus epidermidis (MRSE), penicillin-resistant Streptococci (PRSP), and vancomycin-resistant enterococci (VRE)[2].
In vivo	Oral absorption of Contezolid (MRX-I) occurs rapidly in mouse, rat, and dog, with peak plasma concentrations at 0.5-2.6 h postdose. In these species respectively, dose-normalized C <sub>max</sub> /dose was 524, 1065, and 259 ng/mL/(mg/kg); dose-normalized AUC <sub>0-t</sub> /dose was 1654, 3703, and 1664 ng·h/mL/(mg/kg); T <sub>1/2</sub> is 1, 1.5, and 3 h; and oral bioavailability is 69%, 109%, and 37%[2]. Contezolid (MRX-I) shows no obvious toxicity [2]. Contezolid (MRX-I, 100 mg/kg, once daily) significantly reduced the bacterial load in lungs compared to untreated controls[3].

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	1.8105 mL	9.0526 mL	18.1051 mL
5 mM	0.3621 mL	1.8105 mL	3.621 mL
10 mM	0.1811 mL	0.9053 mL	1.8105 mL
50 mM	0.0362 mL	0.1811 mL	0.3621 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Junzhen Wu, et al. Evaluation of the Effect of Contezolid (MRX-I) on the Corrected QT Interval in a Randomized, Double-Blind, Placebo- and Positive-Controlled Crossover Study in Healthy Chinese Volunteers. *Antimicrob Agents Chemother.* 2020 May 21;64(6):e02158-19.

Mikhail F Gordeev, et al. New potent antibacterial oxazolidinone (MRX-I) with an improved class safety profile. *J Med Chem.* 2014 Jun 12;57(11):4487-97.

Carolyn Shoen, et al. In Vitro and In Vivo Activities of Contezolid (MRX-I) against *Mycobacterium tuberculosis*. *Antimicrob Agents Chemother.* 2018 Jul 27;62(8):e00493-18.

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