

<b>Product Name:</b>	Mezlocillin Sodium
<b>Product Number:</b>	M017
<b>CAS Number:</b>	59798-30-0
<b>Molecular Formula:</b>	$C_{21}H_{24}N_5NaO_8S_2$
<b>Molecular Weight:</b>	561.57
<b>Form:</b>	Powder
<b>Appearance:</b>	white to off-white crystalline powder
<b>Source:</b>	semi-synthetic
<b>Water Content (Karl Fischer):</b>	≤6.0%
<b>pH:</b>	4.5-8.0
<b>Optical Rotation:</b>	+175° to +195°
<b>Storage Conditions:</b>	2-8 °C
<b>Description:</b>	Mezlocillin sodium is broad-spectrum, semisynthetic, $\beta$ -lactam antibiotic and ureido penicillin derived from ampicillin. It is sparingly soluble in aqueous solution.
<b>Mechanism of Action:</b>	$\beta$ -lactams interfere with PBP (penicillin binding protein) activity involved in the final phase of peptidoglycan synthesis. PBP's are enzymes which catalyze a pentaglycine crosslink between alanine and lysine residues providing additional strength to the cell wall. Without a pentaglycine crosslink, the integrity of the cell wall is severely compromised and ultimately leads to cell lysis and death. Resistance to $\beta$ -lactams is commonly due to cells containing plasmid encoded $\beta$ -lactamases, however, mezlocillin is resistant to a number of $\beta$ -lactamases.
<b>Spectrum:</b>	Mezlocillin is a broad-spectrum antibiotic targeting a wide variety of Gram-positive and Gram-negative bacteria.
<b>Microbiology Applications</b>	<p>Mezlocillin is commonly used in clinical <i>in vitro</i> microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against Gram-positive and Gram-negative microbial isolates. Medical microbiologists use AST results to recommend antibiotic treatment options. Representative MIC values include:</p> <ul style="list-style-type: none"><li>• <i>Helicobacter pylori</i> 0.125 <math>\mu</math>g/mL – 0.25 <math>\mu</math>g/mL</li><li>• For a complete list of Mezlocillin MIC values, <a href="#">click here</a>.</li></ul>

**References:**

Bodey GP and Pan T (1977) Mezlocillin: In vitro studies of a new broad-spectrum penicillin. *Antimicrob. Agents Chemother.* 11 (1): 74-79 PMID 836016

Fu KP and Neu HC (1978) Azlocillin and Mezlocillin: New ureido penicillins. *Antimicrob. Agents Chemother.* 13(6):930-938 PMID 677860

Guzmán, Flavio, MD. "Beta Lactams Antibiotics (penicillins and Cephalosporins) Mechanism of Action." *Medical Pharmacology*. Pharmacology Corner, 29 Nov. 2008. Web. 21 Aug. 2012.

Pitout JD, Sanders CC, Sanders WE (1997) Antimicrobial resistance with focus on beta-lactam resistance in gram-negative bacilli. *Am J Med* 103:51

Roszkowski K, Ko HL, Roszkowski W, Jeljaszewicz J, and Pulverer G. (1984) Effects of cefotaxime, clindamycin, mezlocillin, and piperacillin on mouse sarcoma L-1 tumor. *Cancer Immunol.* 18(3):164-168 PMID 6095992

Soares LA and Trabulsi LR (1979) Studies on the antibacterial activity of two new acylureidopenicillins, mezlocillin and azlocillin. *Arzneimittelforschung.* 29(12a):1932-1934. PMID 543893

If you need any help, contact us: [info@toku-e.com](mailto:info@toku-e.com). Find more information on: [www.toku-e.com/](http://www.toku-e.com/)