Plesiomonas shigelloides

Calibration of zone diameter breakpoints to MIC values

Version 3.0
January 2020
**Plesiomonas shigelloides**

MIC and zone diameter correlates

- The following histograms present inhibition zone diameter distributions from EUCAST antimicrobial susceptibility testing. In most, the different colours of the bars indicate different MIC values. In some, the colours of the bars indicate a resistance gene or a resistance mechanism.

- The distributions include data for wild-type isolates and for isolates with acquired resistance mechanisms. These distributions can not be used to infer resistance rates or the performance of the tests with routine isolates.

- For some agents, isolates were tested on more than one occasion, including parallel tests with disks and media from several manufacturers. When this is the case, data are presented as both the “number of isolates tested” and the “total number of MIC-zone diameter correlates”, including replicate tests and parallel tests with disks and media from different sources.
**Plesiomonas shigelloides**

Materials and methods

- Antimicrobial susceptibility testing was performed on clinical isolates of *Plesiomonas shigelloides*. Disk diffusion was performed according to EUCAST methodology and MIC determination was performed with broth microdilution.

- *Plesiomonas shigelloides* was previously considered to be part of the family Enterobacteriaceae. Recent taxonomic studies have narrowed the definition of the family Enterobacteriaceae and *Plesiomonas shigelloides* is now included in another family within the Order Enterobacterales. EUCAST breakpoints for Enterobacteriaceae apply to all members of the *Enterobacterales*. Distributions for *Plesiomonas shigelloides* are represented separately in this document and are not included in the document on *Enterobacterales*.

- This presentation is based on EUCAST Clinical Breakpoint Table v. 10.0.
## Changes from previous version (2.0)

<table>
<thead>
<tr>
<th>Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cefuroxime graph removed since breakpoints not valid for <em>Plesiomonas shigelloides</em>.</td>
</tr>
<tr>
<td>• Zone and MIC breakpoints changed for ertapenem.</td>
</tr>
</tbody>
</table>
Explanation of graphs:

- These graphs show zone diameter distributions with MIC values or resistance mechanisms as coloured bars. Colours are related to current EUCAST MIC breakpoints.

Agent X

- MIC (mg/L) Legend:
  - ≥8: Resistant
  - 4: Susceptible, increased exposure
  - 2: Susceptible, standard dosing regimen
  - 1: Susceptible, increased exposure
  - 0.5
  - 0.25

Agent Y

- MIC (mg/L) Legend:
  - ≥64: Resistant
  - 32: Susceptible, increased exposure
  - 16
  - 8
  - 4
  - 2
  - 1
  - 0.5
  - ≤0.25

No of observations

Inhibition zone diameter (mm)
Piperacillin-tazobactam 36 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**

<table>
<thead>
<tr>
<th>MIC (mg/L)</th>
<th>S≤8, R&gt;16 mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone diameter</td>
<td>S≥20, R&lt;17 mm</td>
</tr>
</tbody>
</table>
Cefepime 30 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

Breakpoints

<table>
<thead>
<tr>
<th>MIC (mg/L)</th>
<th>Zone diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>S≤1, R&gt;4</td>
<td>S≥27, R&lt;24</td>
</tr>
</tbody>
</table>

No of isolates vs. Inhibition zone diameter (mm)
Cefotaxime 5 µg vs. MIC
*Plesiomonas shigelloides*, 46 isolates (61 correlates)

Breakpoints

| MIC (mg/L) | S≤1, R>2 mg/L |
| Zone diameter | S≥20, R<17 mm |
Ceftazidime 10 µg vs. MIC

_Plesiomonas shigelloides_, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**

- **MIC**
  - S≤1, R>4 mg/L
- **Zone diameter**
  - S≥22, R<19 mm
Ceftriaxone 30 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**

| MIC (mg/L) | S≤1, R>2 mg/L |
| Zone diameter | S≥25, R<22 mm |

**Inhibition zone diameter (mm)**

- MIC
- Zone diameter
Ertapenem 10 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**

| MIC (mg/L) | S≤0.5, R>0.5 mg/L |
| Zone diameter | S≥25, R<25 mm |
Imipenem 10 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**

<table>
<thead>
<tr>
<th>MIC (mg/L)</th>
<th>S≤2, R&gt;4 mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone diameter</td>
<td>S≥22, R&lt;17 mm</td>
</tr>
</tbody>
</table>
Meropenem 10 µg vs. MIC

*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**
- **MIC**
  - $S \leq 2$, $R > 8$ mg/L
- **Zone diameter**
  - $S \geq 22$, $R < 16$ mm

**Inhibition zone diameter (mm)**

**No of isolates**

**MIC (mg/L)**
- 0.03
- $\leq 0.016$
Ciprofloxacin 5 µg vs. MIC
*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**

<table>
<thead>
<tr>
<th>MIC (mg/L)</th>
<th>Breakpoints</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥8</td>
<td>S≤0.25, R&gt;0.5 mg/L</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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<tr>
<td>1</td>
<td></td>
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<tr>
<td>0.5</td>
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<tr>
<td>0.25</td>
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<tr>
<td>0.125</td>
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<tr>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>0.03</td>
<td></td>
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<tr>
<td>≤0.016</td>
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</table>

**Zone diameter**

<table>
<thead>
<tr>
<th>MIC (mg/L)</th>
<th>Breakpoints</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>S≥25, R&lt;22 mm</td>
</tr>
<tr>
<td>S≤0.25</td>
<td></td>
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<tr>
<td>R&gt;0.5</td>
<td></td>
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<tr>
<td>≥25</td>
<td></td>
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<tr>
<td>≥22</td>
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</tbody>
</table>
Levofloxacin 5 µg vs. MIC
*Plesiomonas shigelloides*, 46 isolates (61 correlates)

(1 data source)

**Breakpoints**

- **MIC**
  - $S \leq 0.5$, $R > 1$ mg/L
- **Zone diameter**
  - $S \geq 23$, $R < 19$ mm
Trimethoprim-sulfamethoxazole 1.25-23.75 µg vs. MIC

Plesiomonas shigelloides, 46 isolates (60 correlates)

(1 data source)

Breakpoints

MIC
S≤2, R>4 mg/L

Zone diameter
S≥14, R<11 mm