



EUCAST

European Committee
on Antimicrobial
Susceptibility Testing

Moraxella catarrhalis

Calibration of zone diameter
breakpoints to MIC values

Version 11.0
January 2026

Moraxella catarrhalis

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. A large number of isolates with MIC values close to the edge of the wild-type distribution and/or close to EUCAST clinical breakpoints were intentionally included. 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.

Moraxella catarrhalis

Materials and methods

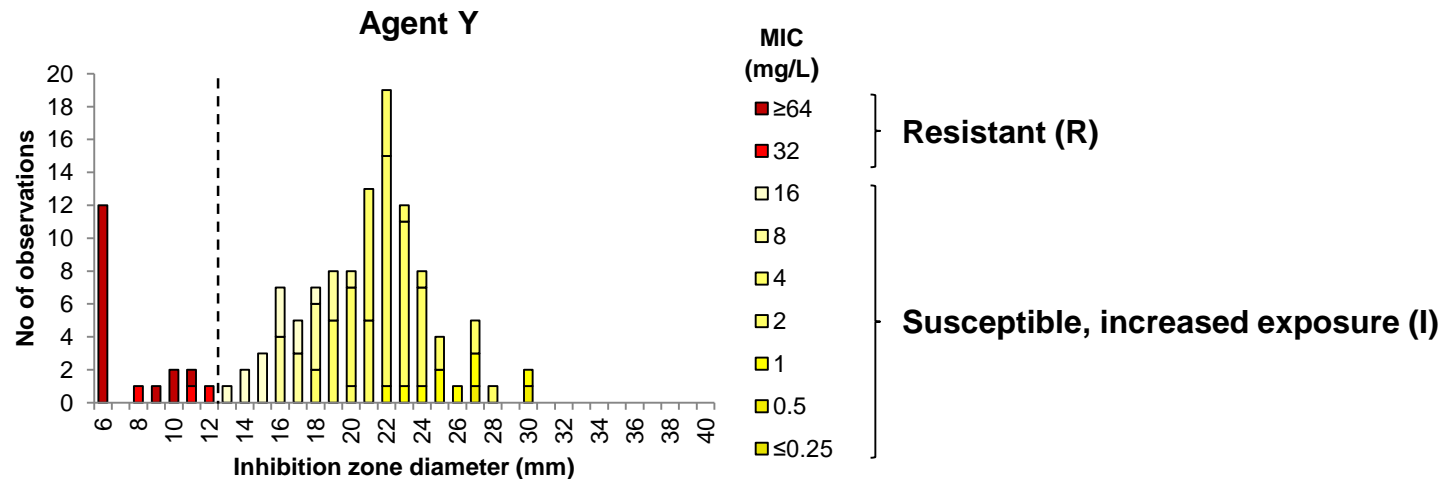
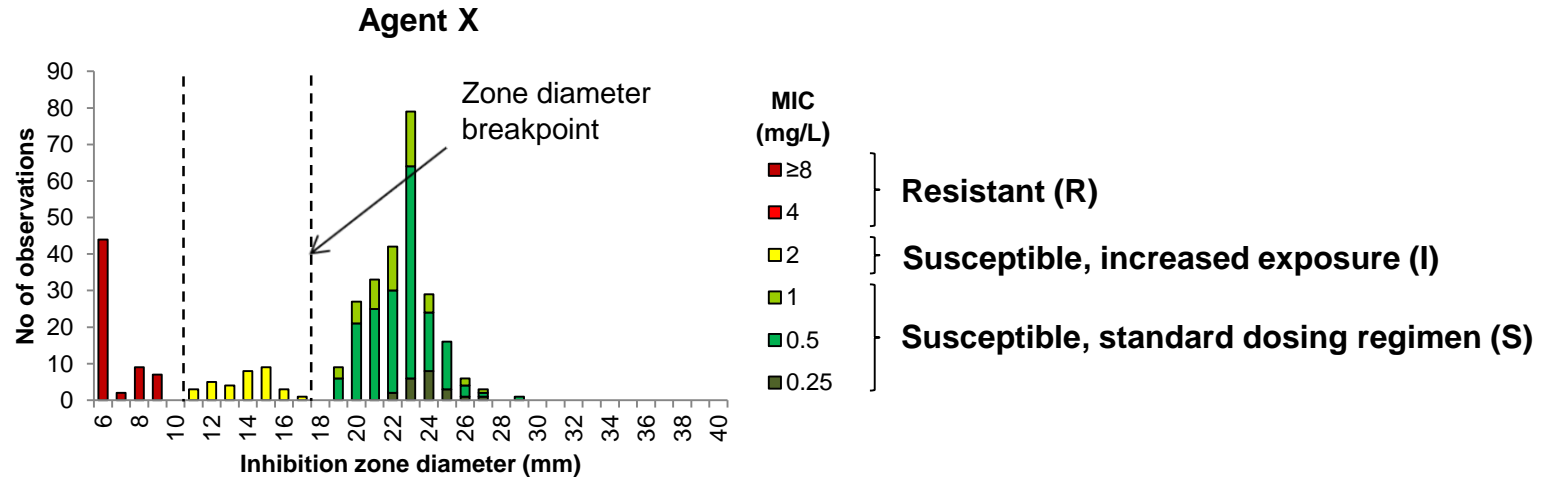
- The distributions in this presentation are based on a collection of consecutive clinical isolates of *Moraxella catarrhalis* and 25 additional isolates with known MIC values. Disk diffusion and MIC determination with broth microdilution and gradient tests were performed according to EUCAST recommendations using MH-F agar and broth.
- The distributions in this presentation are the result of a collaboration between EUCAST and Public Health Agency of Sweden, Stockholm, Sweden.
- This presentation is based on EUCAST Clinical Breakpoint Tables v. 16.0.

Changes from previous version (10.2)

Changes
<ul style="list-style-type: none">• MIC and zone diameter breakpoints changed for trimethoprim-sulfamethoxazole.

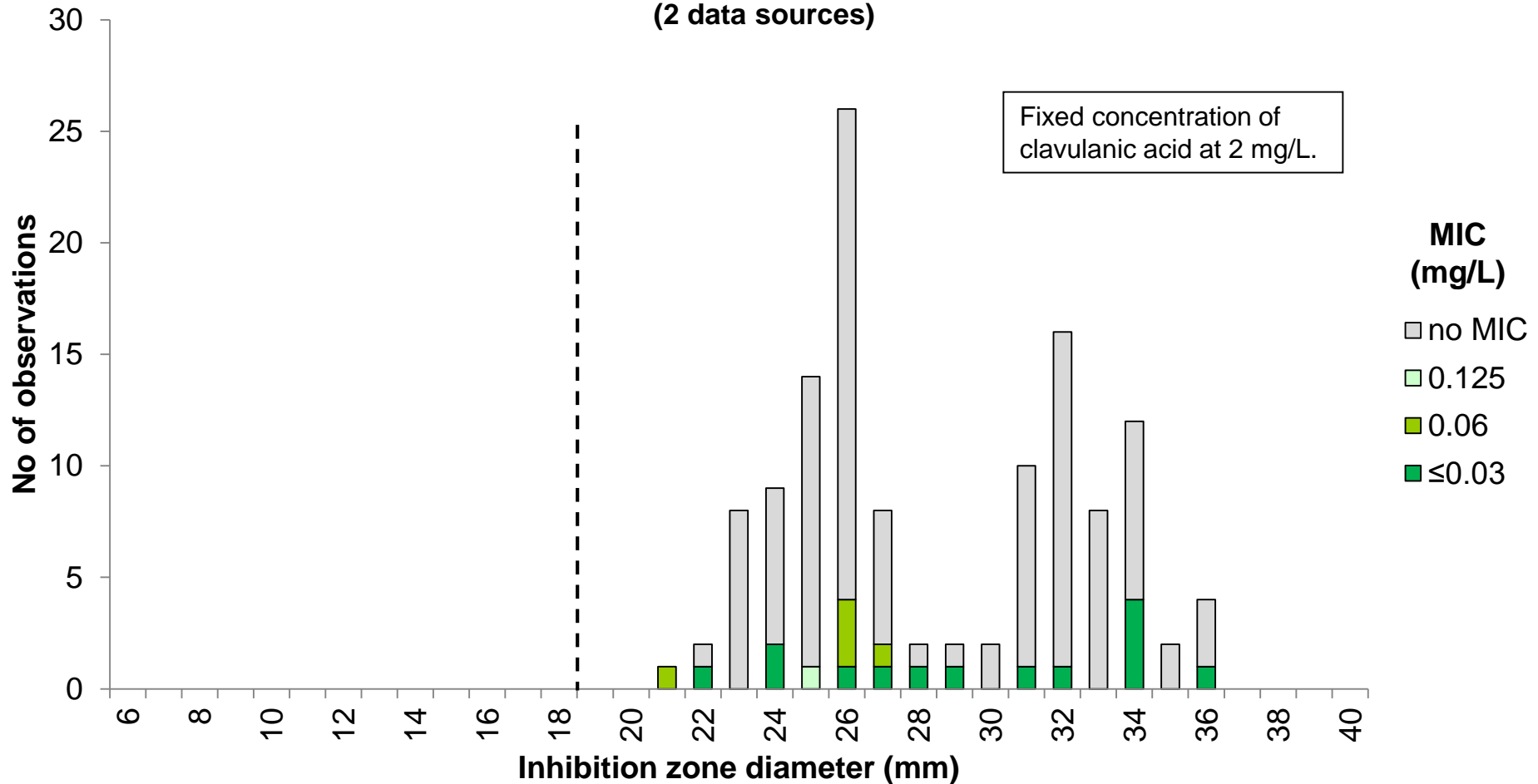
Explanation of graphs:

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



Amoxicillin-clavulanic acid 2-1 μg vs. MIC *Moraxella catarrhalis*, 106 isolates (126 correlates)

(2 data sources)



Breakpoints

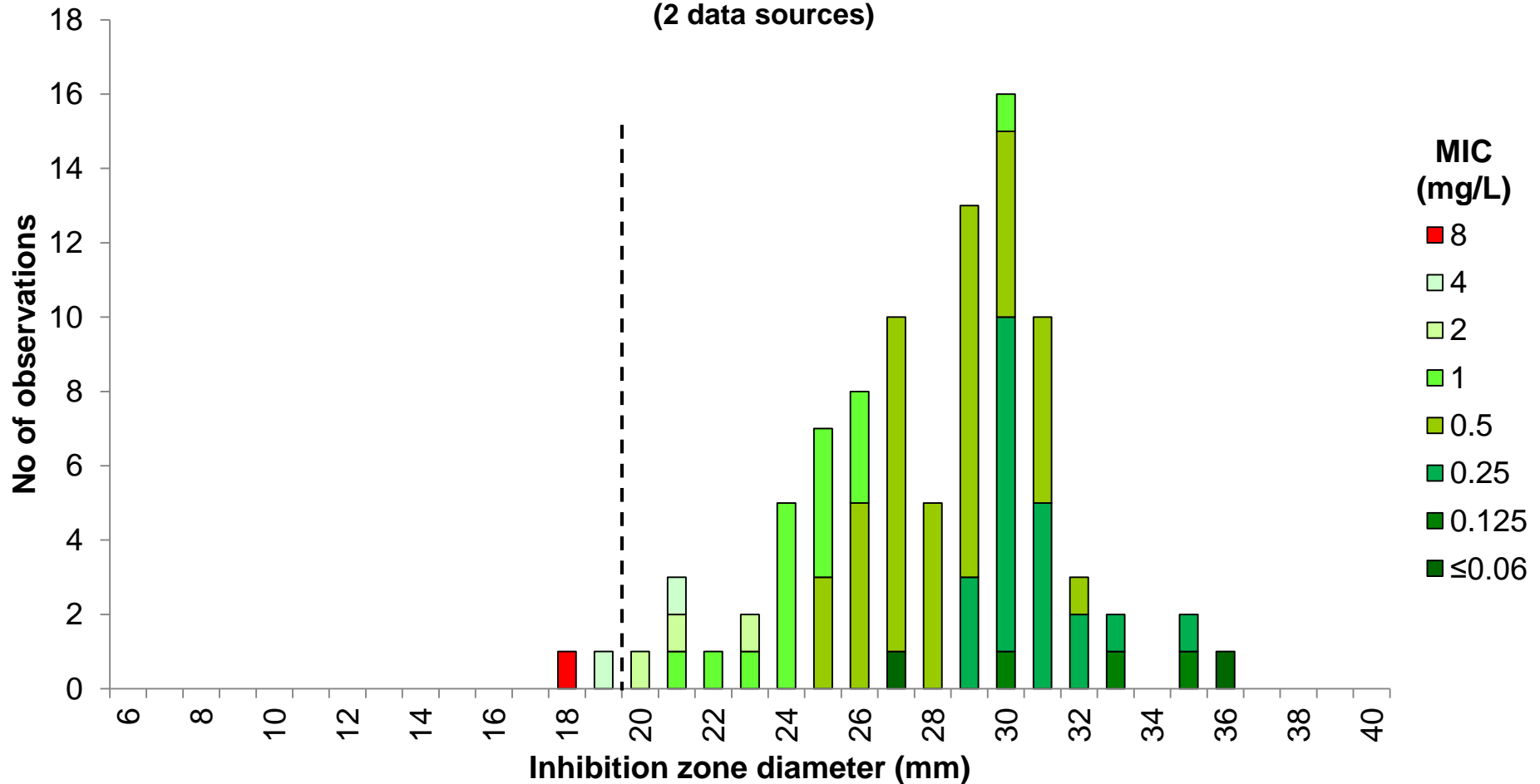
MIC $S \leq 1$, $R > 1$ mg/L

Zone diameter $S \geq 19$, $R < 19$ mm

Cefepime 30 µg vs. MIC

Moraxella catarrhalis, 91 isolates

(2 data sources)



Breakpoints

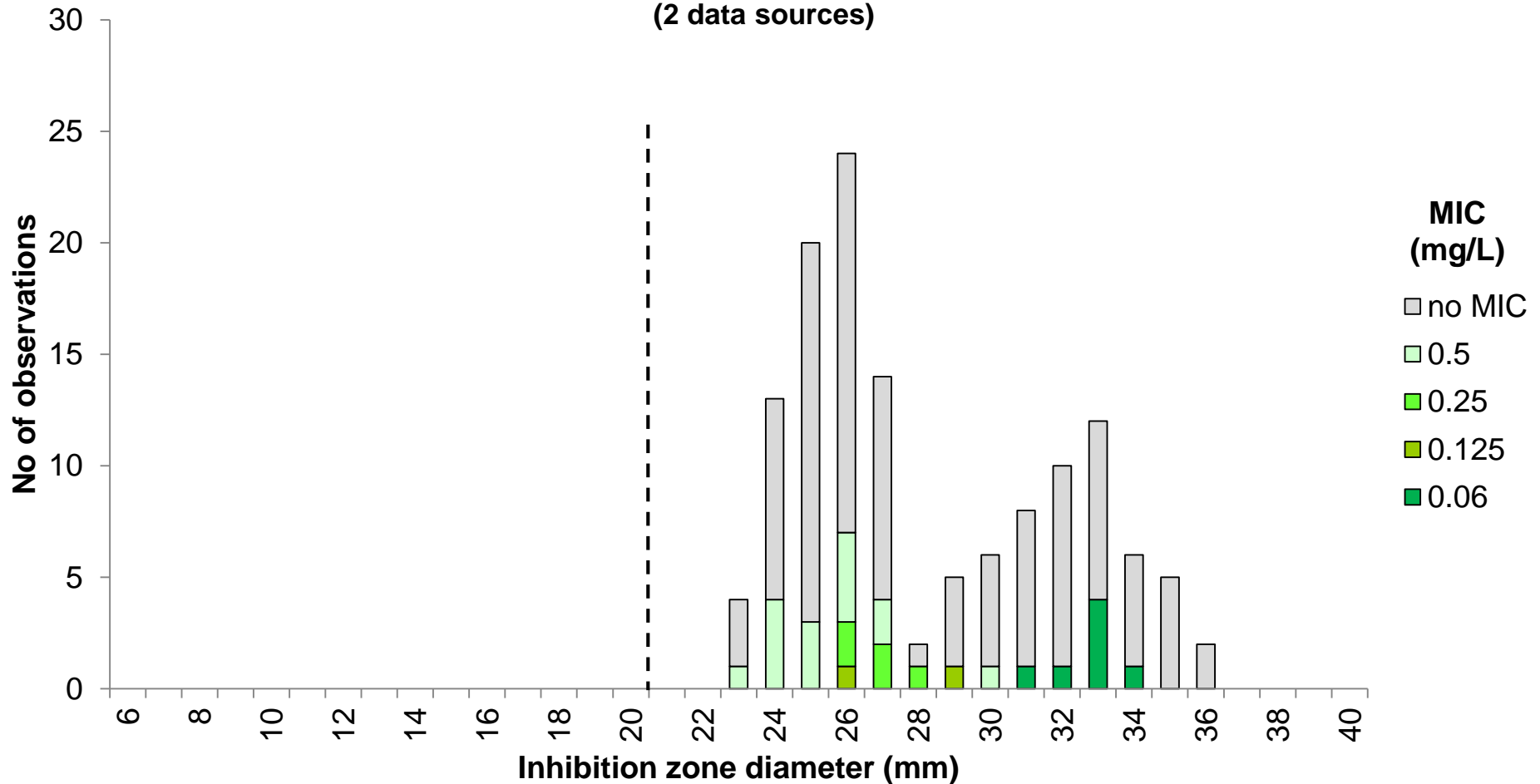
MIC S ≤ 4, R > 4 mg/L

Zone diameter S ≥ 20, R < 20 mm

Cefixime 5 µg vs. MIC

Moraxella catarrhalis, 131 isolates

(2 data sources)



Breakpoints

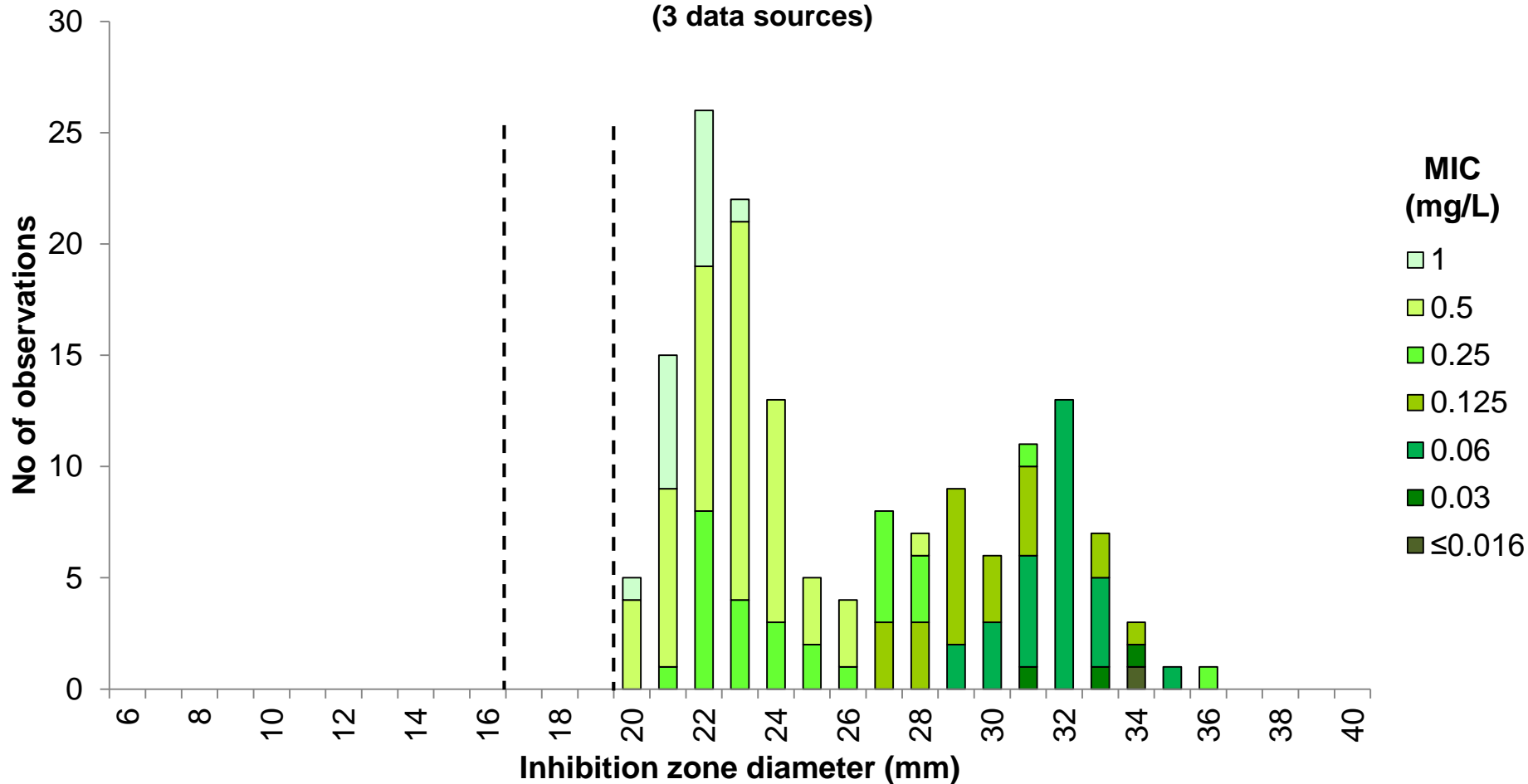
MIC $S \leq 0.5$, $R > 0.5$ mg/L

Zone diameter $S \geq 21$, $R < 21$ mm

Cefotaxime 5 μ g vs. MIC

Moraxella catarrhalis, 131 isolates (156 correlates)

(3 data sources)



Breakpoints

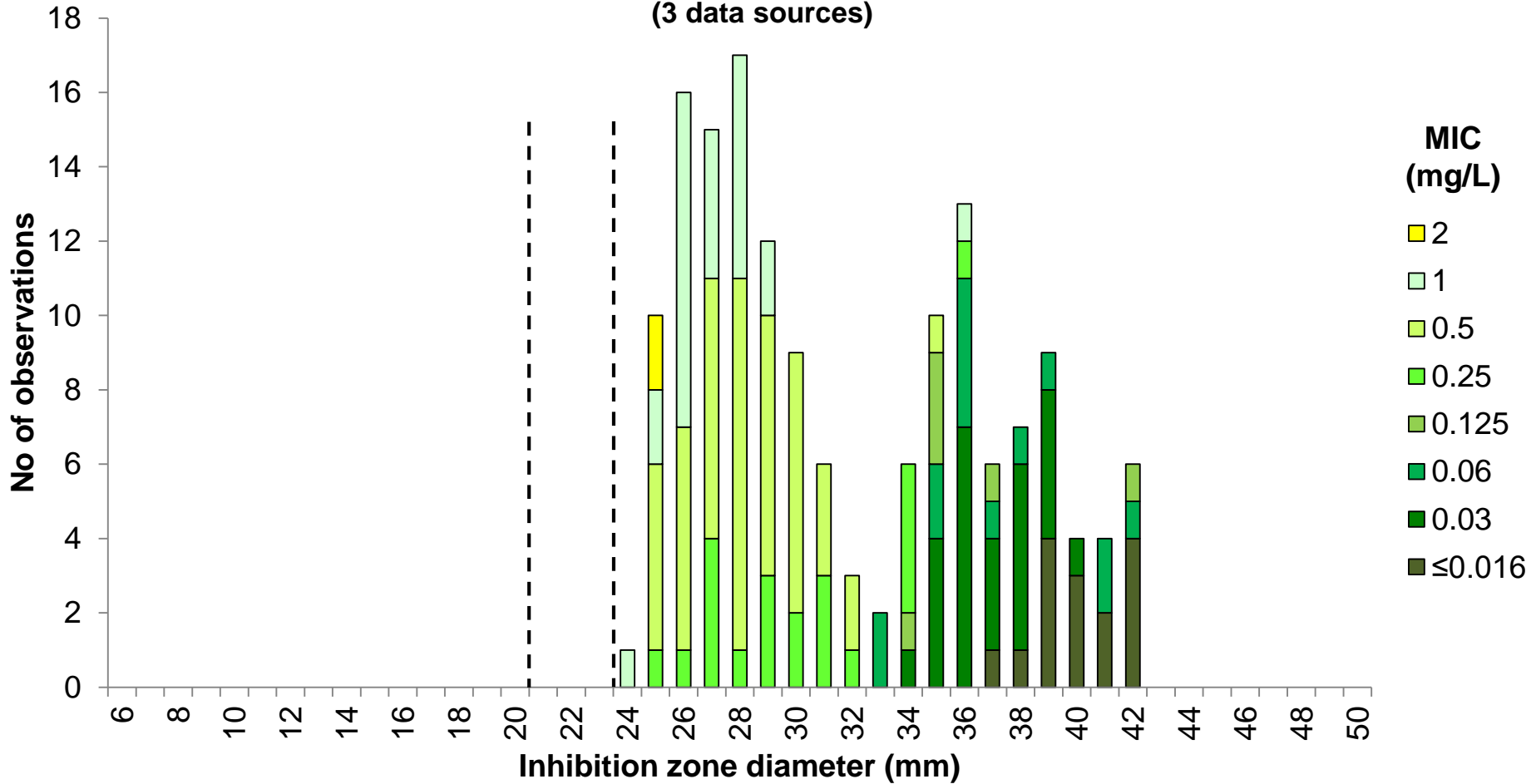
MIC $S \leq 1, R > 2$ mg/L

Zone diameter $S \geq 20, R < 17$ mm

Ceftriaxone 30 µg vs. MIC

Moraxella catarrhalis, 131 isolates (156 correlates)

(3 data sources)

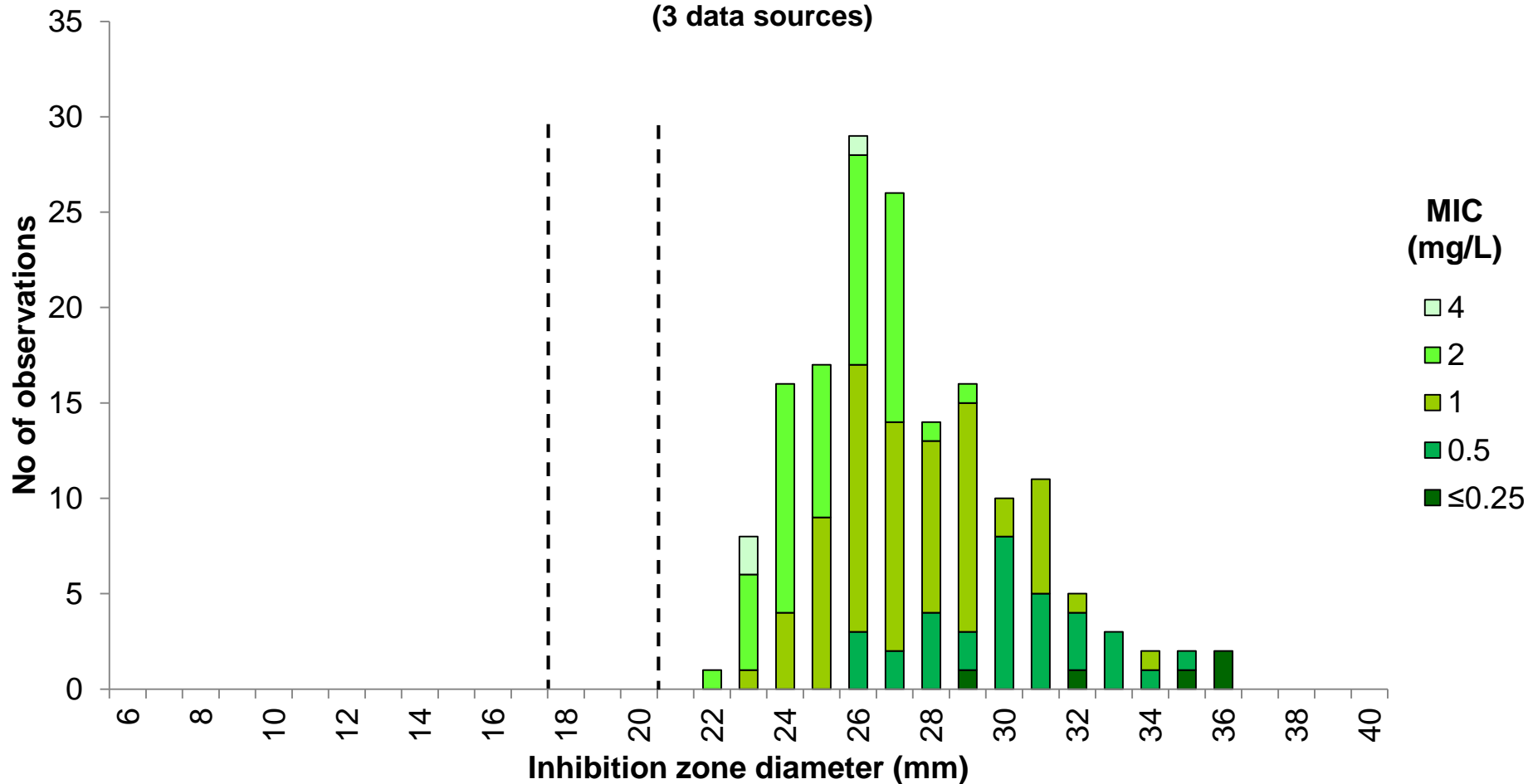


Breakpoints	
MIC	S ≤ 1 , R > 2 mg/L
Zone diameter	S ≥ 24 , R < 21 mm

Cefuroxime 30 µg vs. MIC

Moraxella catarrhalis, 131 isolates (162 correlates)

(3 data sources)



Breakpoints (iv)

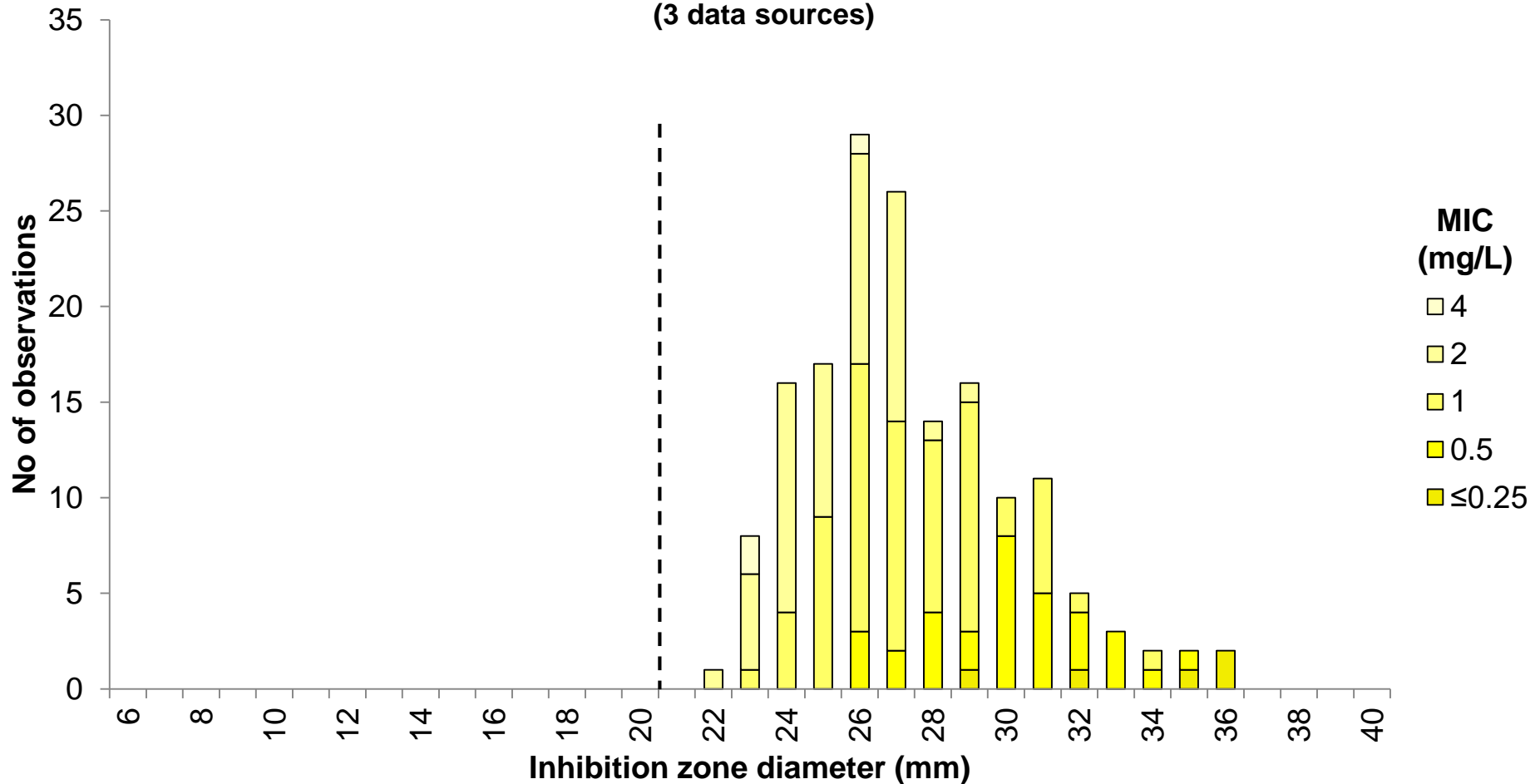
MIC S ≤ 4 , R > 8 mg/L

Zone diameter S ≥ 21 , R < 18 mm

Cefuroxime 30 µg vs. MIC

Moraxella catarrhalis, 131 isolates (162 correlates)

(3 data sources)



Breakpoints (oral)

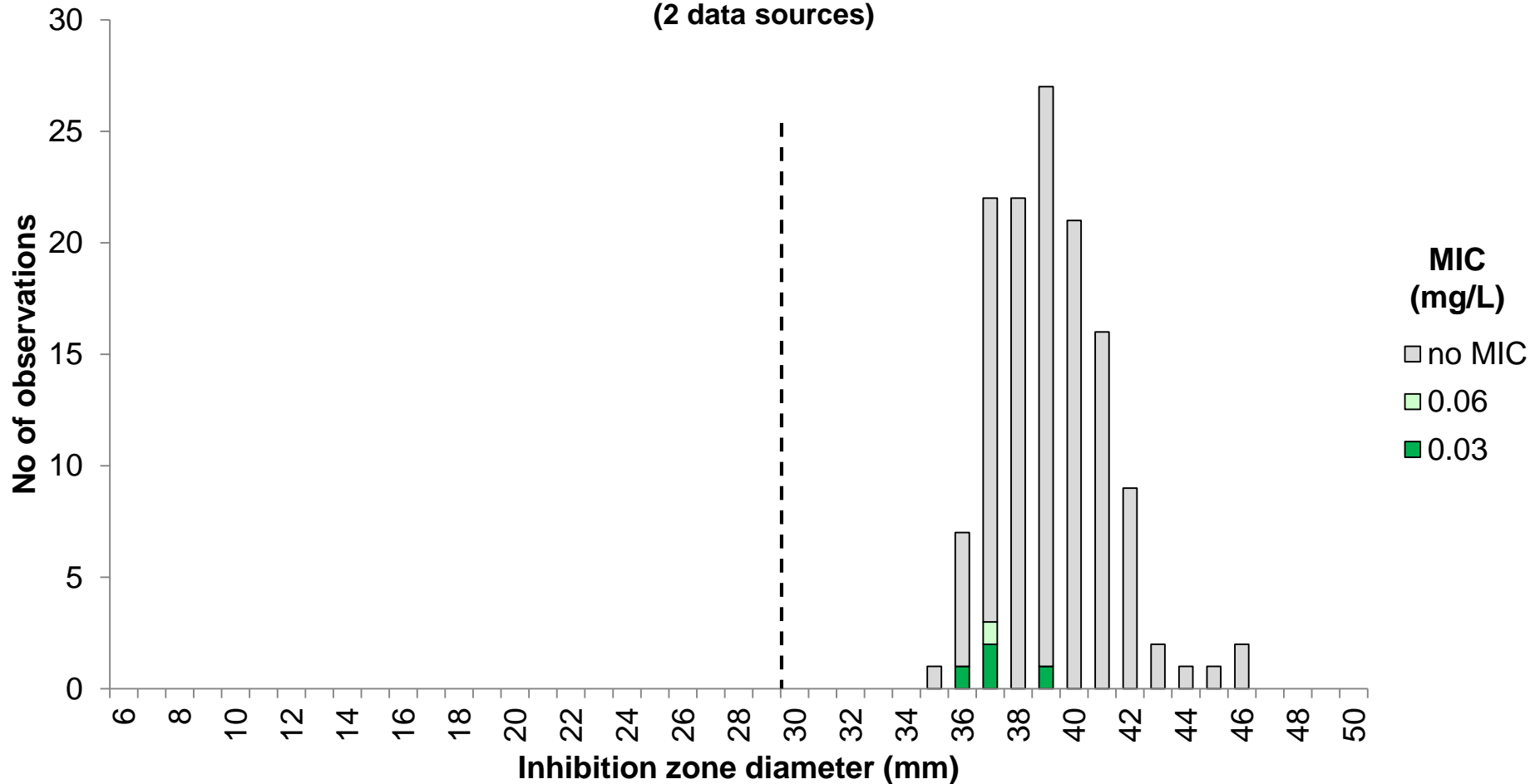
MIC $S \leq 0.001$, $R > 4$ mg/L

Zone diameter $S \geq 50$, $R < 21$ mm

Doripenem 10 µg vs. MIC

Moraxella catarrhalis, 131 isolates

(2 data sources)



Breakpoints

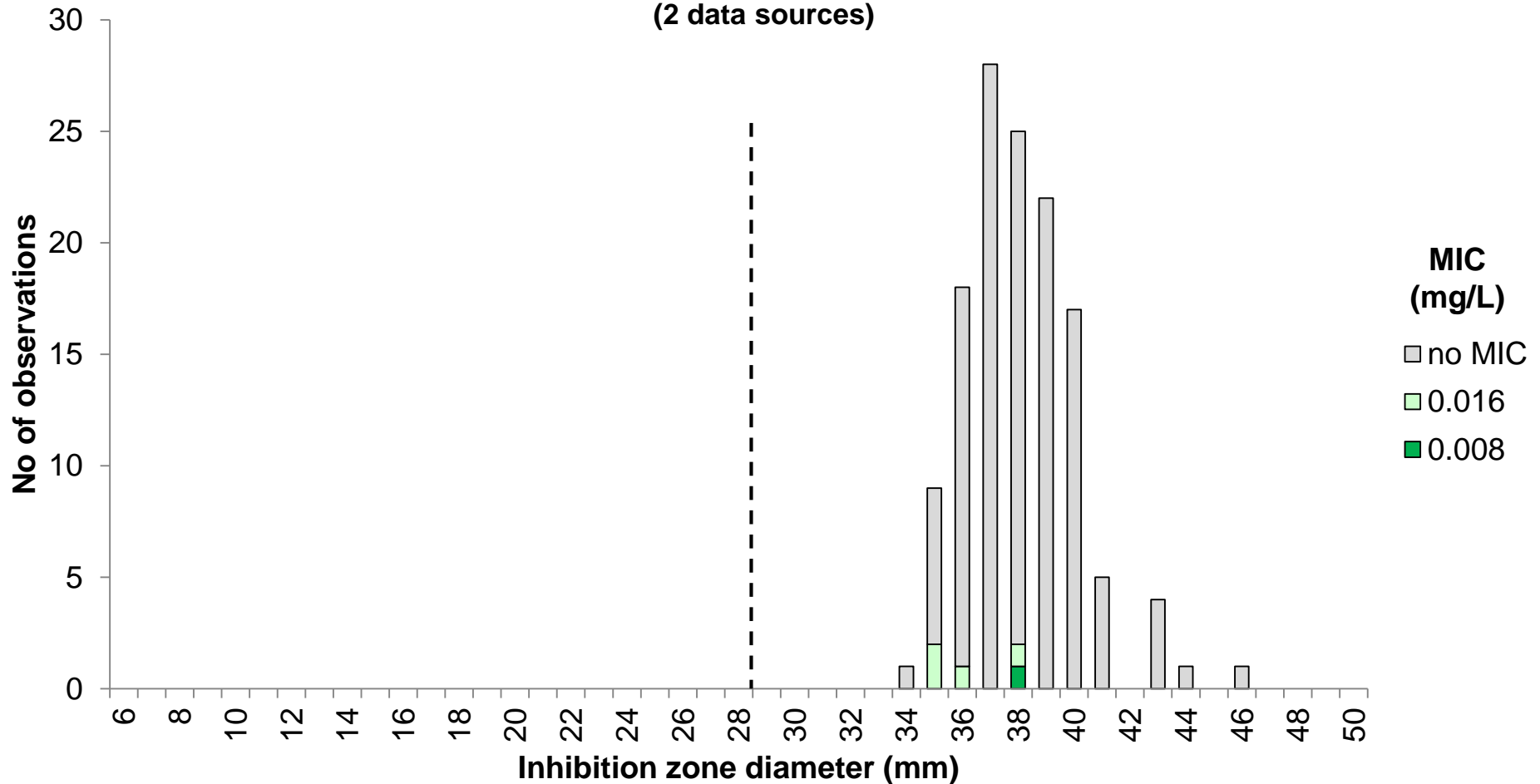
MIC $S \leq 1$, $R > 1$ mg/L

Zone diameter $S \geq 30$, $R < 30$ mm

Ertapenem 10 µg vs. MIC

Moraxella catarrhalis, 131 isolates

(2 data sources)



Breakpoints

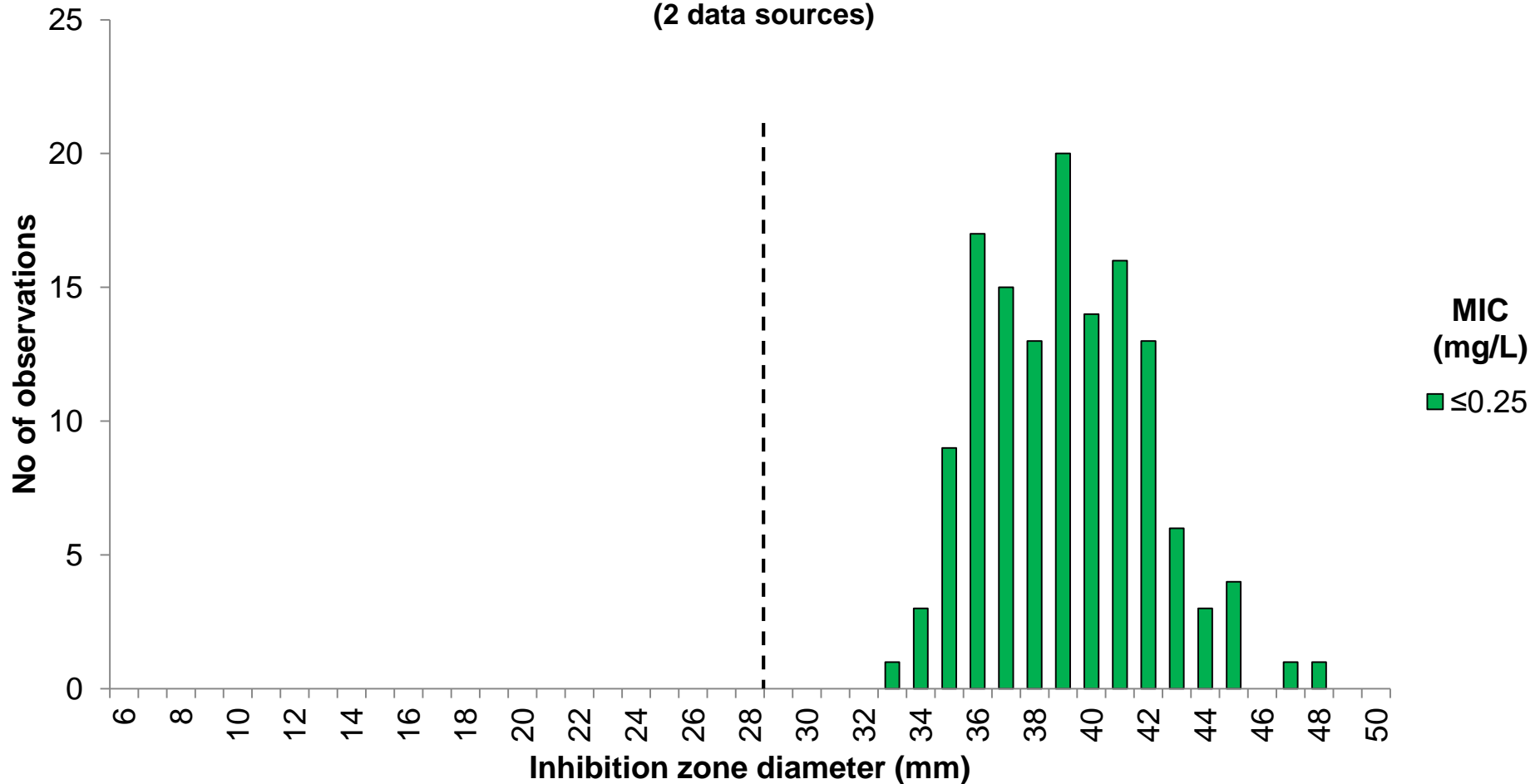
MIC $S \leq 0.5$, $R > 0.5$ mg/L

Zone diameter $S \geq 29$, $R < 29$ mm

Imipenem 10 µg vs. MIC

Moraxella catarrhalis, 131 isolates (136 correlates)

(2 data sources)



Breakpoints

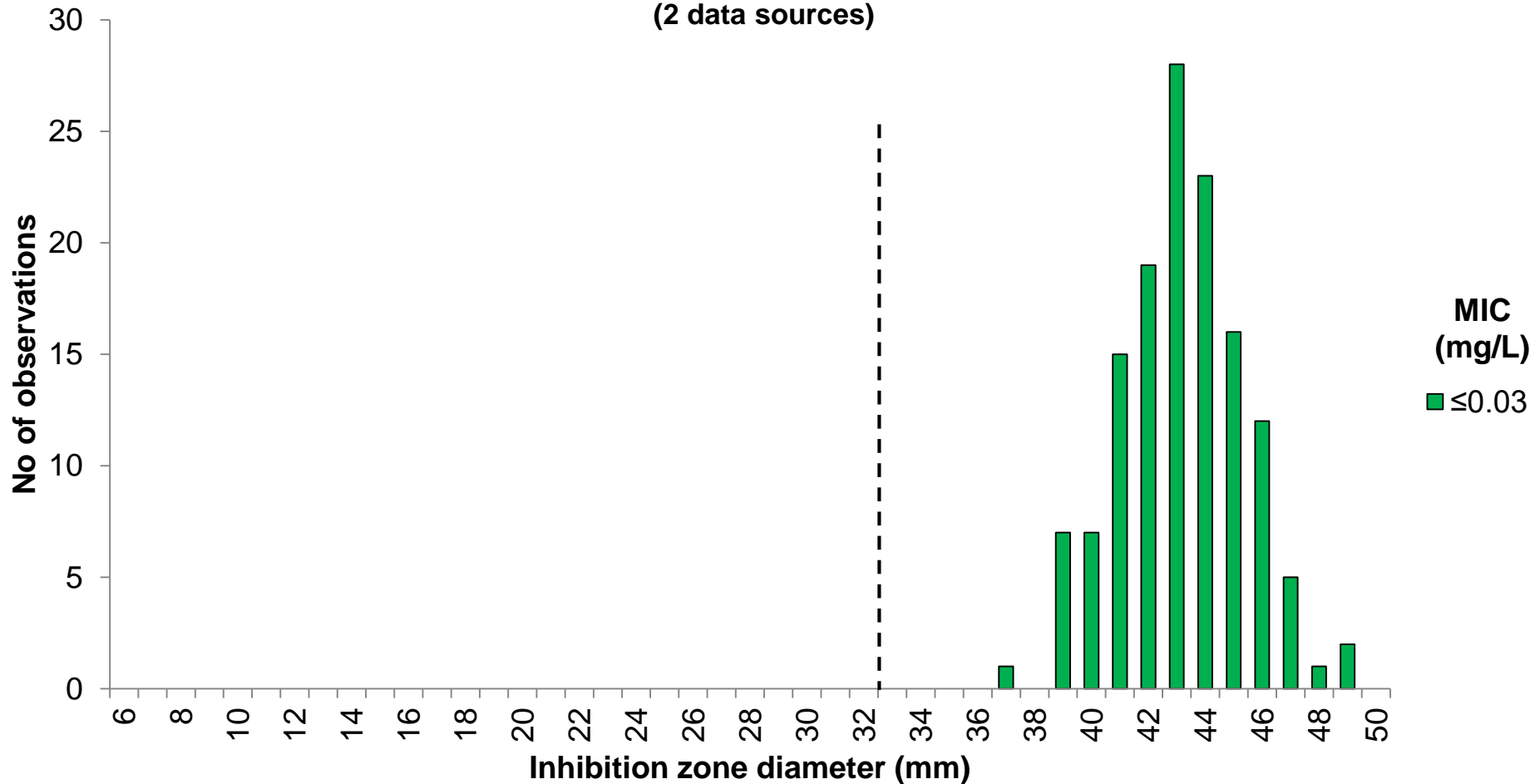
MIC $S \leq 2$, $R > 2$ mg/L

Zone diameter $S \geq 29$, $R < 29$ mm

Meropenem 10 µg vs. MIC

Moraxella catarrhalis, 131 isolates (136 correlates)

(2 data sources)



Breakpoints

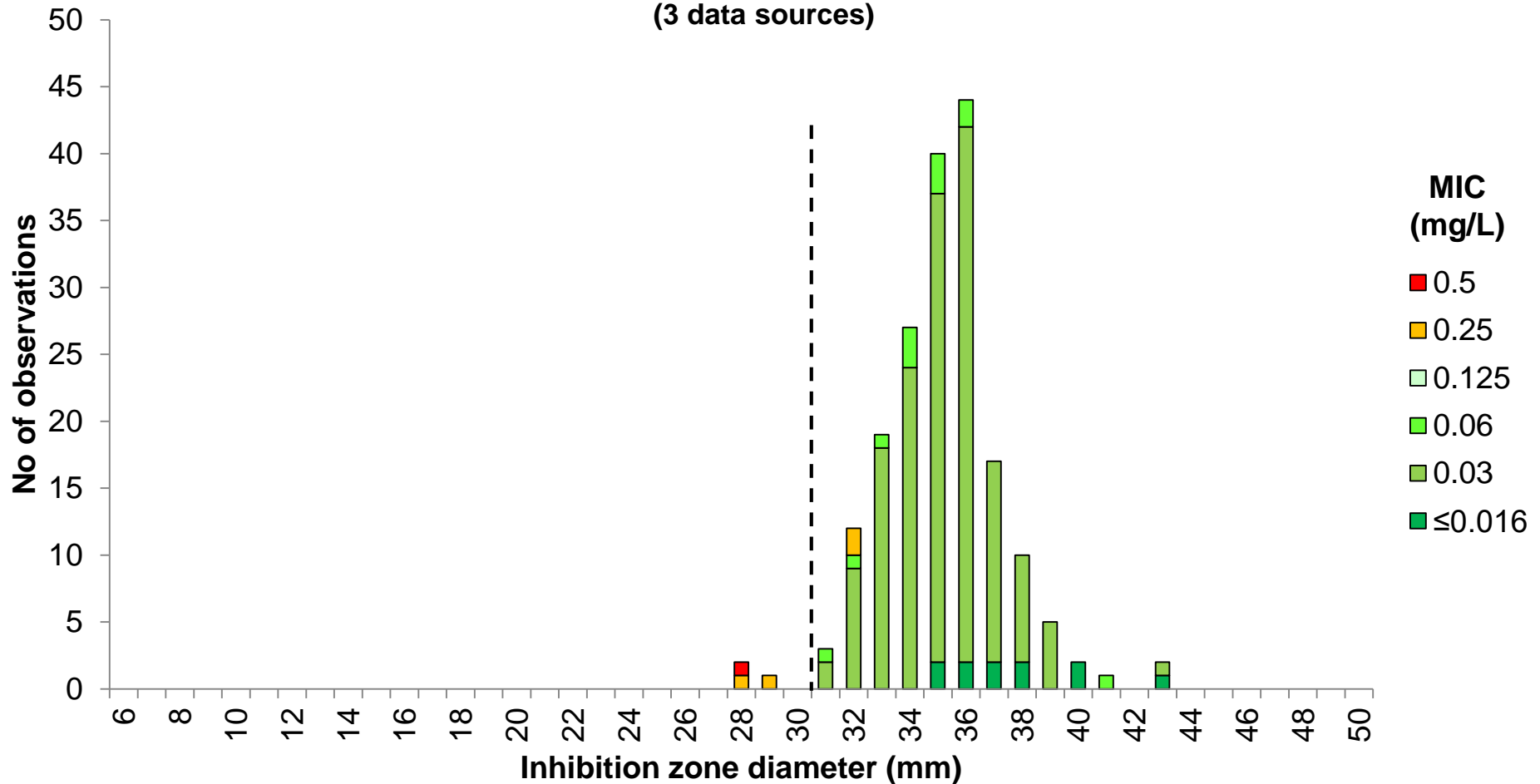
MIC $S \leq 2$, $R > 2$ mg/L

Zone diameter $S \geq 33$, $R < 33$ mm

Ciprofloxacin 5 μ g vs. MIC

Moraxella catarrhalis, 131 isolates (185 correlates)

(3 data sources)



Breakpoints

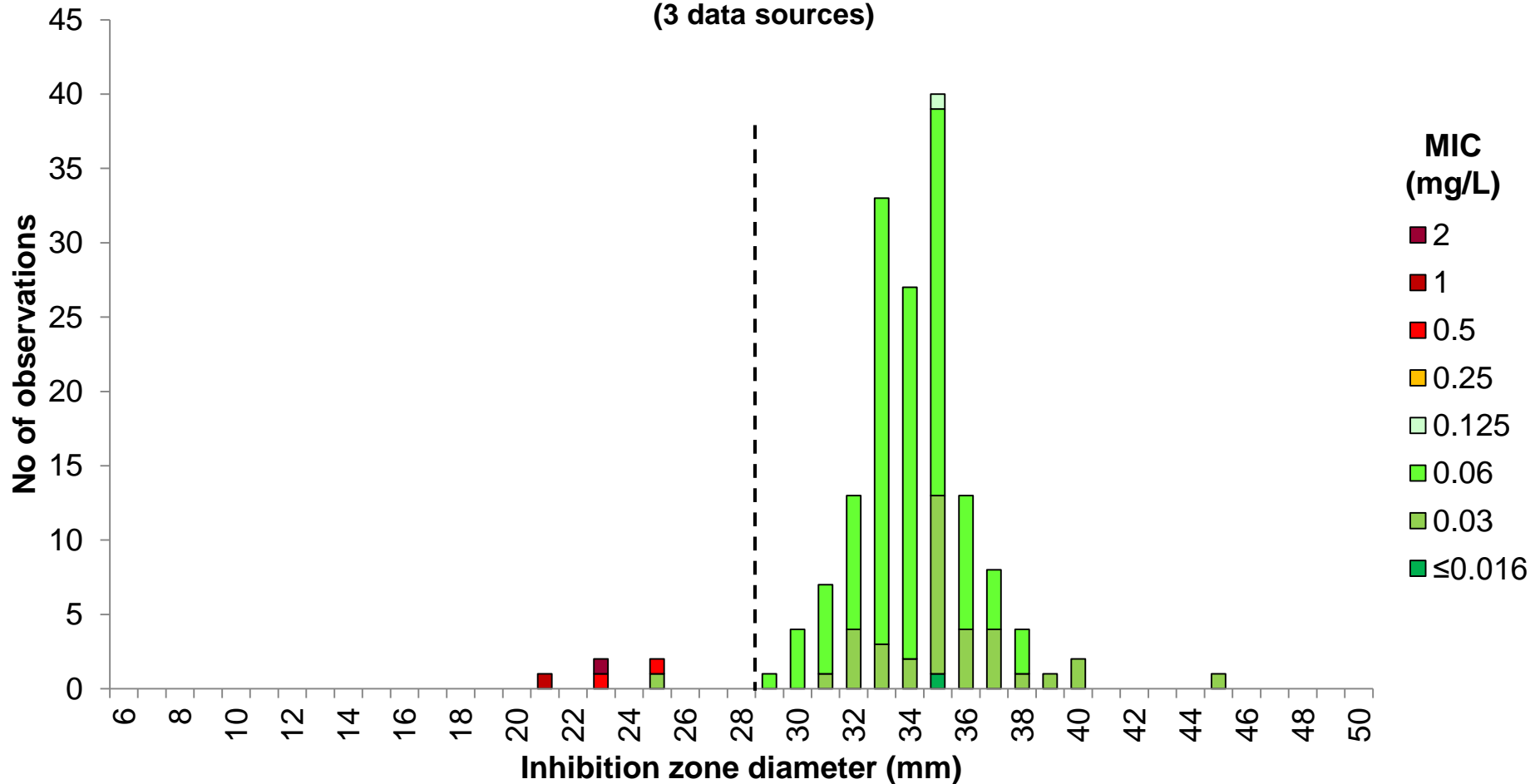
MIC $S \leq 0.125$, $R > 0.125$ mg/L

Zone diameter $S \geq 31$, $R < 31$ mm

Levofloxacin 5 μ g vs. MIC

Moraxella catarrhalis, 131 isolates (159 correlates)

(3 data sources)



Breakpoints

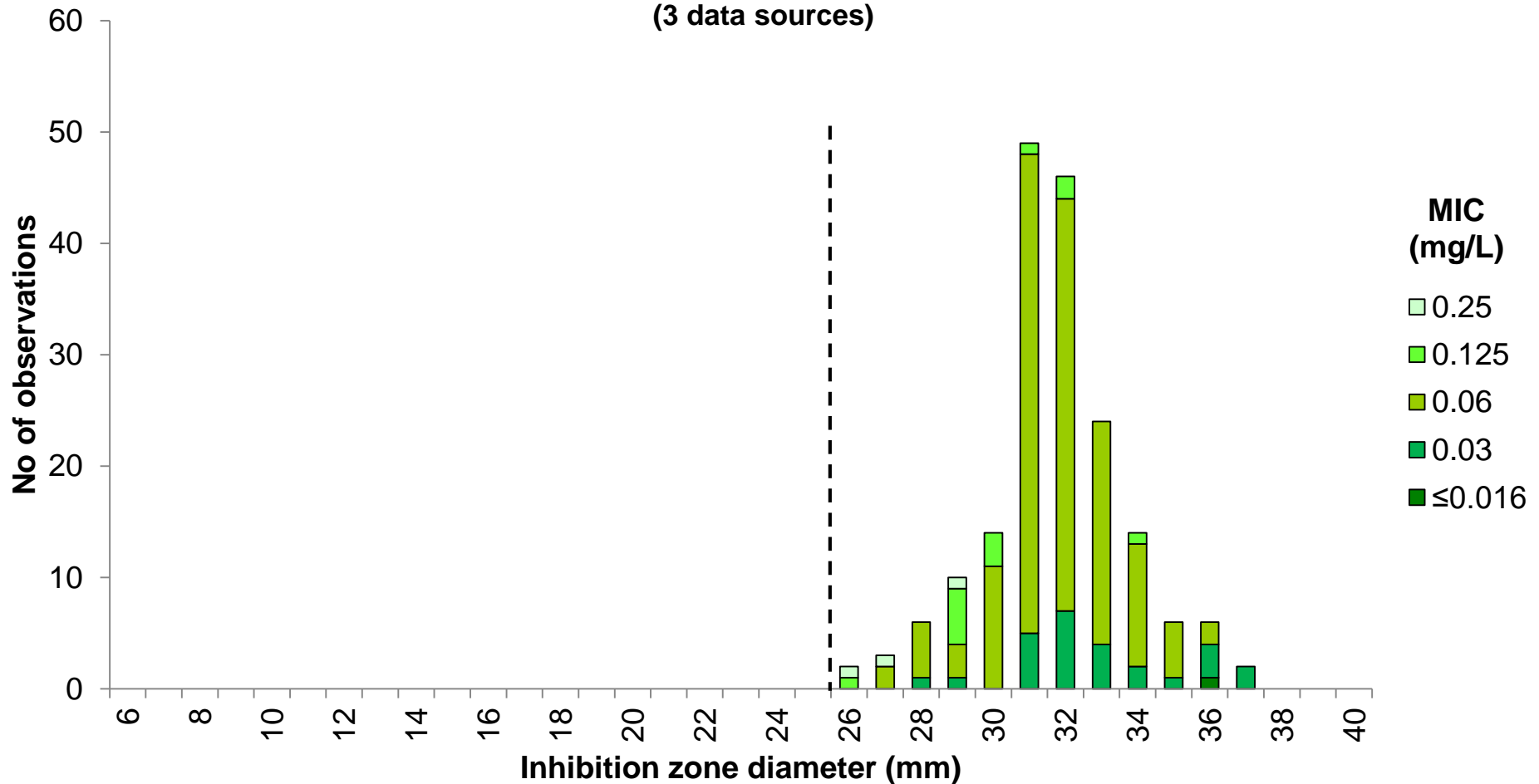
MIC $S \leq 0.125$, $R > 0.125$ mg/L

Zone diameter $S \geq 29$, $R < 29$ mm

Moxifloxacin 5 µg vs. MIC

Moraxella catarrhalis, 131 isolates (182 correlates)

(3 data sources)



Breakpoints

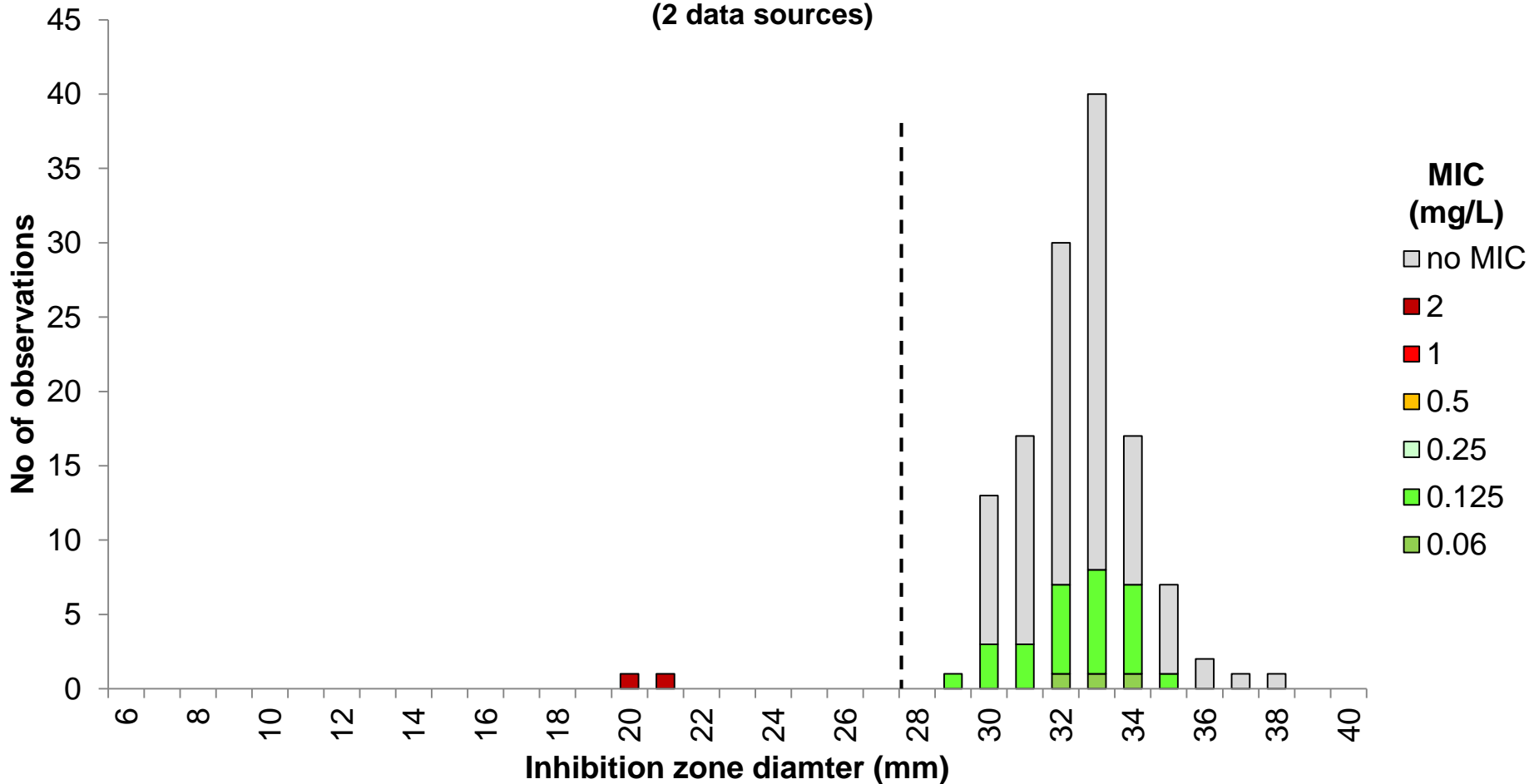
MIC S ≤ 0.25, R > 0.25 mg/L

Zone diameter S ≥ 26, R < 26 mm

Ofloxacin 5 µg vs. MIC

Moraxella catarrhalis, 131 isolates

(2 data sources)



Breakpoints

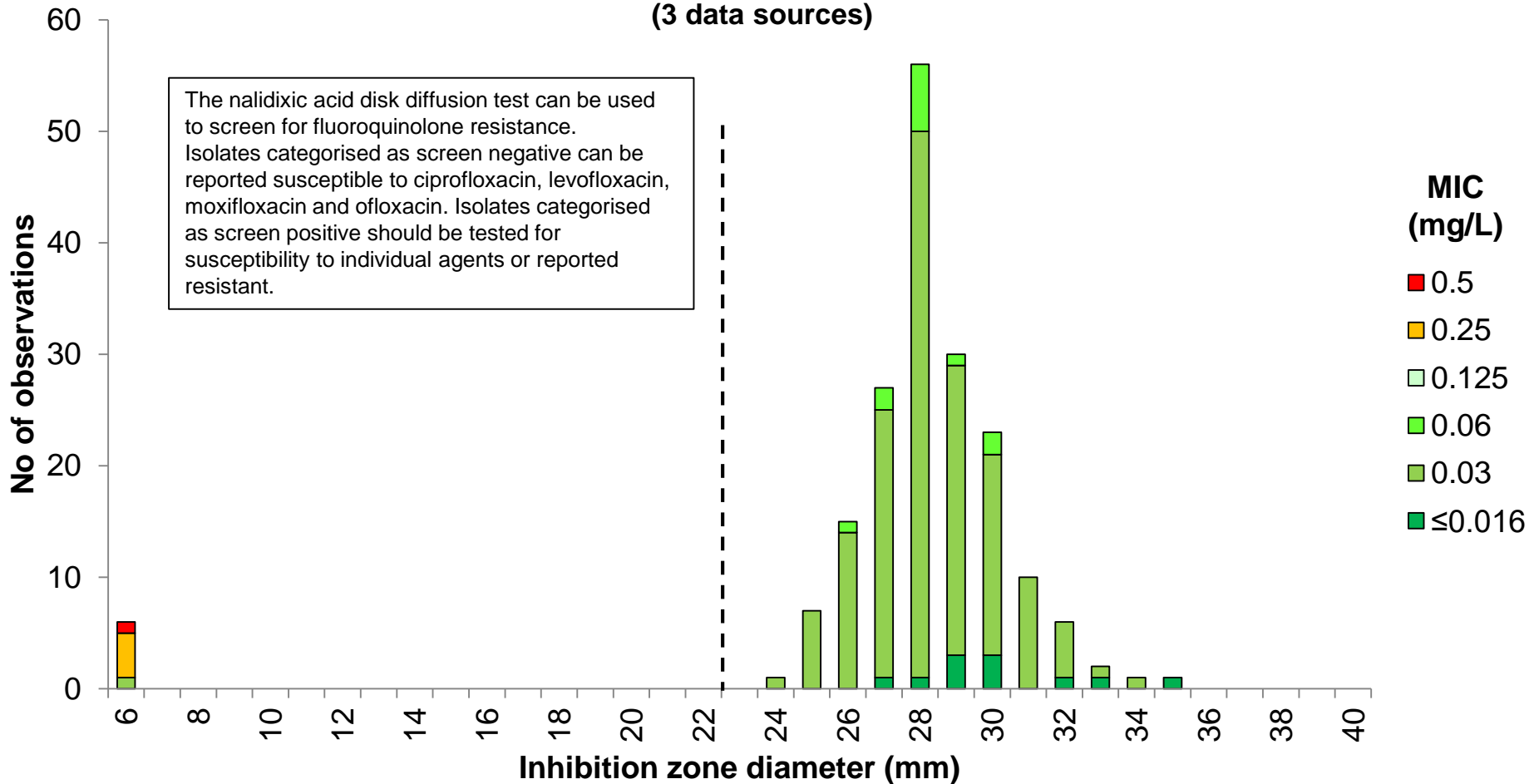
MIC $S \leq 0.25$, $R > 0.25$ mg/L

Zone diameter $S \geq 28$, $R < 28$ mm

Nalidixic acid 30 µg vs. Ciprofloxacin MIC

Moraxella catarrhalis, 131 isolates (185 correlates)

(3 data sources)



Breakpoints

Ciprofloxacin MIC

S ≤ 0.125, R > 0.125 mg/L

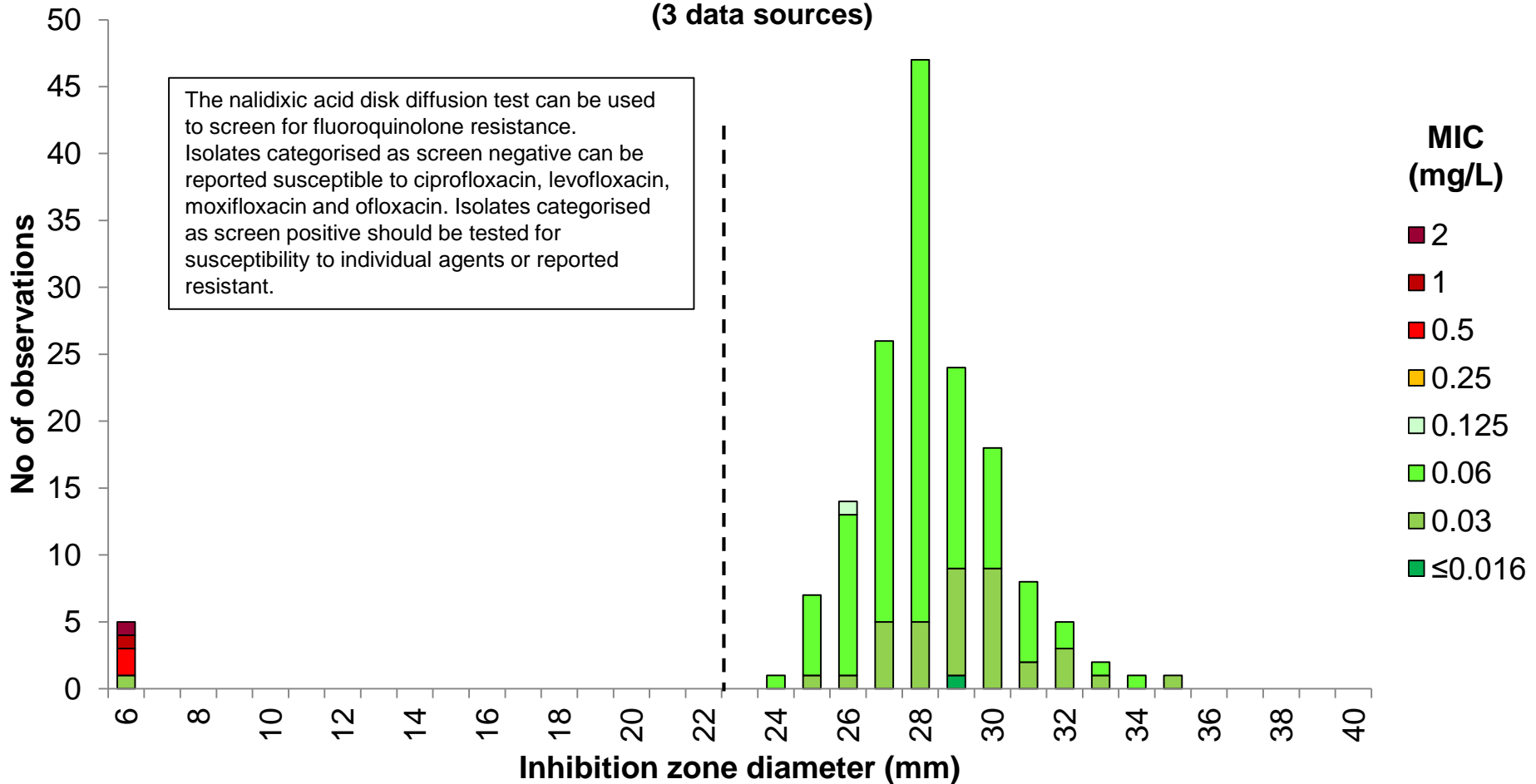
Nalidixic acid zone diameter (screen)

S ≥ 23, R < 23 mm

Nalidixic acid 30 µg vs. Levofloxacin MIC

Moraxella catarrhalis, 131 isolates (159 correlates)

(3 data sources)



Breakpoints

Levofloxacin MIC

S ≤ 0,125, R > 0,125 mg/L

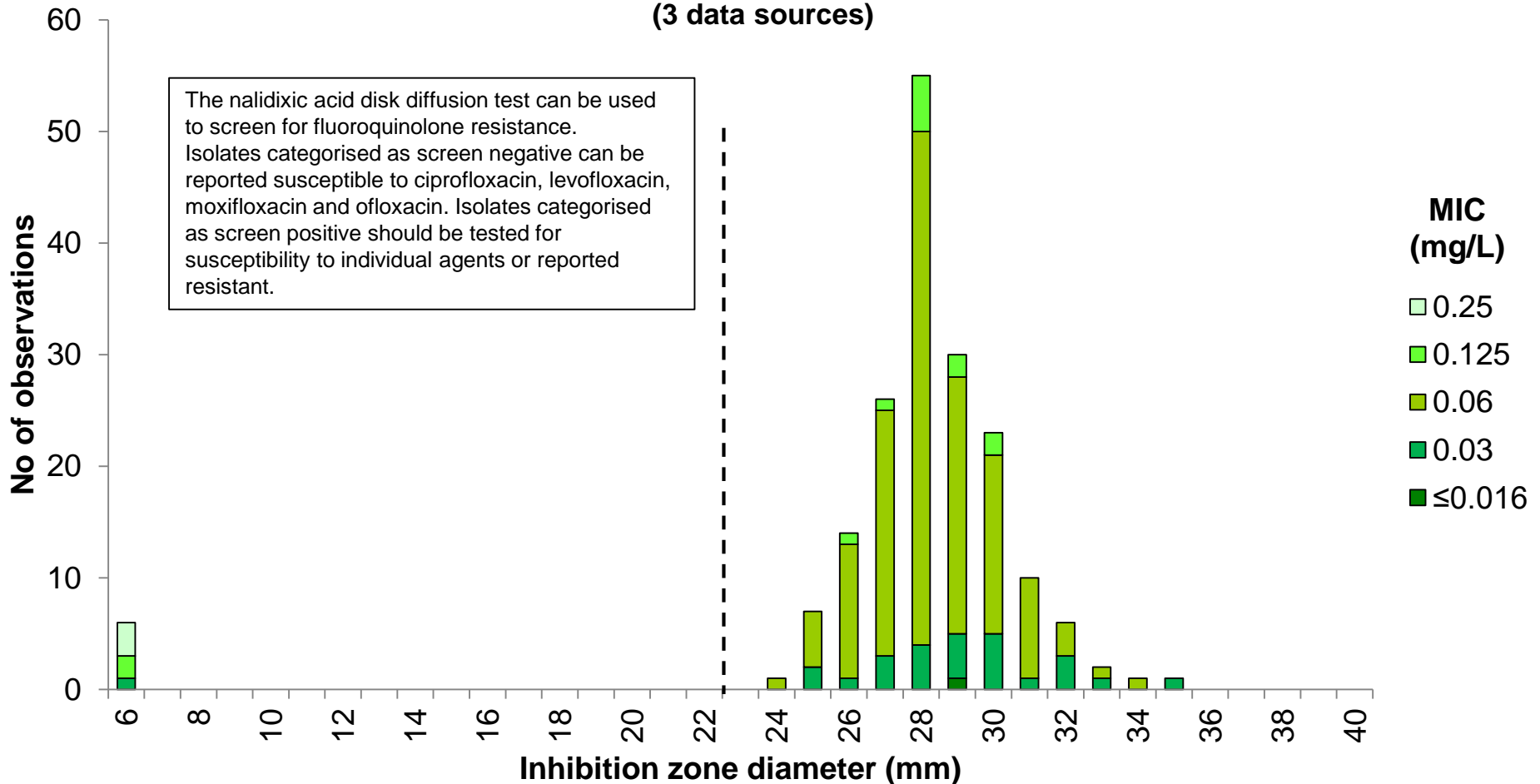
Nalidixic acid zone diameter (screen)

S ≥ 23, R < 23 mm

Nalidixic acid 30 µg vs. Moxifloxacin MIC

Moraxella catarrhalis, 131 isolates (151 correlates)

(3 data sources)



Breakpoints

Moxifloxacin MIC

S ≤ 0.25, R > 0.25 mg/L

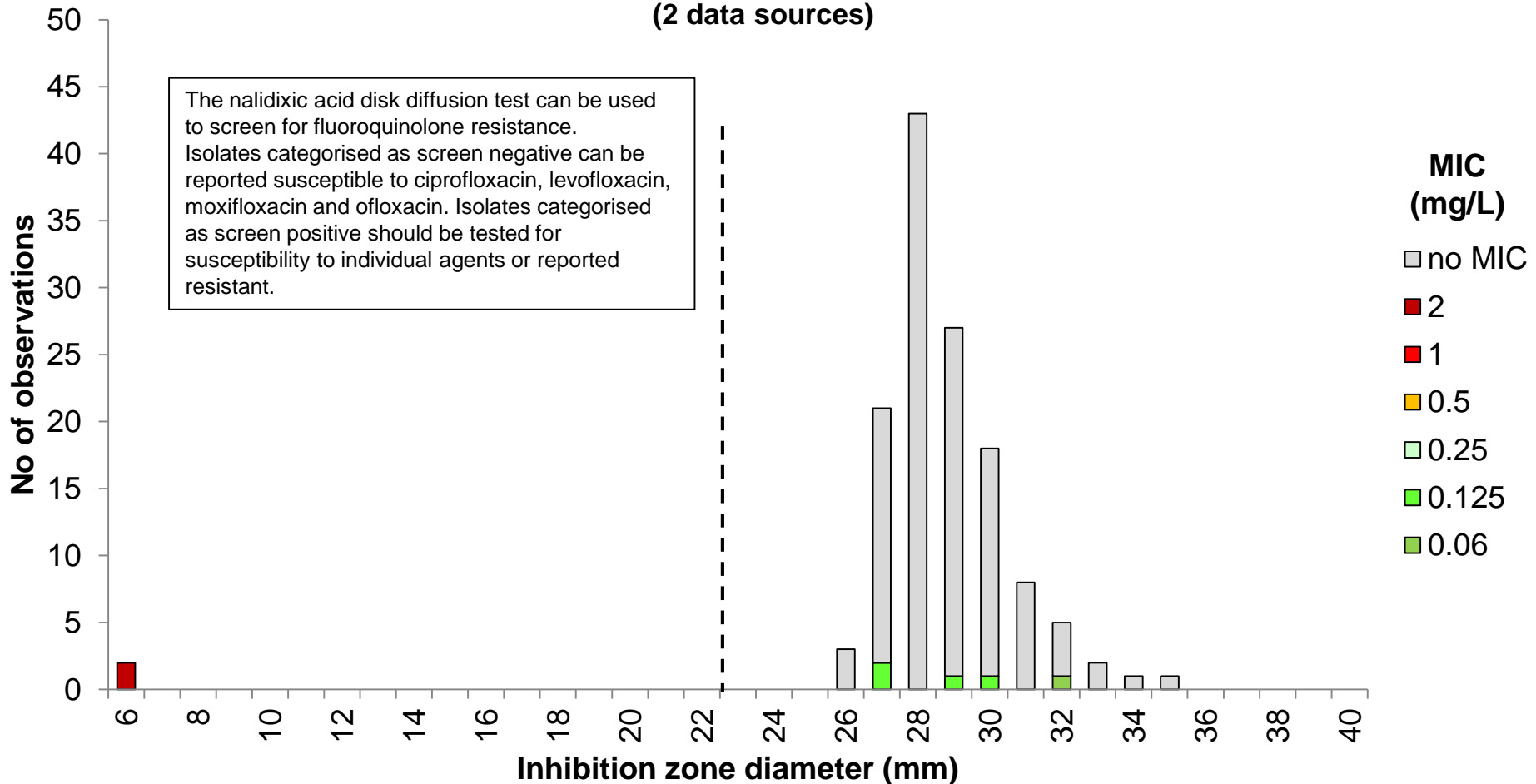
Nalidixic acid zone diameter (screen)

S ≥ 23, R < 23 mm

Nalidixic acid 30 µg vs. Ofloxacin MIC

Moraxella catarrhalis, 131 isolates

(2 data sources)



Breakpoints

Ofloxacin MIC

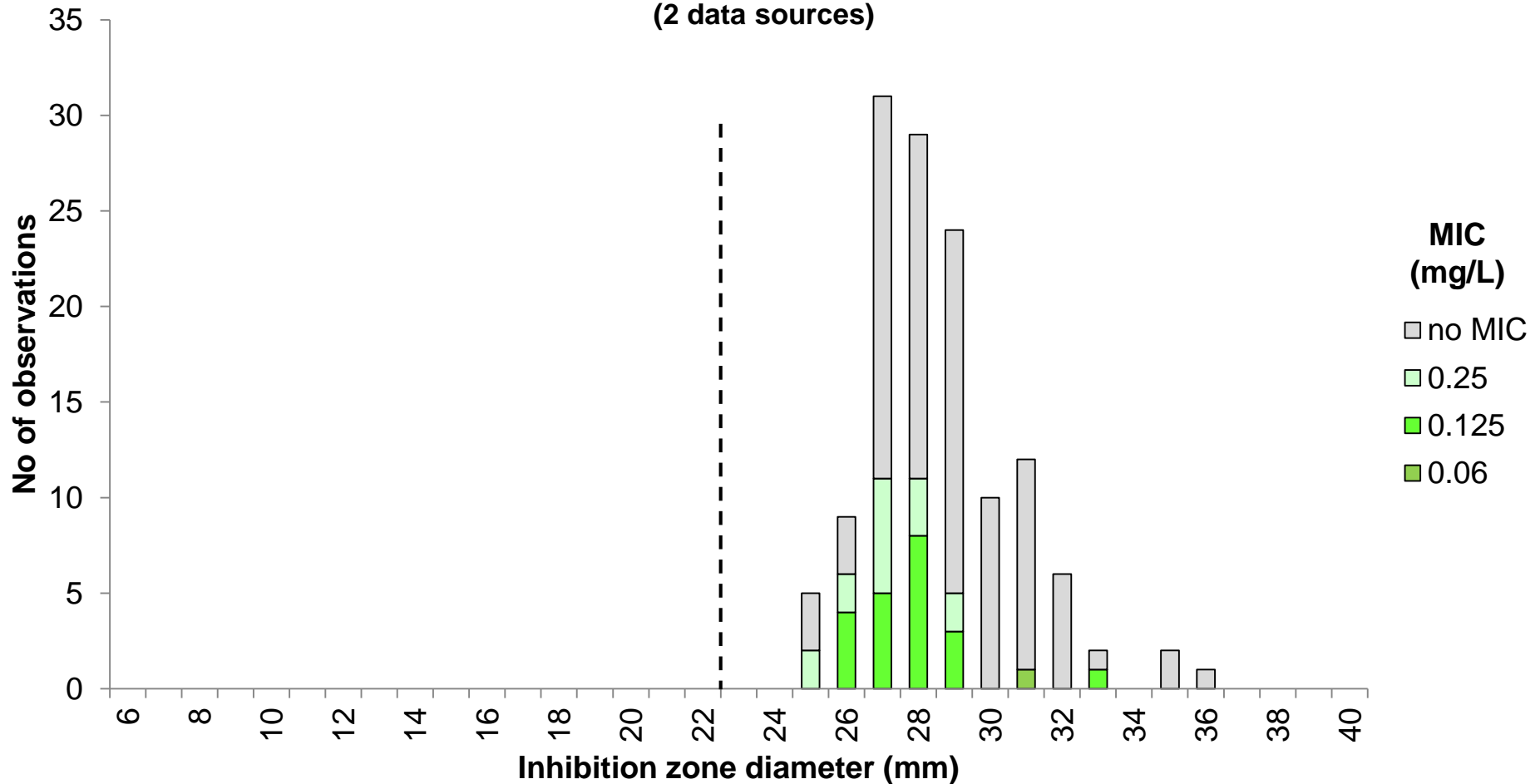
$S \leq 0.25$, $R > 0.25$ mg/L

Nalidixic acid zone diameter (screen)

$S \geq 23$, $R < 23$ mm

Erythromycin 15 µg vs. MIC *Moraxella catarrhalis*, 131 isolates

(2 data sources)



Breakpoints

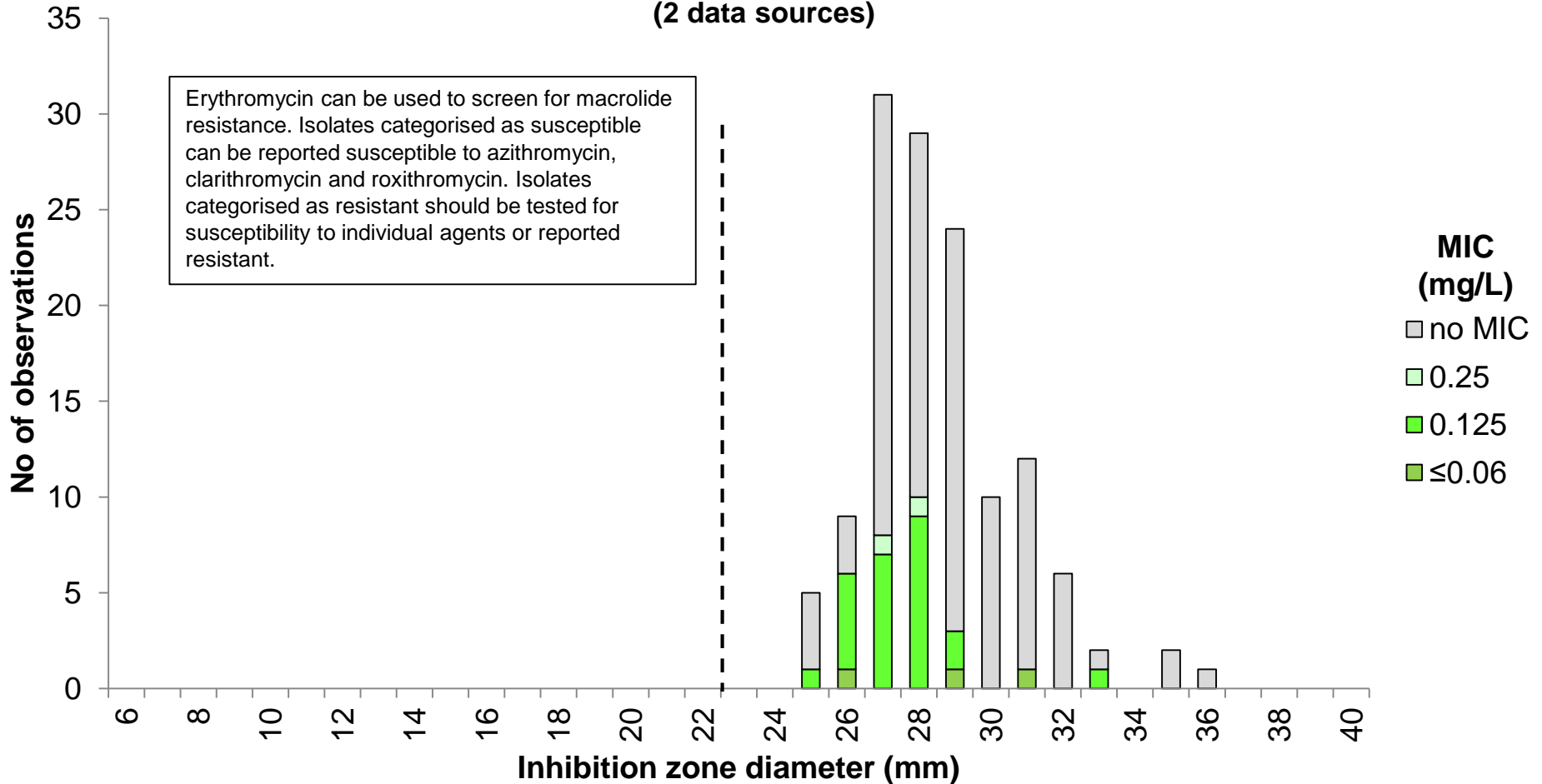
MIC S ≤ 0.25, R > 0.25 mg/L

Zone diameter S ≥ 23, R < 23 mm

Erythromycin 15 µg vs. Clarithromycin MIC

Moraxella catarrhalis, 131 isolates

(2 data sources)



Breakpoints

Clarithromycin MIC

S ≤ 0.25, R > 0.25 mg/L

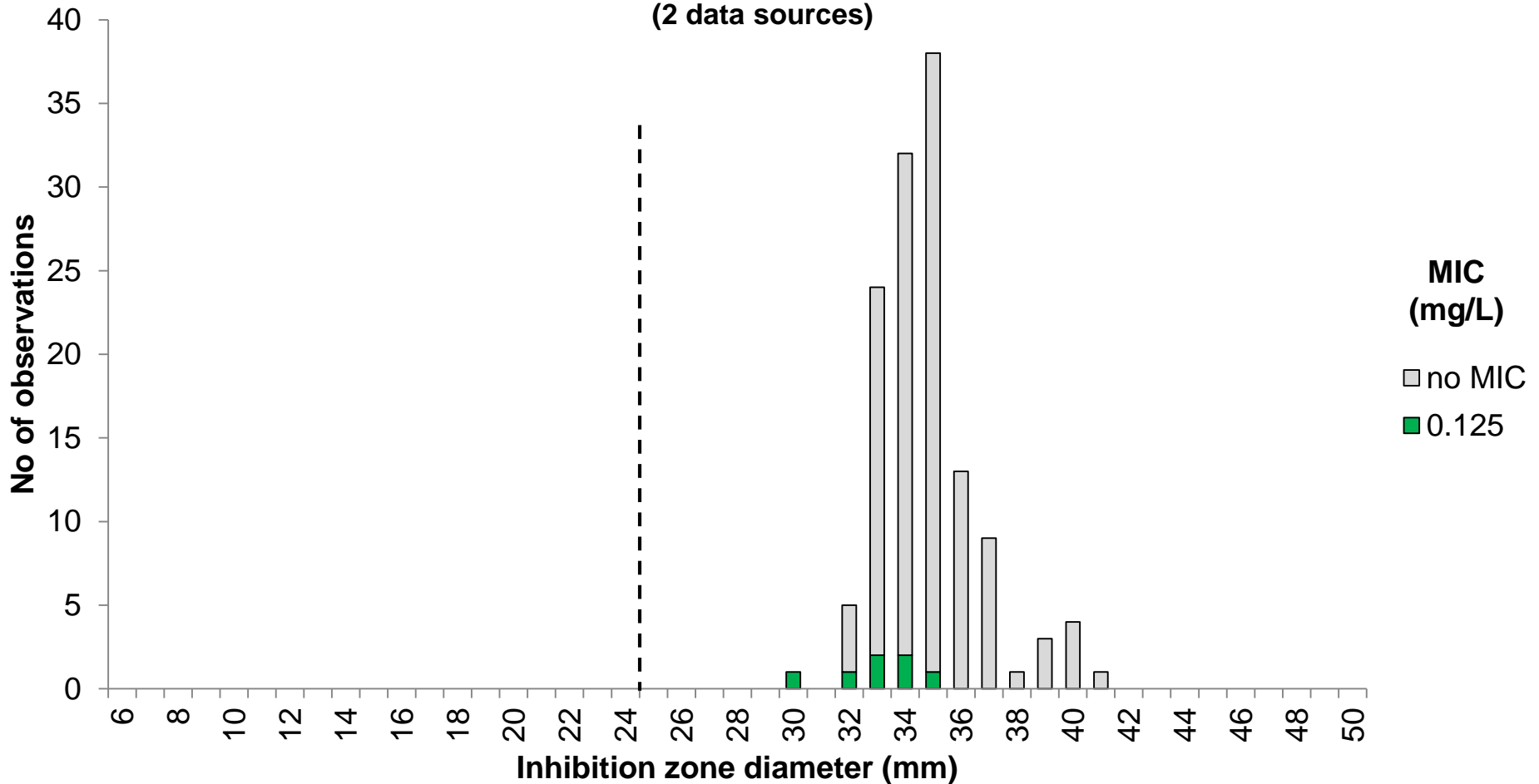
Erythromycin zone diameter

S ≥ 23, R < 23 mm

Minocycline 30 µg vs. MIC

Moraxella catarrhalis, 131 isolates

(2 data sources)



Breakpoints

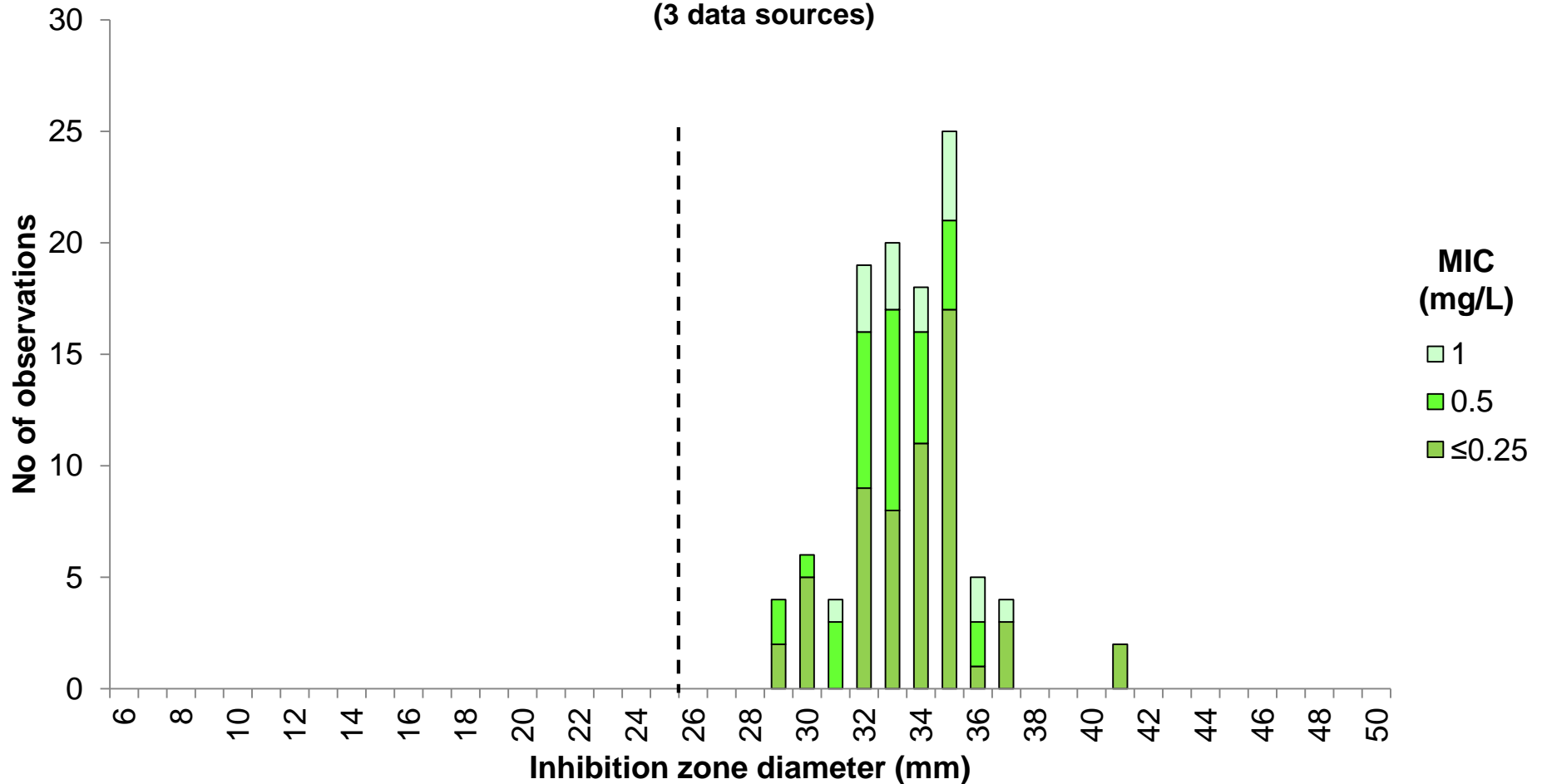
MIC $S \leq 1, R > 1$ mg/L

Zone diameter $S \geq 25, R < 25$ mm

Tetracycline 30 µg vs. MIC

Moraxella catarrhalis, 61 isolates (107 correlates)

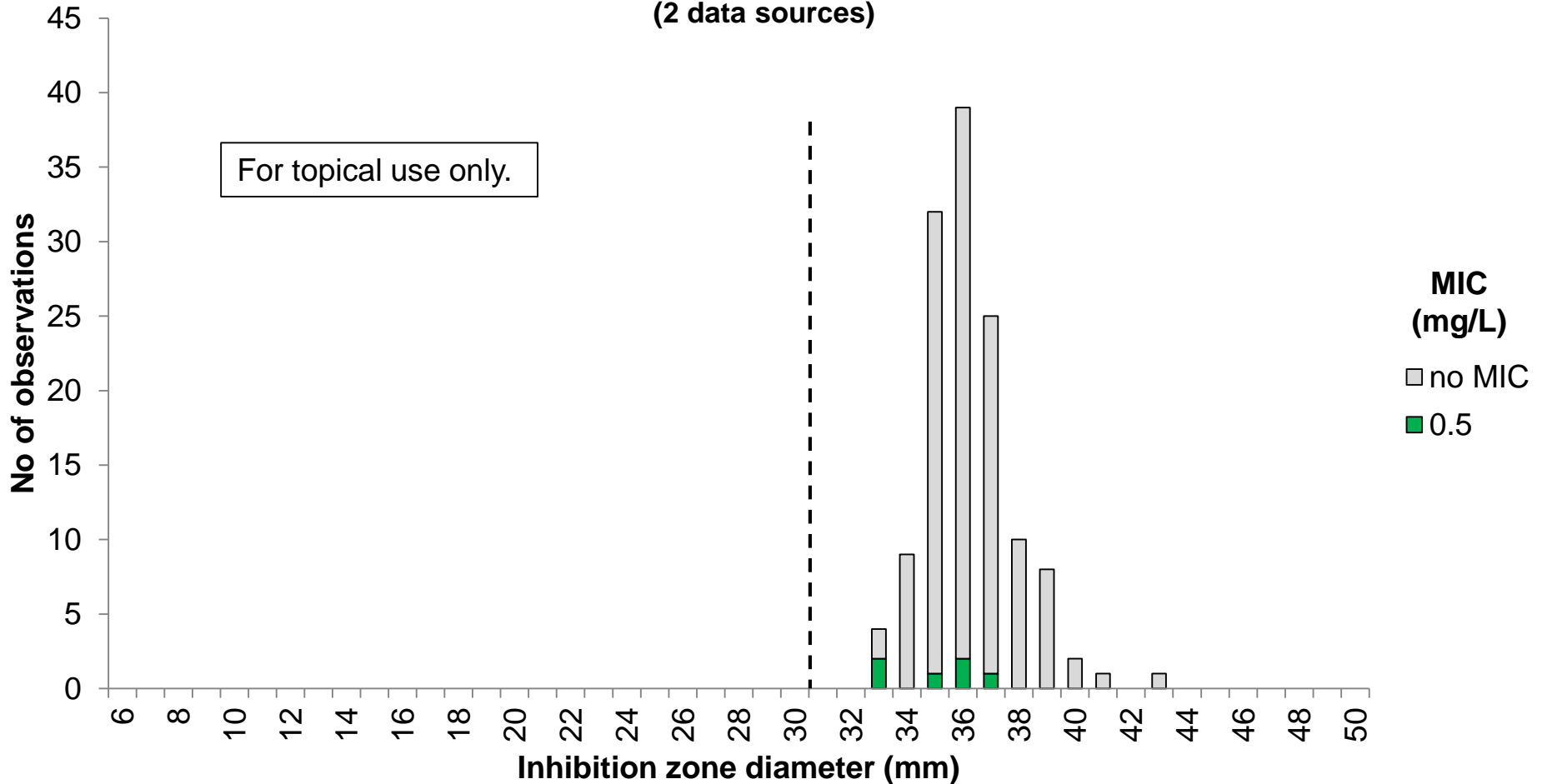
(3 data sources)



Breakpoints	
MIC	S ≤ 2, R > 2 mg/L
Zone diameter	S ≥ 26, R < 26 mm

Chloramphenicol 30 µg vs. MIC *Moraxella catarrhalis*, 131 isolates

(2 data sources)

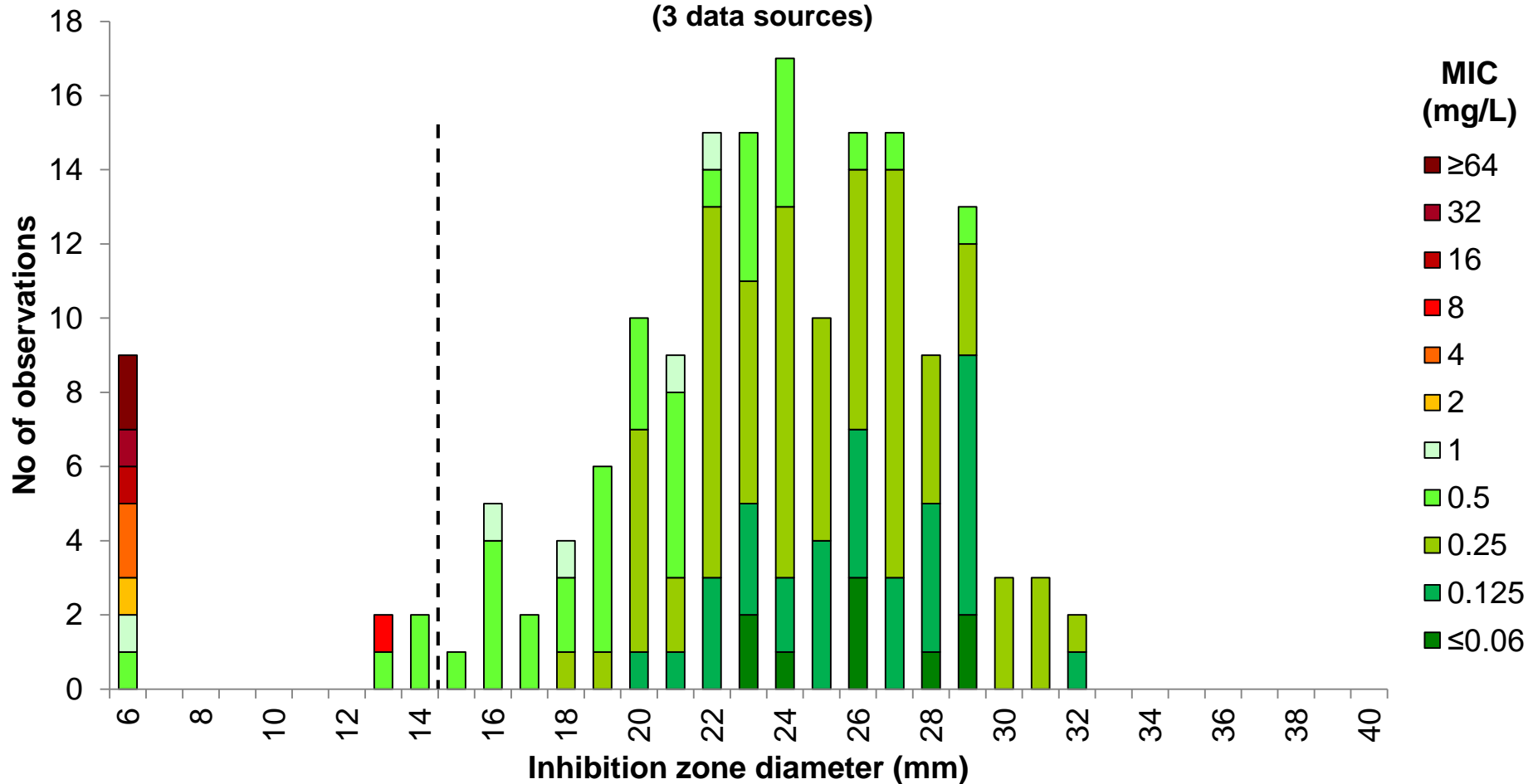


Screening cut-offs

MIC 2 mg/L

Zone diameter 31 mm

Trimethoprim-sulfamethoxazole 1.25-23.75 μg vs. MIC *Moraxella catarrhalis*, 131 isolates (167 correlates)



Breakpoints

MIC $S \leq 1, R > 1$ mg/L

Zone diameter $S \geq 15, R < 15$ mm



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