ANTIMICROBIAL RESISTANCE BANK

# ESCHERICHIA COLI

AR-BANK#0014

KNOWN ACQUIRED RESISTANCE:

**(-) KPC** **(-) NDM**

Reduced susceptibility, elevated Carbapenem MICs.

Known Resistance is listed above by (+) for positive result and (–) for negative result.

## PROPAGATION

### MEDIUM

Medium: Trypticase Soy Agar with 5% Sheep Blood (BAP)

### GROWTH CONDITIONS

Temperature: **35°C**
Atmosphere: **Aerobic**

### PROPAGATION PROCEDURE

Remove the sample vial to a container with dry ice or a freezer block. Keep vial on ice or block. (Do not let vial content thaw)

Open vial aseptically to avoid contamination

Using a sterile loop, remove a small amount of frozen isolate from the top of the vial

Aseptically transfer the loop to BAP

Use streak plate method to isolate single colonies

Incubate inverted plate at 35°C for 18-24 hrs.

## MIC (µg/ml) RESULTS AND INTERPRETATION

| DRUG | MIC | INT | DRUG | MIC | INT |
|---|---|---|---|---|---|
| Amikacin | 4 | S | Colistin | 1 | --- |
| Amoxicillin/Clavulanic Acid* | 16 | I | Doripenem | ≤0.12 | S |
| Ampicillin | >32 | R | Ertapenem | ≤0.12 | S |
| Ampicillin/Sulbactam* | 32 | R | Gentamicin | >16 | R |
| Aztreonam | 64 | R | Imipenem | ≤0.5 | S |
| Cefazolin | >8 | R | Imipenem+chelators** | ≤0.25 | --- |
| Cefepime | >32 | R | Levofloxacin | >8 | R |
| Cefotaxime | 128 | R | Meropenem | ≤0.12 | S |
| Cefotaxime/Clavulanic Acid* | ≤0.5 | --- | Piperacillin/Tazobactam* | 8 | S |
| Cefoxitin | ≤2.0 | S | Polymyxin B | 1 | --- |
| Ceftazidime | 32 | R | Tetracycline | >32 | R |
| Ceftazidime/Clavulanic Acid* | ≤0.5 | --- | Tigecycline*** | ≤0.5 | S |
| Ceftriaxone | >32 | R | Tobramycin | >16 | R |
| Ciprofloxacin | >8 | R | Trimethoprim/Sulfamethoxazole* | ≤0.25 | S |

S – I –R Interpretation (INT) derived from *CLSI 2015 M100 S25*
SDD (Susceptible Dose Dependent)
* Reflects MIC of first component
** Screen for metallo-beta-lactamase production
[Rasheed et al. Emerging Infectious Diseases. 2013. 19(6):870-878]
*** Based on FDA break points

SEQUENCING INFORMATION: No Sequencing information available at this time.

| ACCESSION # | SEQUENCING SOURCE | LINK |
|---|---|---|
| | | |

## BIOSAFETY LEVEL 2

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *BioSafety in Microbiological and Biomedical Laboratories* (HHS Publication No. (CDC) 21-1112) from the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, and National Institutes of Health.

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