AIM LABORATORIES

3165 McKelvey Rd, Suite 110
Bridgeton, MO 63044
Phone: 314- 743-3748
Fax: 314- 743-3749
CLIA # 26D1101943
Laboratory Director: Guihua Cao, M.D., Ph.D.

Molecular Diagnostic Report

Facility Information	Patient Information	Specimen Information
Provider Name: Test, Provider	**Name:** Test, Patient	**Accession No:** 2303097734
Provider ID: 111111111	DOB: 10/29/1901 Gen: Female	Collected On: 10/5/2023 4:37:00 PM
Address: 43 Church St St Louis, MO 61111		Received On: 10/6/2023 8:31:00 AM
Facility Name: Primary care		Sample Type:

Urinary Tract Infectious Disease Pathogens – Basic Panel - PCR Test

Detected Pathogen Results Summary:

*** The Genomic Copy Equivalent/mL is calculated semi-quantitatively using delta Ct method. Percentages indicate the relative quantity of each pathogen in a given specimen. Pathogen levels are defined based on the GCE/mL value (high = >1x10^5 and low = <1x10^5).**

Pathogen Name	Genomic Copy Equivalent/mL *	Relative Strain Qty (%)	Clinical	Flag
Klebsiella pneumoniae	**2.5x10^5**	**100.00**	**High**	

Summary of Recommended Antibiotics :

Pathogen Name	Priority	Antibiotic Name (John Hopkins)	Activity Spectrum (Sanford)	Resistant genes Express f/nf	Recommended Antibiotics (AIM Labs)	Route of Administration **
Klebsiella pneumoniae	**Preferred**	Ciprofloxacin	+	nf	Ciprofloxacin	PO/IV
		Nitrofurantoin	+	nf	Nitrofurantoin	PO
		Levofloxacin	+	nf	Levofloxacin	PO/IV
		Trimethoprim / Sulfamethoxazole	±	nf	Trimethoprim / Sulfamethoxazole	PO/IV
	Alternative	Imipenem/Cilastin	+	nf	Imipenem/Cilastin	IV
		Meropenem	+	nf	Meropenem	IV
		Ceftazidime/Avibactam	+	nf	Ceftazidime/Avibactam	IV
		Ertapenem	+	nf	Ertapenem	IV/IM

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Antibiotic results are summarized only for those pathogens that show a relative quantity of ≥10%.

- **[++] Recommended**: Agent is a first line therapy: reliably active in vitro, clinically effective, guideline recommended, recommended as a first-line agent or acceptable alternative agent in the Sanford Guide.
- **[+] Active: Agent** is a potential alternative agent (active in vitro, possesses class activity comparable to known effective agents or a therapeutically interchangeable agents and hence likely to be clinically effective, but second line due to overly broad spectrum, toxicity, limited clinical experience, or paucity of direct evidence of effectiveness).
- **[±] Variable**: Variable activity such that the agent, although clinically effective in some settings or types of infections is not reliably effective in others, or should be used in combination with another agent, and/or its efficacy is limited by resistance which has been associated with treatment failure.
- **[0] Not Recommended**: Agent is a poor alternative to other agents because resistance to likely to be present or occur, due to poor drug penetration to site of infection or an unfavorable toxicity profile, or there is insufficient clinical data to support effectiveness.

f – expression of resistant gene found
nf - expression of resistant gene not found

** References:
https://reference.medscape.com/drug/duricef-ultracef-cefadroxil-342489
https://medlineplus.gov/druginfo/meds/a682730.html

Tested Antibiotic Resistance Genes (ABR) Summary:

Tested Pathogen/Genes:

Pathogen Name	Detected or Not Detected
Acinetobacter baumanii-calcoaceticus complex	Not Detected
Candida albicans	Not Detected
Candida glabrata	Not Detected
Candida parapsilosis	Not Detected
Candida tropicalis	Not Detected
Citrobacter freundii	Not Detected
Enterobacter aerogenes	Not Detected
Enterococcus faecalis	Not Detected
Enterococcus faecium	Not Detected
Escherichia coli	Not Detected

Pathogen Name	Detected or Not Detected
Klebsiella oxytoca	Not Detected
Klebsiella pneumoniae	Detected
Morganella morganii	Not Detected
Proteus vulgaris	Not Detected
Providencia stuartii	Not Detected
Pseudomonas aeruginosa	Not Detected
Serratia marcescens	Not Detected
Staphylococcus aureus	Not Detected
Staphylococcus saprophyticus	Not Detected

* Disclaimer: This molecular diagnostics test was validated by AIM Laboratories under CLIA regulations. As such, this test is for clinical purpose only and not for research. It has not been cleared or approved by the FDA.
Suggested antibiotics for treatment purpose is based on the antimicrobial stewardship from the Sanford database guide and the John Hopkins ABX guide. It is up to the physician's judgement to select antibiotics and treatment options based on clinical symptoms, and patient's physical and biological conditions.

Methodology: The pathogen and antibiotic resistance gene panels are detected by real-time TaqMan probe-based PCR technology using nucleic acid amplification test (NAAT). The primers and probes were designed by Applied Biosystems and arrayed on OpenArray cards. AIM Laboratories analyzed test samples using Applied Biosystem QuantStudio 12K Flex Real-Time PCR-v1.3 system.

Limitations: This test detects only the listed pathogens and genes on the panel. The detected ABR genes in a given specimen is not specific to detected pathogen(s) in the same specimen. Therefore, ABR genes may be detected in bacterial strains not listed/tested in the panel.