Precision Microbio

# Wound Molecular Lab Report

| CLINIC INFORMATION | PATIENT INFORMATION | | SPECIMEN INFORMATION | |
|---|---|---|---|---|
| **Provider:** | **Name:** | John Jones | **Date Collected:** | 9/7/2019 |
| Dr. Smith | **DOB:** | 11/2/1965 | **Date Received by Lab:** | 9/7/2019 |
| | **Gender:** | Male | **Run Date:** | 9/7/2019 |
| | | | **Date Reported:** | 9/7/2019 |
| | | | **Source:** | SWAB |

## Controls

| | |
|---|---|
| Patient Extraction Control [1] | **PASS** |
| Endogenous Positive Control [1] | **PASS** |
| Pathogen Positive Control [2] | **PASS** |
| Pathogen Negative Control [3] | **PASS** |

(1) Endogenous control confirms sample collection, DNA/RNA extraction, and assay enzyme activity

(2) Positive control is synthetic inactive pathogen.

(3) Negative Control contains primers, probe, and enzymes with no DNA/RNA template

(4) A "Detected" result indicates the presence of a pathogen (99.99% confidence) above the assay cutoff. Assay cutoff is represneted by CFU (bacteria), PFU (viruses) or Copy Number (DNA).

| Test Performed | Lab Result (Qualitative) | Recommended Treatment |
|---|---|---|
| **Wound Pathogens** | | |
| A. baumannii | Not detected | N/A |
| C. freundii/braakii | Not detected | N/A |
| Citrobacter koseri | Not detected | N/A |
| E. aerogenes | Not detected | N/A |
| E. cloacae | Not detected | N/A |
| B. fragilis | Not detected | N/A |
| Enterococcus spp. (E. faecalis/E.faecium) | Not detected | N/A |
| E. coli | Not detected | N/A |
| K. oxytoca | Not detected | N/A |
| K. pneumoniae | Not detected | N/A |
| Morganella morganii | Not detected | N/A |
| Proteus mirabilis | Not detected | N/A |
| Pseudomonas aeruginosa | Not detected | N/A |
| S. epidermidis | Not detected | N/A |
| S. saprophyticus | Not detected | N/A |
| Staphylococcus aureus | Not detected | N/A |
| MRSA | Not detected | N/A |
| S. pyogenes (Group A) | Not detected | N/A |
| Serratia marcescens | Detected - HIGH | treated with an aminoglycoside plus an antipseudomonal beta-lactam |

**Technician: David Ray**

*This test detects the presence of pathogen and must be evaluated with clinical symptoms to/ diagnose disease. All test established and validated by Laboratory and not FDA approved.

Methodology statement: Real-time PCR assays are designed to detect pathogens with clinical significance and analytical sensitivity and specificity greater than 99%.

Limitations: While these assays are very sensitive and specific, theoretically these assays could detect pathogens not listed,r esulting in a false positive.

In addition, while these assays are very specific, there may be target pathogen sequences with unknown sequence variability which may not be detected, resulting in a false negative result.

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| Class and (Gene Name) | Lab Result (Qualitative) | Resistane Gene Targets Identified | Associated Resistances |
|---|---|---|---|
| **ABX Resistance Markers** | | | |
| Class A Beta-lactamase (CTX-M-Group 1) | Not detected | blaCTX-M-1,3,10, 12,15,22,23,28, blaFEC-1 | cephalosporins, penicillins, aztreonam |
| Class A Beta-lactamase (blaKPC) | Not detected | KPC-2-8,10,11,13-22,24-33 | carbapenems, cephalosporins, penicillins, beta-lactamase inhibitors, aztreonam |
| Class B metallo Beta-lactamase (blaNDM) | Not detected | NDM (1-21) | carbapenems, cephalosporins, penicillins, beta-lactamase inhibitors |
| vanA Vancomycin | Not detected | vanA | vancomycin |
| vanB Vancomycin | Not detected | vanB | vancomycin |
| mecA | Not detected | mecA | methicillin, oxacillin |
| Sulfonamides | Not detected | sul1, sul2, sul3 | sulfadiazine, sulfamethizole, sulfamethoxazole, sulfasalazine, sulfisoxazole |
| Fluoroquinones | Not detected | qnrS 1,3,4,5,7,8,9<br><br>qnrB Group 1: qnrB 1, 2, 3, 6, 13, 14, 15, 16, 17, 18, 20, 23, 26, 29, 30, 41, 42, 43, 45, 48, 49, 52, 54, 57, 58, 64, 66, 75, 77, 80<br><br>qnrB Group 5: qnrB 5, 10, 19, 36, 40, 46, 47, 50, 56, 59, 61, 62, 67, 68, 70, 71, 72 | ciprofloxacin, gemifloxacin, levofloxacin, moxifloxacin, norfloxacin, ofloxacin |
| Trimethoprim | Not detected | dfrA1, dfrA5, dfrA11, dfrA17 | Primsol |

Low = <10,000 CFU/ml
Medium = 50,000-100,000 CFU/ml
High = >100,000 CFU/ml

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