

Overview

Useful For

Determination of susceptibility of rapidly growing mycobacteria to the antimicrobial agents on the test panel

Additional Tests

| Test Id | Reporting Name | Available Separately | Always Performed |
|---------|-----------------------------|----------------------|------------------|
| SRG | Susceptibility Rapid Grower | No, (Bill Only) | Yes |

Testing Algorithm

When this test is ordered, rapid grower susceptibility will be performed at an additional charge.

Special Instructions

- [Infectious Specimen Shipping Guidelines](#)

Method Name

Minimum Inhibitory Concentration (MIC) by Microtiter Broth Dilution Method

NY State Available

Yes

Specimen

Specimen Type

Varies

Additional Testing Requirements

CTB / Mycobacteria and *Nocardia* Culture, Varies or CTBID / Culture Referred for Identification, *Mycobacterium* and *Nocardia*, Varies must also be ordered and will be charged separately **unless identification of organism is provided by the client.**

Shipping Instructions

1. See [Infectious Specimen Shipping Guidelines](#) in Special Instructions.
2. Place specimen in a large infectious container (T146) and label as an etiologic agent/infectious substance.

Necessary Information

Specimen source and organism identification are required unless either CTB / Mycobacteria and *Nocardia* Culture,

Varies or CTBID / Culture Referred for Identification, *Mycobacterium* and *Nocardia*, Varies is also ordered.

Identification to the species level is required for *Mycobacterium* species in order for the correct antimicrobial susceptibility drug panel to be selected. Identification to the genus level is sufficient for *Nocardia* species and other aerobic actinomycetes (eg, *Gordonia* species, *Rhodococcus* species).

Specimen Required

Specimen Type: Organism

Supplies: [Infectious Container, Large \(T146\)](#)

Container/Tube: Middlebrook 7H10 agar slant or other appropriate media

Specimen Volume: Pure isolate

Collection Instructions: Organism must be in pure culture, actively growing.

Forms

If not ordering electronically, complete, print, and send a [Microbiology Test Request](#) (T244) with the specimen.

Reject Due To

Agar plate Reject

Specimen Minimum Volume

See Specimen Required

Specimen Stability Information

| Specimen Type | Temperature | Time | Special Container |
|---------------|---------------------|------|-------------------|
| Varies | Ambient (preferred) | | |
| | Refrigerated | | |

Clinical & Interpretive**Clinical Information**

There are more than 100 species of rapidly growing mycobacteria and many are significant human pathogens (eg, *Mycobacterium abscessus*, *Mycobacterium chelonae*, *Mycobacterium fortuitum*). Rapidly growing mycobacteria cause a variety of infections including pulmonary infections, skin and soft tissue infections, and disseminated disease. Antimicrobial susceptibility testing of clinically significant rapidly growing mycobacteria is important to help guide

patient care.

Antimicrobials tested in this assay are amikacin, ceftazidime, ciprofloxacin, clarithromycin, clofazimine, doxycycline, imipenem, linezolid, moxifloxacin, tigecycline, tobramycin, and trimethoprim/sulfamethoxazole.

Reference Values

| Antimicrobial | Susceptible (mcg/mL) | Intermediate (mcg/mL) | Resistant (mcg/mL) |
|-------------------------------|------------------------------|-----------------------|--------------------|
| Amikacin | < or =16 | 32 | > or =64 |
| Ceftazidime | < or =16 | 32-64 | > or =128 |
| Ciprofloxacin | < or =1 | 2 | > or =4 |
| Clarithromycin | < or =2 | 4 | > or =8 |
| Clofazimine | No interpretations available | | |
| Doxycycline | < or =1 | 2-4 | > or =8 |
| Imipenem | < or =4 | 8-16 | > or =32 |
| Linezolid | < or =8 | 16 | > or =32 |
| Moxifloxacin | < or =1 | 2 | > or =4 |
| Tigecycline | No interpretations available | | |
| Tobramycin | < or =2 | 4 | > or =8 |
| Trimethoprim/Sulfamethoxazole | < or =2/38 | - | > or =4/76 |

Interpretation

Results are reported as the minimum inhibitory concentration in micrograms/mL. Interpretive criteria (susceptible, intermediate, or resistant) are reported according to the Clinical and Laboratory Standards Institute (CLSI) guidelines.

Clinical Reference

1. Brown-Elliott BA and Pilley JV. [Rapidly growing mycobacteria](#). *Microbiol Spectr*. 2017;5:1-19
2. Apiwattankul N, Flynn PM, Hayden RT, Adderson EE. [Infections caused by rapidly growing mycobacteria spp in children and adolescents with cancer](#). *J Pediatric Infect Dis Soc*. 2015 Jun;4(2):104-113
3. Kasperbauer SH, De Groote MA. [The treatment of rapidly growing mycobacterial infections](#). *Clin Chest Med*. 2015 Mar;36(1):67-78

Performance

Method Description

The method employed in this assay is broth microtiter dilution using a commercially available RAPMYCO2 plate. Antimicrobials included in the assay are tested according to CLSI guidelines.(CLSI. Susceptibility Testing of Mycobacteria, Nocardia spp., and Other Aerobic Actinomycetes. 3rd ed. CLSI standard M24. Clinical and Laboratory Standards Institute; 2018 and CLSI. Performance Standards for Susceptibility Testing of Mycobacteria, Nocardia spp., and Other Aerobic Actinomycetes. CLSI supplement M62. Clinical and Laboratory Standards Institute; 2018)

PDF Report

No

Specimen Retention Time

1 year

Performing Laboratory Location

Rochester

Fees & Codes**Test Classification**

This test has been cleared, approved, or is exempt by the US Food and Drug Administration and is used per manufacturer's instructions. Performance characteristics were verified by Mayo Clinic in a manner consistent with CLIA requirements.

CPT Code Information

87186

LOINC® Information

| Test ID | Test Order Name | Order LOINC Value |
|---------|----------------------------|-------------------|
| MMLRG | Susc, AFB, Rapidly Growing | 29579-0 |

| Result ID | Reporting Name | LOINC® |
|-----------|----------------------------|---------|
| MMLRG | Susc, AFB, Rapidly Growing | 29579-0 |