

TEST CHANGE

Antimicrobial Susceptibility, AFB/Mycobacteria

0060217, MA AFB

Specimen Requirements:

Patient Preparation:

Collect: Actively growing isolate in pure culture.

Specimen Preparation: Transport sealed container with pure isolate on solid or liquid media. Place each isolate in an individually sealed bag.

Transport Temperature: Room temperature
Submit M. tuberculosis complex isolates according to Infectious Substance, Category A shipping guidelines.

Unacceptable Conditions: Mixed isolates or nonviable organisms. M. tuberculosis complex isolates submitted on an agar plate.

Remarks:

Stability: Ambient: 2 weeks; Refrigerated: 2 weeks; Frozen: unacceptable

Methodology: Broth Macrodilution / Broth Microdilution

Note: AFB susceptibility testing is billed at the panel level. Charges will vary based on organism identified. An additional handling fee will be billed for all organisms submitted that are not in pure culture as indicated in the specimen requirements.

If species identification is not provided or if incorrect identification is provided, identification will be performed at ARUP. Additional charges apply.

An additional charge will be added for drug requests that are not tested at ARUP and require sendout.

CPT Codes: CPT codes vary based on method

New York DOH Approval Status: This test is New York DOH approved.

Interpretive Data:

Test Name	Methodology	Drugs Tested	CPT Code
Antimicrobial Susceptibility - AFB/Mycobacterium tuberculosis Primary Panel	Broth Microdilution MGIT960 Broth Macrodilution (Isoniazid 0.4) Macro dilution	Drugs tested: Isoniazid, rifampin, ethambutol The interpretation provided is based on results for the following drugs at the stated concentrations: Drugs tested: Ethambutol: 5.0 ug/mL; Isoniazid: 0.1 ug/mL (0.4 ug/mL if resistant to 0.1 ug/mL); Rifampin: 1.0 ug/mL. This procedure screens isolates of M. tuberculosis complex for drug resistance. The procedure does not use serial dilutions to	87186 87188 x4

		provide quantitative MIC values. Single-critical concentrations for each antimycobacterial agent used have been defined by the United States Public Health Service.	
Antimicrobial Susceptibility - AFB/Mycobacterium tuberculosis Secondary Panel	Agar P proportion and Broth D dilution	Note: If M. tuberculosis complex isolate is resistant to rifampin or any two primary drugs, a secondary panel is available as a send-out test. The interpretation provided is based on testing for the following drugs at the stated concentrations: Drugs tested: Amikacin: 6 ug/mL; capreomycin: 10 ug/mL; cycloserine: 60 ug/mL; ethionamide: 10 ug/mL; kanamycin: 6 ug/mL; PAS: 8 ug/mL; streptomycin at a low level (2.0 ug/mL) and a high level (4.0 ug/mL). Levofloxacin and moxifloxacin are tested at 2, 4 and 8 ug/mL	87190 x6, 87188 x3
Antimicrobial Susceptibility - AFB/Mycobacteria	Broth Microdilution	See organism-specific panels below.	87186
Mycobacterium aviumintracellularae Complex	Broth Microdilution	Drugs tested: Amikacin, clarithromycin, linezolid, moxifloxacin. Clofazimine at request only Clarithromycin results predict azithromycin. Because MIC results do not predict clinical response and may be misleading, rifampin, rifabutin, and ethambutol MICs are not tested.	87186
Rapid Growing Mycobacteria	Broth Microdilution	Drugs tested: Amikacin, cefoxitin, ciprofloxacin, clarithromycin, clofazimine, doxycycline, imipenem, linezolid, moxifloxacin, tigecycline, tobramycin (M. chelonae only), and trimethoprim/sulfamethoxazole (TMP/SXT). Extended 14-day incubation is performed on isolates initially susceptible to clarithromycin to detect Erm-dependent inducible macrolide resistance. Extended drugs at an additional charge: bedaquiline, omadacycline, and eravacycline	87186
Miscellaneous Slowly Growing Non-tuberculosis	Broth Microdilution	Drugs tested: Amikacin, ciprofloxacin, clarithromycin, doxycycline, linezolid,	

<p>Mycobacteria (NTM, non-fastidious species)</p>	<p>moxifloxacin, rifabutin, rifampin, streptomycin and trimethoprim/sulfamethoxazole (TMP/SXT). Selective reporting by organism. CLSI recommends that isolates of <i>M. kansasii</i> be tested against rifampin and clarithromycin only. Rifampin-susceptible isolates are also susceptible to rifabutin. If the isolate is rifampin-resistant, the following secondary drugs will also be reported: Amikacin, ciprofloxacin, linezolid, moxifloxacin, rifabutin, streptomycin and trimethoprim-sulfamethoxazole. <i>M. marinum</i> isolates are tested against amikacin, ciprofloxacin, clarithromycin, doxycycline, moxifloxacin, rifabutin, rifampin, and trimethoprim-sulfamethoxazole. Slowly-growing NTM other than <i>M. kansasii</i> and <i>M. marinum</i> are tested against amikacin, ciprofloxacin, clarithromycin, linezolid, moxifloxacin, rifabutin, rifampin, streptomycin, and trimethoprim-sulfamethoxazole.</p>	
<p>Miscellaneous Slowly Growing Non-tuberculosis Mycobacteria (NTM, fastidious species)</p>	<p>Susceptibility testing is not available for <i>M. haemophilum</i>, <i>M. genavense</i>, and <i>M. ulcerans</i></p>	

Reference Interval: