



**CITY AND COUNTY OF SAN FRANCISCO
PUBLIC HEALTH LABORATORY**
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Test Order

Mycobacterium tuberculosis Complex: Molecular Detection of Drug Resistance (Referred Testing to MDL-CDPH)

Synonym(s)	Pyrosequencing (PSQ) for the identification of mutations associated with drug resistance.
Methodology	Pyrosequencing (PSQ) is performed to identify mutations associated with drug resistance in the following genes: rpoB for rifampin, katG, inhA promoter and ahpC for isoniazid, gyrA for fluoroquinolones, and rrs for injectable drugs such as amikacin, capremycin, or kanamycin.
Acceptable Specimen Type(s) for Testing	Sediments or cultures.
Transport / Collection Medium	Sterile collection vial or liquid (MGIT) or solid (LJ Slant) culture.
Storage and Preservation of Specimen	Sediments: refrigerate at 4°C. Cultures: Incubated (35-37°C), prior to shipping at ambient temperature or cold pack.
Minimum Volume Required	0.5 mL sediment
Additional Collection Instructions	Fresh, pure growth of <i>M.tb.</i> is required for this test. Identification of <i>M.tb.</i> must be confirmed before testing.
Additional Required Information	Collection date and specimen source required. Indicate first line drug susceptibility results and patient history. Prior approval with the Microbial Diseases Laboratory (MDL) required.
Send Out?	Yes
Turnaround Time	1-3 days
Testing Restrictions	
Requisition Form(s)	http://sfcdcp.org/document.html?id=1035
Limitations / Notes / Disclaimers	There must be a satisfactory number of <i>M.tb.</i> bacilli to yield an acceptable result. Specimens with at least 0.5 mL and an acid-fast positive smear of 1+ or greater will most likely generate an acceptable result. Sometimes inhibitory substances in the specimen may prevent successful DNA amplification and pyrosequencing.

Updated 2/10/2017