

Patient Name : **Mr. RAMESH**
Age & Sex : 23 Years / M
Ref. Doctor : Dr. S.K.LUHADIA M.D.(Chest & TB)

Received on : 15/02/2025
Reported on : 17/02/2025
Serial No : **032502150020**

Truenat® MTB

Center ARTH DIAGNOSTICS Operator Arth Bay 1
Profile MTB Date Sun 16 Feb 2025 11:53
Lot TB264 Expiry Date 04-26 Sample Sputum

Patient Details

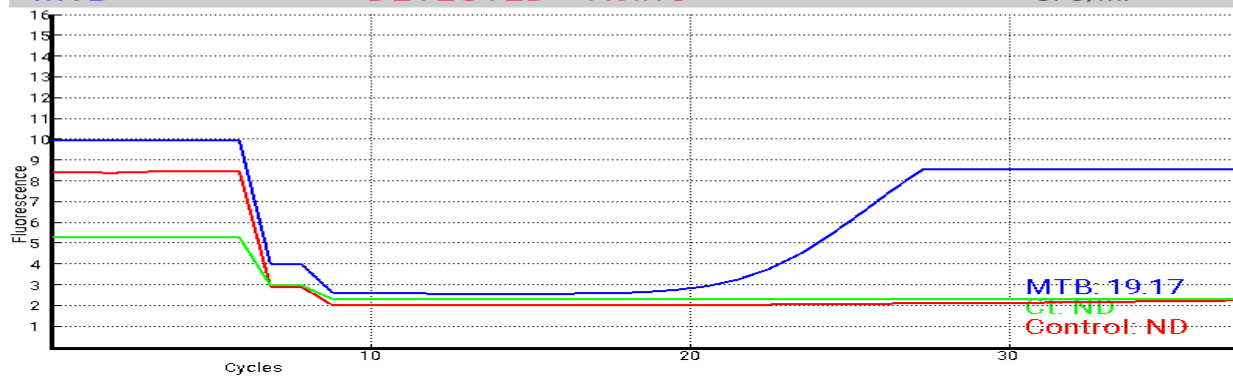
Name Mr. RAMESH ID 032502150020
Age 23 Gender Male Referred By Dr.S.K.LUHADIA MD

Result **Detected**

Control C_t ND MTB 19.17

Run Status **Valid**

MTB **DETECTED** 7.9×10^{05} CFU/ml



This report is for the perusal of doctor only. Not for medico legal cases. Clinical correlation is essential. Please contact us in case of unexpected result.

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MOLECULAR BIOLOGY (TRUENAT™MTB RIF TEST)

Specimen: SPUTUM

Final Result:- Rif Resistance Not Detected

Truenat™ MTB RIF, Mycobacterium Tuberculosis Rifampicin Resistance Test (for diagnosis of MDR TB), is a follow on test conducted on DNA extracts that have shown MTB positive by Truenat™ MTB.

INTERPRETATION:

RESULT	COMMENTS
RIF SENSITIVE	No mutations detected in the target region of <i>rpoB</i> gene. MDR TB unlikely.
RIF RESISTANT	Mutation detected in the target region of <i>rpoB</i> Gene suggesting MDR TB
INTERMEDIATE	No conclusive result

Test Principle:

The *rpoB* gene encodes the β subunit of bacterial [RNA polymerase](#). It is the site of mutations that confer resistance to the [rifampicin](#) antibacterial agents, such as [rifampin](#). Mutations in *rpoB* that confer resistance to rifampicin do so by altering residues of the rifampicin binding site on RNA polymerase, thereby reducing binding affinity for rifampicin. Rifampicin resistance is most invariably associated with resistant to isoniazid. Hence, detection of rifampicin resistance is recommended as a reliable proxy for diagnosis of MDR TB.

Pathogen Information:

Tuberculosis (TB) is an infectious disease caused predominantly by the bacillus *Mycobacterium tuberculosis*. It typically affects the lungs (Pulmonary TB) but can affect other sites as well (Extra pulmonary TB). Pulmonary TB spreads through air and is highly contagious. Over 80% of TB infections are pulmonary and if left untreated, a pulmonary TB patient can infect up to 10-15 other people through close contact over the course of a year. Multidrug-resistant *Mycobacterium tuberculosis* (MDR-TB) has emerged as a major public health problem worldwide with about 450,000 new cases reported every year.

Target selection:

The target sequence for this test is the RRDR region of the *rpoB* gene (between codon positions 509 and 533), representing mutation hot spots known to be related to rifampicin resistance.

Method: Real Time PCR (Melt curve analysis)

Note: Assay result should be interpreted only in the context of other laboratory findings and the total clinical status of patient.

PATHOLOGIST

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Truenat® MTB RIF

Center	ARTH DIAGNOSTICS	Operator	Arth	Bay	1
Profile	MTB RIF	Date	Sun 16 Feb 2025 12:40		
Lot	TX095	Expiry Date	02-26	Sample	Sputum

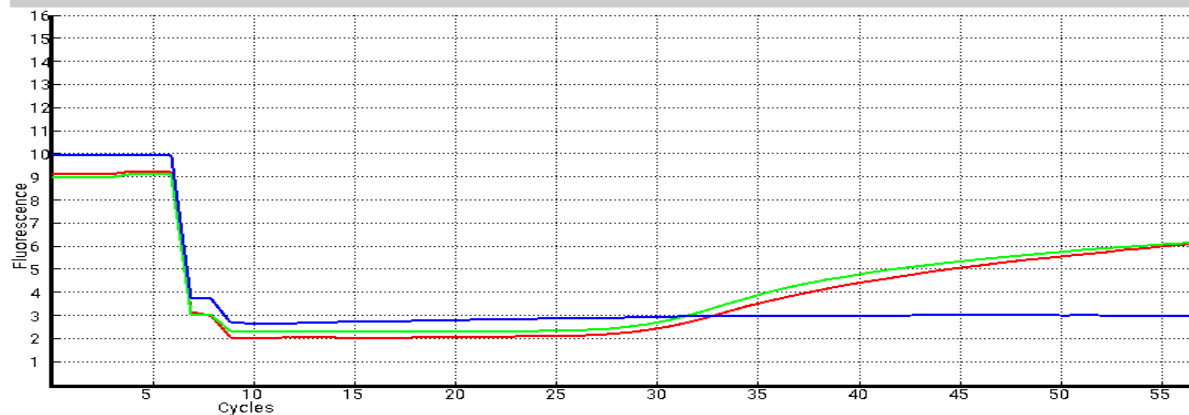
Patient Details

Name	Mr. RAMESH	ID	032502150020
Age	23	Gender	Male
Referred By	Dr.S.K.LUHADIA MD		

Result Rif Resistance not detected

P2	71.62	P1	65.85	Control	73.18
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Run Status Valid



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