

REPORT

Patient sample details, ID etc

NAME : KRITIKA V YADAV (9Y/F)
REF. BY : RGMCTU 05 NID 18509219
TEST ASKED : TB XDR SCREEN (LPA)
PATIENTID : KY16749597

HOME COLLECTION :
KALWA HEALTH CENTRE, CSMH HOSPITAL, KALWA NAKA,
KALWA W SCT 29-4-21 - 400605

TGS Genome Analysis Report

Clinical summary

<i>Mycobacterium tuberculosis</i> detected	Yes	Coverage	0.99
Lineage	Beijing	% of reads	99.24

Drug susceptibility profile

Antibiotic	Presence of Drug-Resistant Mutation	Antibiotic	Presence of Drug-Resistant Mutation
Rifampicin (RMP)	Detected	Ofloxacin (OFX)	Detected
Isoniazid (INH)	Detected	Gatifloxacin (GAT)	Detected
Ethambutol (EMB)	Detected	Ethionamide (ETO)	Not Detected
Pyrazinamide (PZA)	Detected	Linezolid (LZD)	Not Detected
Streptomycin (SM)	Detected	Para-aminosalicylic acid	Not Detected
Capreomycin (CAP)	Detected	Bedaquiline (BDQ)	Not Detected
Kanamycin (KAN)	Detected	Clofazimine (CLO)	Not Detected
Amikacin (AMK)	Detected	Delamanid (DMD)	Not Detected
Moxifloxacin (MOX)	Detected	Pretomanid (PTM)	Not Detected

Report summary for Patient ID

Mycobacterium tuberculosis was **Detected**.

The WGS analysis has categorized the sample as **Extensively Drug-Resistant tuberculosis (XDR-TB)**.

Drug resistance has been identified for **7** drugs.

Co-infections identified are **NA**.

Mixed infections identified are **NA**.

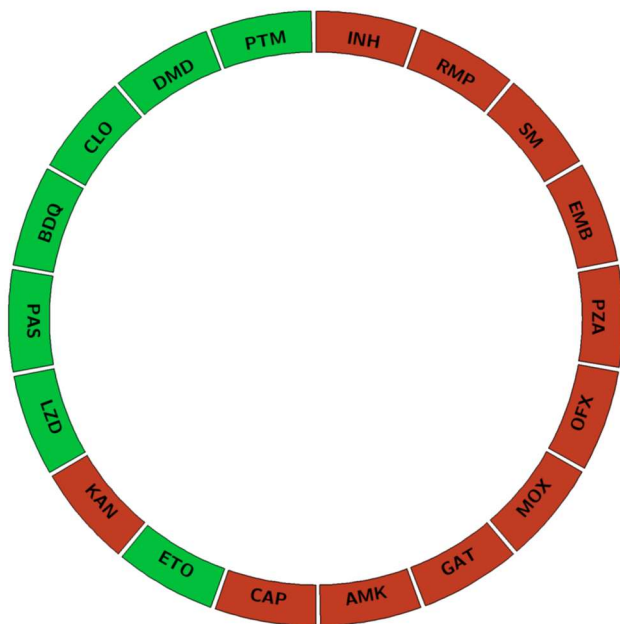
Sample Collected on (SCT) : 03 May 2021 09:00
Sample Received on (SRT) : 04 May 2021 10:02
Report Released on (RRT) : 04 May 2021 14:07
Sample Type : CULTURE MGIT
Labcode : 0405001885/RNT09
Barcode : U8159447



Dr. Chaitali Nikam, Ph.D

Dr. Caesar Sengupta MD(Micro)

Antibiogram



	Mutation conferring drug resistance DETECTED
	Mutation conferring drug resistance NOT DETECTED

RIF: Rifampicin, INH: Isoniazid, EMB: Ethambutol, PZA: Pyrazinamide, STR: Streptomycin, CAP: Capreomycin, KAN: Kanamycin, AMK: Amikacin, MOX: Moxifloxacin, OFX: Ofloxacin, GAT: Gatifloxacin, ETO: Ethionamide, LZD: Linezolid, PAS: Para-aminosalicylic acid, BDQ: Bedaquiline, CLO: Clofazimine, DMD: Delamanid

List of variants used to call resistance

Position	Ref allele	Alternate allele	Type	Frequency	Coverage	Substitution	Gene Symbol	Gene Name	Drug	Pubmed ID	Mutation Confidence
781687	A	G	SNP	99.17	113	Lys43Arg (aag/aGg)	Rv0682	rpsL	SM	22646308	Yes
761155	C	T	SNP	100.00	51	Ser450Leu (tcg/tTg)	Rv0667	rpoB	RMP	7759399	Yes
2288847	C	G	SNP	100.00	44	Gly132Ala (ggg/gCt)	Rv2043c	pncA	PZA	25336456	Yes
155168	C	G	SNP	100.00	81	Ser315Thr (agc/aCc)	Rv1908c	katG	INH	8878604	Yes
7564	G	C	SNP	100.00	42	Gly88Ala (ggc/gCc)	Rv0006	gyrA	FQ	24055765	Yes
7570	C	T	SNP	98.90	48	Ala90Val (gcg/gTg)	Rv0006	gyrA	FQ	21300839	Yes
247429	A	G	SNP	100.00	102	Met306Val (atg/Gtg)	Rv3795	embB	EMB	21300839	Yes
1473246	A	G	SNP	97.60	49	-	Rvnr01	-	AMK,KAN,CAP	21300839	Yes

Mutation confidence: Confidence of mutation for calling drug resistance as per WHO guidelines

Pubmed ID: Identification of peer reviewed study demonstrating mutation associated with drug resistance

ΩTB Drug resistance classification criteria	
Multidrug resistant tuberculosis (MDR-TB)	Tuberculosis caused by <i>Mycobacterium tuberculosis</i> strains that and is resistance to at least Isoniazid and Rifampicin.
Pre-extensively drug-resistant tuberculosis (Pre-XDR-TB)	Tuberculosis caused by <i>Mycobacterium tuberculosis</i> strains that fulfil the definition of MDR/Rifampicin Resistant-TB and that are also resistant to any Fluoroquinolones
Extensively drug-resistant tuberculosis (XDR-TB)	Tuberculosis caused by <i>Mycobacterium tuberculosis</i> strains that fulfil the definition of MDR/Rifampicin Resistant-TB and that are also resistant to any Fluoroquinolones and at least one additional Group A drug (The Group A drugs are currently Levofloxacin or Moxifloxacin, Bedaquiline and Linezolid)
Drug resistance detected	Tuberculosis caused by <i>Mycobacterium tuberculosis</i> (<i>M. tuberculosis</i>) strains that is resistant to anti-TB drugs and do not fall in the above-mentioned categories
Not Drug Resistance	No Resistance for the anti-TB drugs detected

Sample summary

Sample ID	Patient ID	Client ID	#####	Test ID	#####
Sample Type	gDNA	Sample Receipt Date	ddmmyyyy	Sample Temperature on Receipt	Xyz°C
Sample Source	Culture	Sample QC Date	ddmmyyyy	Sample QC	28 ng/μl

Genome sequencing summary

Library Type	Whole Genome. PE x 150	Library Date	ddmmyyyy	Library QC	Pass
Genome Sequencer	Illumina NextSeq 500	Run Date	ddmmyyyy	Machine/ Lane ID	#####

Genomic Analysis Application Summary

Application	ΩTB ver 2.0.1	Run Date	ddmmyyyy	QC check	Pass	Application Run By	
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Disclaimer: This is an automated report. The data reported here is based on statistical prediction of variants in the whole genome of the sample processed here. This report is not a phenotypic test of drug resistance. The variants used to predict antibiotic resistance and strain classification are based on genomic variants reported in peer reviewed publications.

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