Reliance Life Sciences Pvt. Ltd.,
Dhirubhai Ambani Life Sciences Centre,
R 282, TTC Area of MIDC,
Thane Belapur Road,Rabale
Navi Mumbai - 400 701.

Board : +91-22-35338000
Direct : +91-22-35338112
Fax : +91-22-35338099
Email : patientcare@relbio.com

Test Report

Name of Patient	:	-. LV1P04-SD1-1			
Pt. No	:		**Collection center**	:	OSMA0002
Age	:	-	**Date of Collection**	:	22-03-2024 03:05:00
Sex	:	Notspecified	**Date of Receipt**	:	23-03-2024 14:56:39
Reason for Referral	:	N/A	**Date of Reporting**	:	02-04-2024 12:22:24
Referred By	:	DR L V PRASAD			

Name of Test	:	Karyotyping
Specimen	:	Human Induced Pluripotent Stem Cells

Test Result

No. of Metaphases:

Counted	:	20
Analysed	:	20
Karyotyped	:	5

Karyotype : 46,XY

Test Report
Chromosomal analysis revealed apparently normal male karyotype, the banding resolution [ISCN (2020)] of the chromosomes is 525.

Interpretation
The karyotypes are designated as per International System of Human Cytogenetic Nomenclature (ISCN, 2020) whereby the chromosomes are classified into 7 groups (A - G) consisting of 22 pairs of autosomes and one pair of sex chromosomes. Thus, a human diploid cell has 46 chromosomes. The basic steps involved in chromosome preparation from Cultured cells include long term growth of cells in tissue culture flasks in Nutrient medium and arresting of the spindle formation in cell division by colcemid. The chromosomes are in the condensed form in this phase (metaphase) of the cell cycle. The cells are then given hypotonic treatment so that they swell and the chromosomes are released . The slides are prepared and stained using G - banding method for the identification and analysis of chromosomes. The metaphases are analyzed using Cytovision software.
Note:
1.The report should be correlated with the history.
2.The results are not to be used as sole means for clinical diagnosis or cell line management decisions.
3.Presence of low grade mosaicism cannot be ruled out.
4.The microdeletion syndrome and cryptic chromosomal anomalies cannot be detected. Also the cytogenetic study cannot rule out the molecular basis of any inherited genetic disorder.

Test Indications:
Karyotyping of Cultured cells in indicated to evaluate its stability along with to detect both numeric and structural alterations, including

Dr. Shailaja Gada Saxena
MBBS, MSc Gen. (UK), PhD
Head - Molecular Medicine

Ms. Leena Shah
MSc (Cytogenetics)
Cytogeneticist

The laboratory report must be interpreted in conjunction with the clinical profile of the patient by the clinician.
6B52484

CAP ACCREDITED
COLLEGE of AMERICAN PATHOLOGISTS

This report is system generated.

CIN: U24239MH2001PTC130654

MC-3086

Reliance Life Sciences Pvt. Ltd.,
Dhirubhai Ambani Life Sciences Centre,
R 282, TTC Area of MIDC,
Thane Belapur Road,Rabale
Navi Mumbai - 400 701.

Board : +91-22-35338000
Direct : +91-22-35338112
Fax : +91-22-35338099
Email : patientcare@relbio.com

Name of Patient : -. LV1P04-SD1-1

balanced rearrangements and mosaicism.

Test Specifications:
Cultured cell karyotyping is performed on metaphase spreads obtained from long term cultures in tissue culture flasks in Nutrient medium and arresting of the spindle formation in cell division by colcemid. The chromosomes are in the condensed form in this phase (metaphase) of the cell cycle. The cells are then given hypotonic treatment so that they swell and the chromosomes are released. The slides are prepared and stained using G - banding method. The metaphases are analyzed on bright field microscope and karyotyped using the appropriate software.
Karyotype has the advantage of detecting numerical and structural chromosomal aberrations at a resolution of approximately 10 million DNA base-pairs, i.e.>10 mb level.

Clinical Significance:
Karyotyping of Cultured cells is done to ascertain the stability of cell line.

Limitation of the Assay:
Culture failure may be seen in cases of infected samples, samples with very low cell count and poor cell viability.

References:
1.An International System for Human Cytogenetic Nomenclature, Ed: Jean McGowan-Jordan, Ros J. Hastings, Sarah Moore - Karger Publications, USA, 2020.
2.The AGT Cytogenetics Laboratory Manual, 3rd, Ed: Barch M J, Knutsen T, and Spurbeck J L, Lippincott-Raven Publishers, New York, 1997, 19-76, 173-320, 481-526.

Dr. Shailaja Gada Saxena
MBBS, MSc Gen. (UK), PhD
Head - Molecular Medicine

Ms. Leena Shah
MSc (Cytogenetics)
Cytogeneticist

The laboratory report must be interpreted in conjunction with the clinical profile of the patient by the clinician.
6B52484

This report is system generated.

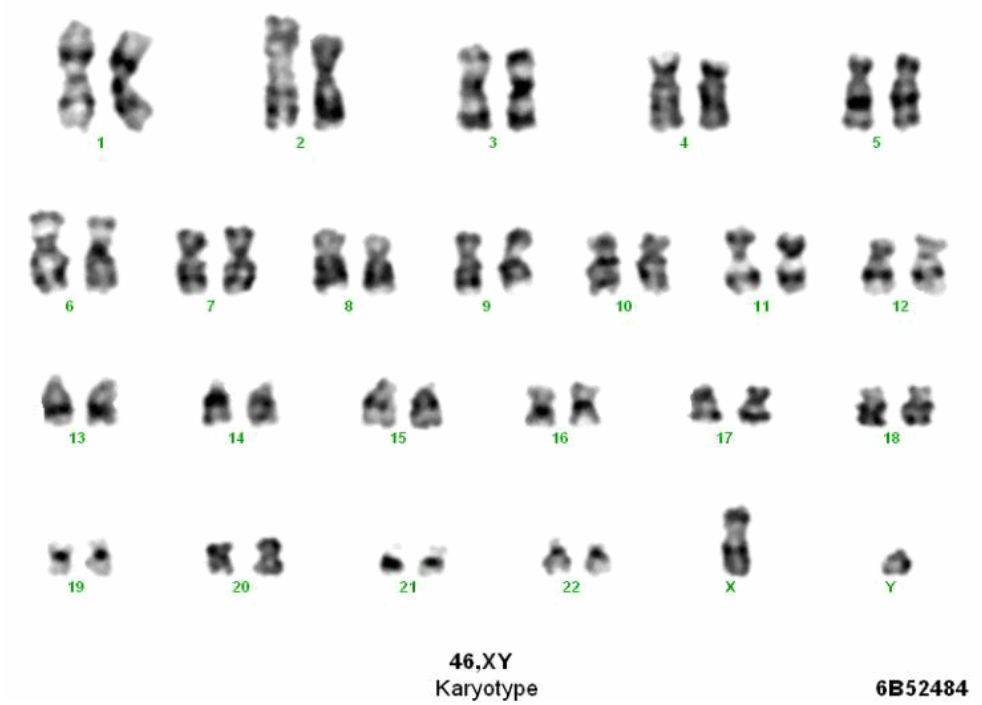
CIN: U24239MH2001PTC130654

MC-3086

Reliance Life Sciences Pvt. Ltd.,
Dhirubhai Ambani Life Sciences Centre,
R 282, TTC Area of MIDC,
Thane Belapur Road,Rabale
Navi Mumbai - 400 701.

Board : +91-22-35338000
Direct : +91-22-35338112
Fax : +91-22-35338099
Email : patientcare@relbio.com

Name of Patient : -. LV1P04-SD1-1



46,XY
Karyotype
6B52484

Dr. Shailaja Gada Saxena
MBBS, MSc Gen. (UK), PhD
Head - Molecular Medicine

Ms. Leena Shah
MSc (Cytogenetics)
Cytogeneticist

The laboratory report must be interpreted in conjunction with the clinical profile of the patient by the clinician.
6B52484

CAP ACCREDITED
COLLEGE of AMERICAN PATHOLOGISTS

This report is system generated.

CIN: U24239MH2001PTC130654

MC-3086

Reliance Life Sciences Pvt. Ltd.,
Dhirubhai Ambani Life Sciences Centre,
R 282, TTC Area of MIDC,
Thane Belapur Road,Rabale
Navi Mumbai - 400 701.

Board : +91-22-35338000
Direct : +91-22-35338112
Fax : +91-22-35338099
Email : patientcare@relbio.com

Name of Patient : -. LV1P04-SD1-1

Metaphase **6B52484**

End of Report

Dr. Shailaja Gada Saxena
MBBS, MSc Gen. (UK), PhD
Head - Molecular Medicine

Ms. Leena Shah
MSc (Cytogenetics)
Cytogeneticist

The laboratory report must be interpreted in conjunction with the clinical profile of the patient by the clinician.
6B52484

CAP ACCREDITED
COLLEGE of AMERICAN PATHOLOGISTS

This report is system generated.

CIN: U24239MH2001PTC130654

MC-3086

Conditions of Reporting

1. The reported results are for the information of the referring doctor only.
2. Partial reproduction of this report is not permitted.
3. It is presumed that the tests performed on the specimen belong to the patient named or identified, such verification having been carried out at the point of generation of the said samples.
4. The test results are interpreted based on the quality and source of the specimen tested. Any query regarding the same needs to be addressed to the concerned technical head.
5. Laboratory Investigations are an aid to the clinical diagnosis and should be interpreted with supporting clinical examinations and clinical history/indications to arrive at a final diagnosis. In absence of any clinical history/indications, Reliance Life Sciences will not be responsible for any discordance in results performed on such specimens. The reports must be thoroughly discussed with the referring physician before arriving at any conclusion.
6. A test requested may not be performed/may be rejected due to one of the following reasons that affect sample stability, integrity and our standards of evaluation. These include: Insufficient specimen quantity; unacceptable sample quality (clotted/hemolysed/Lipemic/leaky etc); improper handling or transport of specimens; specimen collected in wrong vacutainer/container, mislabeled and lack unique identifiers; blood stained tissue specimens. In such cases, a repeat/additional sample will be requested.
7. Test schedule/TAT would vary in unavoidable circumstances (non-availability of kits, instrument breakdown or natural calamities).
8. If the collection date is not specified on the test requisition form, the date of specimen receipt will be printed by default as the date of collection.
9. This report is not valid for medico-legal purposes.
10. Neither Reliance Life Sciences, nor its Directors, Officers, Agents, Employees/Representatives and Affiliate assume any liability, responsibility for any loss or damage of any nature whatsoever that may be incurred or suffered by any person as a result of use of the electronic or hard copy report.
11. Electronic Images in the report are created by electronic processing. Reliance Life Sciences makes no expressed or implied warranties or representations with respect to, and take no responsibility for the authenticity, quality, size of the image, computer viruses and other contamination.
12. Reliance Life Sciences warrants that all the tests have been carried out with reasonable care, clinical safety & technical integrity. However, Reliance Life Sciences in no way makes any representations and gives any warranty as to the accuracy or completeness of the reported results provided by Reliance Life Sciences to the patient/doctor.
13. All information originated by us in response to the submission of electronic report should not be construed as a medical diagnosis of a disease, state of any patient or any need for treatment or referral of any kind.
14. PCR is a technique used to amplify the number of copies of a specific region of DNA, in order to produce enough DNA to be adequately tested. Using specific primers, mutations in β-globin gene are detected by ARMS PCR. Currently available data indicate that the technical error rate for all types of DNA analysis is approximately 1-2%. The PCR technology platform is prone to errors due to the processivity of the DNA Polymerase being used. This may lead to an occasional false positive for which Reliance Life Sciences will not be held responsible.
15. Karyotyping is a standard cytogenetic technique that analyses metaphase chromosome spreads obtained from cultured cells. All genetic abnormalities like single gene / polygenic disorders, microdeletions, subtle rearrangements and low grade mosaicism cannot be ruled out by karyotyping.
16. FISH is a molecular diagnostic tool for a rapid and precise identification of chromosomal aberrations (aneuploidies, microdeletions, translocations, etc.) using specific commercially available DNA probes. However, only probe-specific defects get identified. Very small microdeletions, point mutations or other genetic etiologies cannot be detected by FISH.
17. All clinicians involved in the care of families requesting prenatal diagnosis, and the families themselves should be aware of the data in Point No. 14, 15 and 16 before decisions about termination of pregnancy are taken.
18. The sex of the fetus will not be revealed as per the Prenatal Diagnostic Techniques (Regulation and Prevention of Misuse) Act 2003.
19. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution, or taking any action in Reliance Life Sciences on the contents of this information is strictly prohibited and is unlawful.
20. If you have received this communication in error, please notify to Reliance Life Sciences immediately.
21. Any query from the referring doctor pertaining to this report shall be directed to Reliance Life Sciences, Mumbai