hema CŌRE™

Your Test Results

Case Number:	**18014209**
Patient Name:	**Urmila Devi**
Age/Sex:	**40 yrs/Female**
Patient Location:	**Ambala**
Hospital Name:	**PGI**
Physician Name:	**Dr. Deepak Goni**
Date & Time of Accessioning:	**31/03/2018 10:42 Hrs**
Date & Time of Reporting:	**10/04/2018 17:18 Hrs**

TEST NAME

BCR/Abl Kinase Domain Mutations (IRMA)

SPECIMEN INFORMATION

Received peripheral blood in EDTA collected on 29/03/2018.

CLINICAL HISTORY

Not Provided

METHODOLOGY

Polymerase Chain Reaction - Sequencing.

MOLECULAR TEST

BCR/Abl Kinase Domain Mutations (IRMA)

INTERPRETATION

Negative

BCR Abl Kinase Domain Mutations Tested	Results
T315I	Wild Type
E255V	Wild Type
Y253H	Wild Type
E255K	Wild Type
Y253F	Wild Type
E373G	Wild Type
L248V	Wild Type
G321E	Wild Type
E279K	Wild Type
G250E	Wild Type
D276G	Wild Type
F486S	Wild Type

BCR Abl Kinase Domain Mutations Tested	Results
H396P	Wild Type
H396R	Wild Type
F359V	Wild Type
F317L	Wild Type
Q252H	Wild Type
L387M	Wild Type
E275K	Wild Type
F359C	Wild Type
E450K	Wild Type
M351T	Wild Type
M244V	Wild Type
E355G	Wild Type

BCR Abl Kinase Domain Mutations Tested	Results
V379I	Wild Type
E355A	Wild Type
M388L	Wild Type
T315A	Wild Type
M237I	Wild Type
F311L	Wild Type
L387F	Wild Type
V299L	Wild Type
F317V	Wild Type
G250A	Wild Type
V289A	Wild Type
Y235H	Wild Type

Dr. Rahul Katara, Ph.D., Molecular Scientist

CŌRE DIAGNOSTICS™

hema CŌRE™

Your Test Results

Case Number:	**18014209**
Patient Name:	**Urmila Devi**
Age/Sex:	**40 yrs/Female**
Patient Location:	**Ambala**
Hospital Name:	**PGI**
Physician Name:	**Dr. Deepak Goni**
Date & Time of Accessioning:	**31/03/2018 10:42 Hrs**
Date & Time of Reporting:	**10/04/2018 17:18 Hrs**

COMMENTS

1. Chronic Myelogenous leukemia (CML) is characterized by the presence of the Philadelphia chromosome, the product of the t(9;22)(q34;q11) translocation. This translocation results in the BCR/ABL fusion protein with constitutive ABL tyrosine kinase activity.
2. The kinase inhibitor imatinib (STI571, Gleevac) inhibits ABL kinase activity and is now standard of care for early phase CML. Prolonged treatment with Imatinib can lead to drug resistance, especially in patients with advanced disease.
3. A large portion of resistant patients have acquired point mutations in the ABL kinase domain that renders the kinase, resistant to the drug. Site of point mutations in ABL associated with Imatinib resistance span the entire kinase domain but often cluster in important hotspots.
4. This test detects greater that 90 percent of ABL mutations that may lead to Imatinib resistance, including the important T315I and P-loop mutations. A range of levels of resistance and prognosis has been observed for different mutations. ABL kinase domain mutations that cause only moderate resistance may be overcome by higher Imatinib doses.

Assay Description And Methodology:

Total RNA extracted via common sample preparation methodologies from whole blood or bone marrow collected in EDTA is compatible with PCR Sequencing methods. The PCR product sequence is aligned with the Wild Type sequence to detect the codons (HOT SPOT Region) of interest.

Intended Use:

The BCR-ABL Kinase domain mutation Detection Kit is intended for the qualitative detection of BCR-ABL KD mutation in bone marrow or peripheral blood samples using conventional PCR system. The kit is based on reverse transcription of total RNA, followed by Sequencing based PCR amplification and detection of BCR-ABL KD mutation by sanger sequencing.

Disclaimer:

This test is performed using in-house developed primers for BCR ABL & KD mutation. The assay is designed to perform the reactions at the specified analytical sensitivity given that the template RNA is not heavily fragmented and does not contain materials that could inhibit the amplification reaction.

REFERENCES

1. BaccaraniM, Saglio G, Goldman J, Hochhaus A, Simonsson B, Appelbaum F, Apperley J, Cervantes F, Cortes J, Deininger M, Gratwohl A, Guilhot F, Horowitz M, Hughes T, Kantarjian H, Larson R, Niederwieser D, Silver R, Hehlmann R; European LeukemiaNet. Evolving concepts in the management of chronic myeloid leukemia: recommendations from an expert panel on behalf of the European LeukemiaNet. Blood 2006Sep 15;108(6):1809-20.
2. Beillardet al. Evaluation of candidate control genes for diagnosis and residual disease detection in leukemic patients using 'real-time' quantitative reverse-transcriptase polymerase chain reaction (RQ-PCR) – a Europe against cancer program. Leukemia 200317, 2474 – 2486.
3. BranfordS, Cross NC, Hochhaus A, Radich J, Saglio G, Kaeda J, Goldman J, Hughes T. Rationale for the recommendations for harmonizing current methodology for detecting BCR-ABL transcripts in patients with chronic myeloid leukaemia. Leukemia 2006Nov;20(11):1925-30.
4. DrukerBJ, Guilhot F, O'Brien SG, Gathmann I, Kantarjian H, Gattermann N, Deininger MW, Silver RT, Goldman JM, Stone RM, Cervantes F, Hochhaus A, Powell BL, Gabrilove JL, Rousselot P, Reiffers J, Cornelissen JJ, Hughes T, Agis H, Fischer T, Verhoef G, Shepherd J, Saglio G, Gratwohl A, Nielsen JL, Radich JP, Simonsson B, Taylor K, Baccarani M, So C, Letvak L, Larson RA; IRIS Investigators. Fiveyear follow-up of patients receiving imatinib for chronic myeloid leukemia. N Engl J Med. 2006Dec 7;355 (23):2408-17.

Dr. Rahul Katara, Ph.D., Molecular Scientist

CŌRE DIAGNOSTICS™

Questions?

Contact us at **+91 124 4615 615**

Toll Free Helpline**: 1800 103 2673**

CONDITIONS OF REPORTING

1. The tests are carried out in the lab with the presumption that the specimen belongs to the patient named or identified in the bill/test request form.
2. The test results relate specifically to the sample received in the lab and are presumed to have been generated and transported per specific instructions given by the physicians/laboratory.
3. The reported results are for information and are subject to confirmation and interpretation by the referring doctor.
4. Some tests are referred to other laboratories to provide a wider test menu to the customer.
5. CORE Diagnostics Pvt. Ltd. shall in no event be liable for accidental damage, loss, or destruction of specimen, which is not attributable to any direct and mala fide act or omission of CORE Diagnostics Pvt. Ltd. or its employees. Liability of CORE Diagnostics Pvt. Ltd. for deficiency of services, or other errors and omissions shall be limited to fee paid by the patient for the relevant laboratory services.