Lab Dept: Anatomic Pathology

Test Name: BCR/ABL1, QUALITATIVE, DIAGNOSTIC

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**General Information**

**Lab Order Codes:** BCRL

**Synonyms:** BCR/ABL1 RNA; Philadelphia chromosome Ph bone marrow or blood; BCR-ABL; t(9;22)

**CPT Codes:**
- 81206 - BCR/ABL1 translocation analysis; major breakpoint, qualitative or quantitative
- 81207 - Minor breakpoint, qualitative or quantitative
- 81208 - Other breakpoint, qualitative or quantitative

**Test Includes:** A qualitative result is provided that indicates the presence or absence of BCR/ABL1 messenger RNA. When positive, the fusion variant is also reported.

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**Logistics**

**Test indications:** Useful for the diagnostic workup of patients with a high probability of BCR/ABL1-positive hematopoietic neoplasms, predominantly chronic myeloid leukemia and acute lymphoblastic leukemia.

This test is only qualitative and should not be used for routine monitoring (i.e., quantitative messenger RNA [mRNA] level).

Monitoring of most patients with chronic myeloid leukemia (CML) should be performed using test code BCRR (Mayo Test Code: BCRAB) BCR/ABL, p210, mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative, Monitoring Chronic Myelogenous Leukemia (CML), Varies.

Monitoring of patients known to carry a p190 fusion should be performed using test code BCRP (Mayo Test Code: BA190) BCR/ABL, p190, mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative, Monitoring Assay, Varies.

**Lab Testing Sections:** Anatomic Pathology - Sendouts

**Referred to:** Mayo Medical Laboratories (MML) (Mayo Test Code: BADX)

**Phone Numbers:**
- MIN Lab: 612-813-6280
- STP Lab: 651-220-6550
Test Availability: Daily, 24 hours

Turnaround Time: 5-10 days

Special Instructions: Provider completion of the MML Hematopathology Patient Information sheet with clinical history is recommended. See reference lab test catalog (Test Code: BADX) for the form.

Specimen

Specimen Type: Blood or bone marrow

Container:
- Blood: Lavender (EDTA) tube, label as blood. Alternative: Yellow top ACD tube
- Bone marrow: Collect in dry syringe and immediately transfer to EDTA tube to minimize clotting, label as bone marrow aspirate. Alternative: Yellow top ACD tube

Draw Volume:
- Blood: 10 mL (minimum 8.0 mL)
- Bone marrow: 4 mL (minimum 2 mL)

Processed Volume: Same as collection volume

Collection: Routine blood or bone marrow aspirate collection procedure, invert tube several times to mix with anticoagulant.

Special Processing: Lab Staff: Do not process or aliquot. Ensure label indicates specimen type. Store and ship at refrigerated temperature. Forward promptly.

Specimen stable for 5 days refrigerated (preferred) or for 72 hours at room temperature.

Patient Preparation: N/A

Sample Rejection: Unlabeled or mislabeled specimen; gross hemolysis; moderately to severely clotted specimen; specimen collected in incorrect anticoagulant; inadequate specimen volume.

Interpretive

Reference Range: A qualitative result is provided that indicates the presence or absence of BCR/ABL1 messenger RNA. When positive, the fusion variant is also reported.

Critical Values: N/A
**Limitations:** This test is only qualitative and should not be used for routine monitoring. Monitoring of most CML patients should be performed using test code BCRR (Mayo test: BCRAB) BCR/ABL, p210 mRNA Detection, Reverse Transcription-PCR (RT-PCR), Quantitative Chronic Myelogenous Leukemia (CML). Monitoring of patients known to carry a p190 fusion should be performed using test code BCRP (Mayo test code: BA190) BCR/ABL, p190, Quantitative mRNA Detection, Reverse Transcription- PCR, Quantitative Monitoring Assay.

**Methodology:** Reverse Transcription-Polymerase Chain Reaction (RT-PCR) Multiplex PCR

**References:** [Test Catalog - Mayo Clinic Laboratories (mayocliniclabs.com)](mayocliniclabs.com) (February 2023)

**Updates:**
1/29/2013: CPT 2013 update
9/2/2015: Method update, previous PCR method included fluorescent bead array analysis (Luminex). Change from ABL to ABL1. Specimen stability extended, previously arrival within 72 hours. Updated specimen rejection.
5/19/16: Storage temp change, previously room temp.
2/14/2023: Reinstituted test code as orderable. Updates to collection volumes.