
Lab Dept: **Anatomic Pathology**

Test Name: **TARGETED B-ALL FUSION ANALYSIS**

General Information

Lab Order Codes: TBALL

Synonyms: B Cell Acute Lymphoblastic Leukemia Fusion Panel, B-ALL Kinase Fusion Panel; Hematologic Cancer Fusion Analysis

CPT Codes: 81455 – Targeted genomic sequence analysis panel, organ/neoplasm

Test Includes: An interpretive report will be provided and requires a bone marrow or blood sample containing at least 10% blasts.

Logistics

Test Indications: This test is designed for patients suspected to have hematologic malignancies. Chromosomal translocations resulting in gene fusions are a hallmark of hematologic neoplasias and can help define the diagnosis and potential treatment options. Specimen containing 10% disease content or greater is required to report out a negative result. If internal pathology review determines that the sample contains less than 10% tumor content, then the test may be cancelled. Sample acquisition prior to receiving therapy is also strongly preferred. At this time, formalin fixed paraffin embedded (FFPE) tissue is NOT an acceptable sample type for this assay.

This panel provides fusion information for 148 gene fusion partners relevant to lymphoid and myeloid malignancies as well as lymphomas, including gene fusion partners associated with Philadelphia chromosome-like (Ph-like) B-cell acute lymphoblastic leukemia, and some, but not all IGH-CRLF2 gene fusions. All positive results are confirmed with RT-PCR with Sanger sequencing. Please note, this test is not recommended as a first-line diagnostic assay for lymphomas due to reduced sensitivity for detecting genomic rearrangements with cancer associated immunoglobulin loci (IgG, IgL, IgK). Lymphomas that have tested negative for Ig rearrangements by FISH or other methodologies are acceptable.

Lab Testing Sections: Anatomic Pathology - Sendouts

Referred to: Nationwide Children’s Hospital – ChildLab Cytogenetics/Molecular Genetics (NWC Test: HEMFUSN)

Phone Numbers: MIN Lab: 612-813-6280

 STP Lab: 651-220-6550

Test Availability: Monday – Thursday

Turnaround Time: 3 weeks

Special Instructions: Draw Monday – Thursday so samples can get to ChildLab within 24 hours of collection Monday – Friday due to RNA instability.

[Completed Cytogenetics/Molecular Genetics](#) required.

Specimen

Specimen Type: Whole blood, Bone Marrow also accepted

Container: Lavender (EDTA) tube

Draw Volume: 4 mL blood or bone marrow

Processed Volume: Same as Draw Volume

Collection: Routine blood or bone marrow collection

Special Processing: Lab Staff: **Do Not** process or centrifuge whole blood. Ship at room temperature via overnight courier. Do not freeze specimens.

Patient Preparation: None

Sample Rejection: Frozen specimen; delayed or improper handling; mislabeled or unlabeled specimen; insufficient tumor content in sample; wrong type of specimen; wrong collection tube.

Interpretive

Reference Range: An interpretive report will be provided.

A minimum of 10% blasts is required. A blast percentage of <10% will be reviewed by NWC Pathology and may be canceled.

Critical Values: N/A

Limitations: Blast count under 10% could lead to a canceled test.

Methodology: Anchored Multiplex PCR (AMP), Next Generation Sequencing

References: [Nationwide Children's Online Directory](#) February 2020