
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

CPT Codes: 81450 – Targeted genomic sequence analysis panel, hematolymphoid neoplasm or disorder (5-50 genes)

Test Includes: An interpretive report will be provided of B-ALL Fusion results 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 a subtype of B-progenitor acute lymphoblastic leukemia (B-ALL) called Philadelphia chromosome-like B-ALL, which is seen in about 15% of children with newly diagnosed and/or relapsed B-ALL and is characterized by a gene expression profile suggestive of an alternate kinase gene fusion in the absence of a classical t(9;22) BCR-ABL1 rearrangement seen in Philadelphia (ph) chromosome-positive leukemias.

This test detects gene fusions that have the following kinase genes as the 3' fusion partner: ABL1, ABL2, BLNK, CSF1R, EPOR, FGFR1, FLT3, JAK2, NTRK3, PDGFRA, PDGFRB, PTK2B, and TYK2. In addition, this test will also detect some, but not all, IgH-CRLF2 gene fusion. All positive fusion results from this test will be confirmed using singleplex RT-PCR with bi-directional Sanger sequencing.

Lab Testing Sections: Anatomic Pathology - Sendouts

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

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

Processed Volume: Same as Draw Volume

Collection: Routine blood 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](#) March 2018