

Notification Date: November 12, 2021 Effective Date: December 13, 2021

B-Cell Acute Lymphoblastic Leukemia/Lymphoma (ALL), FISH, Adult, Varies

Test ID: BALAF

Useful for:

Detecting a neoplastic clone associated with the common chromosome abnormalities and classic rearrangements seen in adult patients with B-cell acute lymphoblastic leukemia/lymphoma (B-ALL/LBL).

An adjunct to conventional chromosome studies in patients with B-ALL/LBL.

Evaluating specimens in which standard cytogenetic analysis is unsuccessful.

Testing Algorithm:

This test includes a charge for the probe application, analysis and professional interpretation of results for 2 probe sets (4 individual fluorescence in situ hybridization [FISH] probes). Additional charges will be incurred for all reflex or additional probe sets performed. The initial panel includes testing for the following abnormalities using the probes listed:

t(9;22), BCR/ABL1t(X;14)(p22.33;q32) t(Y;14)(p11.32;q32), CRLF2/IGH If results for the initial panel are negative, the following reflex probe sets will be performed as a secondary panel: 1q25 rearrangement, ABL2 break-apart 5q33 rearrangement, PDGFRB break-apart 9p24.1 rearrangement, JAK2 break-apart 9q34 rearrangement, ABL1 break-apart t(Xp22.33;var) or t(Yp11.32;var), CRLF2 rearrangement t(Xp22.33;var) or t(Yp11.32;var), P2RY8 rearrangement Finally, if results for the secondary panel are negative, the following probe sets will be performed as a tertiary panel:

t(1;19)(q23;p13), PBX1/TCF3 fusion Hyperdiploidy, +4,+10,+17: D4Z1/D10Z1/D17Z1 t(12;21)(p13;q22), ETV6/RUNX1 & iAMP21 14q32 rearrangement, IGH break-apart 11q23 rearrangement, MLL(KMT2A) break-apart 7p-, IKZF1/CEP7 When a KMT2A (MLL) rearrangement is identified, reflex testing will be performed to identify the translocation partner. Probes include identification of: t(4;11)(q21;q23) AFF1/MLL MLLT4(AFDN)/MLL t(6;11)(q27;q23) t(9;11)(p22;q23) MLLT3/MLL t(10;11)(p12;q23) MLLT3/MLL t(11;19)(q23;p13.1) MLL/ELL t(11;19)(q23;p13.3) MLL/MLLT1

Reflex Tests:

Test ID	Reporting Name	Available Separately	Always Performed
BALAB	Probe, Each Additional (BALAF)	No (Bill Only)	No
BAL3B	Probe, Tri-Color (BAL)	No (Bill Only)	No

Methods:

Fluorescence In Situ Hybridization (FISH)

Reference Values:

An interpretive report will be provided.

Specimen Requirements:

Preferred Specimen Type: Bone marrow

Preferred Container/Tube: Yellow top (ACD)

Acceptable Container/Tube: Green top (heparin) or lavender top (EDTA)

Specimen Volume: 2-3 mL

Minimum Volume: 1 mL

Collection Instructions:

- 1. It is preferable to send the first aspirate from the bone marrow collection.
- 2. Invert several times to mix bone marrow.

Acceptable Specimen Type: Blood

Preferred Container/Tube: Yellow top (ACD)

Acceptable Container/Tube: Green top (heparin) or lavender top (EDTA)

Specimen Volume: 6 mL

Minimum Volume: 2 mL

Collection Instructions:

1. Invert several times to mix blood.

Note:

A reason for testing and a flow cytometry and/or a bone marrow pathology report should be submitted with each specimen. The laboratory will not reject testing if this information is not provided, however appropriate testing and interpretation may be compromised or delayed in some instances. If this information is not provided, an appropriate indication for testing may be entered by Mayo Clinic Laboratories.

Specimen Stability Information:

Specimen Type	Temperature	Time
Varies	Ambient (preferred)	
	Refrigerated	

Cautions:

This test is not approved by the US Food and Drug Administration, and it is best used as an adjunct to existing clinical and pathologic information.

Fluorescence in situ hybridization (FISH) is not a substitute for conventional chromosome studies because the latter detects many chromosome abnormalities associated with other hematological disorders that would be missed by this FISH panel test.

Bone marrow is the preferred specimen type for this FISH test. If bone marrow is not available, a blood specimen may be used if there are malignant cells in the blood specimen (as verified by a hematopathologist).

CPT Code:

88271 x4,88275 x2, 88291 - FISH Probe, Analysis, Interpretation; 2 probe sets

88271 x2, 88275 - FISH Probe, Analysis; each additional probe set (if appropriate)

88271 - FISH Probe (if appropriate)

Day(s) Performed: Monday through Friday Report Available: 7 to 10 days

Questions

Contact Joshua Couchene Laboratory Technologist Resource Coordinator at 800-533-1710.