MAYO CLINIC LABORATORIES

NEW TEST

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

Philadelphia Chromosome-like Acute Lymphoblastic Leukemia (Ph-like ALL), Diagnostic FISH, Varies

Test ID: PHLDF

Useful for:
Detecting a neoplastic clone associated with Philadelphia chromosome-like acute lymphoblastic leukemia, particularly when a classic abnormality is not detected with the initial panel.

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

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 7 probe sets (14 individual fluorescence in situ hybridization [FISH] probes).

The Philadelphia chromosome-like acute lymphoblastic leukemia (Ph-like ALL) panel includes testing for the following four kinase-activating chromosome rearrangements, as well as for *IKZF1* deletion, which often accompanies Ph-like ALL:
1q25 rearrangement, ABL2
5q33 rearrangement, PDGFRB
9p24.1 rearrangement, JAK2
9q34 rearrangement, ABL1
7p-, IKZF1/CEP7
t(Xp22.33;var) or t(Yp11.32;var), CRLF2 rearrangement
t(Xp22.33;var) or t(Yp11.32;var), P2RY8 rearrangement

Reflex Tests:

Test ID	Reporting Name	Available Separately	Always Performed
PHLDB	Probe, Each Additional (PHLDF)	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 the absence of this information. 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:

88271x14, 88275x7, 88291 x1-FISH Probe, Analysis, Interpretation; 7 probe sets

88271x2, 88275x1-FISH Probe, Analysis; each additional probe set (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.