MAYO CLINIC LABORATORIES

Test Definition: HEMMF

Hematologic Specified FISH, Varies

Overview

Useful For

Detecting specific chromosomal abnormalities in hematologic malignancies using **client-specified** probe set(s)

Reflex Tests

Test Id	Reporting Name	Available Separately	Always Performed
HEMMB	Probe, Each Additional (HEMMF)	No, (Bill Only)	No

Testing Algorithm

This test includes a charge for the probe application, analysis, and professional interpretation of results for 1 probe set (2 individual fluorescence in situ hybridization [FISH] probes). Additional charges will be incurred for all reflex testing, if requested, or additional probe sets performed. Analysis charges will be incurred based on the number of cells analyzed per probe set. If no cells are available for analysis, no analysis charges will be incurred.

This test is performed using client-specified FISH probes. Specific probes **must** be listed in the probe request field. Reflex probes can be performed when appropriate if specified in the order request field.

Appropriate ancillary probes may be performed at consultant discretion to render comprehensive assessment. Any additional probes will have the results included within the final report and will be performed at an additional charge.

Method Name

Fluorescence In Situ Hybridization (FISH)

NY State Available

Yes

Specimen

Specimen Type

Varies

Ordering Guidance

Consult with the laboratory before ordering this test.

This test is intended for instances when **client-specified** fluorescence in situ hybridization (FISH) probes are needed. **The FISH probes to be analyzed must be specified on the ordering request.** If targeted FISH probes are not included with this test order, test processing will be delayed and the test may be canceled by the laboratory.

Paraffin-embedded specimens and blood or bone marrow specimens submitted for evaluation of specific nonhematologic malignancies or congenital/hereditary testing must be ordered as MISCF / Miscellaneous Studies Using Chromosome-Specific Probes, FISH. If HEMMF is ordered in these situations, it will be canceled and MISCF ordered and performed as the appropriate test.

Necessary Information

1. A list of probes requested for analysis is required.

2. A reason for testing must be provided. If this information is not provided, an appropriate indication for testing may be entered by Mayo Clinic Laboratories.

3. A flow cytometry and/or a bone marrow pathology report should be submitted with each specimen**.** Acceptable pathology reports include working drafts, preliminary pathology, or surgical pathology reports. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed.

Specimen Required

Submit only 1 of the following specimens:

Preferred:
Specimen Type: Bone marrow
Container/Tube:
Preferred: Yellow top (ACD)
Acceptable: Green top (sodium heparin) or lavender top (EDTA)
Specimen Volume: 2-3 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.
3. Send bone marrow specimen in original tube. **Do not aliquot.**

Acceptable:
Specimen Type: Whole Blood
Container/Tube:
Preferred: Yellow top (ACD)
Acceptable: Green top (sodium heparin) or lavender top (EDTA)
Specimen Volume: 6 mL
Collection Instructions:
1. Invert several times to mix blood.
2. Send whole blood specimen in original tube. **Do not aliquot.**

Specimen Minimum Volume

Bone marrow: 1 mL; Whole blood: 2 mL

Reject Due To

Fresh tissue	Reject

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Varies	Ambient (preferred)		
	Refrigerated		

Clinical & Interpretive

Clinical Information

Fluorescence in situ hybridization using gene-specific probes and various probe strategies can help characterize chromosome abnormalities in hematologic malignancies for diagnostic, prognostic, and therapeutic purposes.

Reference Values

An interpretive report will be provided.

Interpretation

A neoplastic clone is detected when the percent of cells with an abnormality exceeds the normal reference range for any given fluorescence in situ hybridization probe set.

The absence of an abnormal clone does not exclude the presence of a neoplastic disorder.

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 chromosome abnormalities associated with other hematological disorders that would go undetected in a targeted FISH test.

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

If no FISH signals are observed post-hybridization, the case will be released indicating a lack of FISH results.

Clinical Reference

1. WHO Classification of Tumours: Haematolymphoid Tumours; Lyon (France): 2024, 5th ed, ISBN-13: 978-9283245209
2. The International Consensus Classification of Myeloid and Lymphoid Neoplasms; Philadelphia, PA (USA): 2025, ISBN-13: 978-1975222598

Performance

Method Description

This test is performed using commercially available and laboratory-developed probes. For enumeration and break-apart strategy probe sets, 100 interphase nuclei are scored; 200 interphase nuclei are scored when dual-color, dual-fusion fluorescence in situ hybridization probes are used. All results are expressed as the percent abnormal nuclei.(Unpublished

Mayo method)

PDF Report
No

Day(s) Performed
Monday through Friday

Report Available
9 to 12 days

Specimen Retention Time
4 weeks

Performing Laboratory Location
Mayo Clinic Laboratories - Rochester Main Campus

Fees & Codes

Fees
- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their account representative. For assistance, contact Customer Service.

Test Classification
This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. It has not been cleared or approved by the US Food and Drug Administration.

CPT Code Information
88271x2, 88275x1, 88291x1 - FISH Probe, Analysis, Interpretation; 1 probe set
88271x2, 88275x1 - FISH Probe, Analysis; each additional probe set (if appropriate)

LOINC® Information

Test ID	Test Order Name	Order LOINC® Value
HEMMF	Hematologic Specified FISH	In Process

Result ID	Test Result Name	Result LOINC® Value
614267	Result Summary	50397-9
614268	Interpretation	69965-2
614269	Result Table	93356-4
614270	Result	62356-1
GC117	Reason for Referral	42349-1
GC118	Probes Requested	78040-3

GC119	Specimen	31208-2
614271	Source	31208-2
614272	Method	85069-3
614273	Additional Information	48767-8
614274	Disclaimer	62364-5
614275	Released By	18771-6