Test Definition: CHRBF

Chromosomes, Body Fluid

Overview

Useful For

Assisting in the diagnosis of certain malignancies

Reflex Tests

Test ID	Reporting Name	Available Separately	Always Performed
_ML20	Metaphases, 1-19	No, (Bill Only)	No
_M25	Metaphases, 20-25	No, (Bill Only)	No
_MG25	Metaphases, >25	No, (Bill Only)	No
_STAC	Ag-Nor/CBL Stain	No, (Bill Only)	No

Testing Algorithm

This test includes a charge for cell culture of fresh specimens and professional interpretation of results. Analysis charges will be incurred for total work performed, and generally include 2 banded karyograms and the analysis of 20 metaphase cells. If no metaphase cells are available for analysis, no analysis charges will be incurred. If additional analysis work is required, additional charges may be incurred.

Method Name

Cell Culture followed by Chromosome Analysis

NY State Available

Yes

Specimen

Specimen Type

Body Fluid

Specimen Required

Provide a reason for referral and the specimen source with each specimen. The laboratory will not reject testing if this information is not provided, but appropriate testing and interpretation may be compromised or delayed.

Container/Tube: Sterile container

Specimen Volume: 25-50 mL

Collection Instructions: Collect specimen in a sterile syringe.

Additional Information: Advise Express Mail or equivalent, if not on courier service.

Forms

If not ordering electronically, complete, print, and send 1 of the following forms with the specimen:

-Hematopathology/Cytogenetics Test Request (T726)

-Oncology Test Request (T729)

Specimen Minimum Volume

20 mL

Reject Due To

All specimens will be evaluated at Mayo Clinic Laboratories for test suitability.

Specimen Stability Information

Specimen Type	Temperature	Time	Special Container
Body Fluid	Refrigerated (preferred)		
	Ambient		

Clinical and Interpretive

Clinical Information

Cytogenetic studies on body fluids (eg, pleural effusions, ascites, and pericardial, cerebrospinal, and synovial fluids) may be helpful to diagnose or to rule-out metastases or relapses in patients with lymphoma or other malignancies.

Chromosome analysis serves as a useful adjunct to cytology. In pleural fluids, lymphomas are often more readily diagnosed by cytogenetic techniques than by standard cytologic examination.

Reference Values

An interpretive report will be provided.

Interpretation

The observation of a chromosomally abnormal clone is evidence of a clonal neoplastic process.

A normal karyotype does not eliminate the possibility of a neoplastic process.

On rare occasions, the presence of an abnormality may be associated with a congenital abnormality that is not related to a malignant neoplastic process. Follow-up with a medical genetics consultation is recommended.

Cautions

Interfering factors:

Technical:

-Lack of viable cells

-Bacterial contamination

-Cell death due to failure to transport tissue in appropriate media

-Excessive transport time

-Exposure of the specimen to temperature extremes (freezing or >30 degrees C).

Biological:

-Normal cells may grow better in culture than tumor cells and interfere with the cytogenetic studies.

-Subtle structural chromosome anomalies can be missed occasionally

Clinical Reference

Dewald GW, Dines DE, Weiland LH, Gordon H: The usefulness of chromosome examination in the diagnosis of malignant pleural effusions. N Engl J Med 1976;295:1494-1500

Performance

Method Description

The tissue is centrifuged and the cell pellet is placed in culture medium. After 24 to 48 hours, the cultures may be harvested or a longer term fibroblast culture may be established and harvested within 3 to 20 days or longer. The harvest procedure involves treating the cells with colcemid and hypotonic solution, and then fixing the cells with glacial acetic acid and methanol. Metaphase cells are dropped onto microscope slides and are routinely stained by G-banding. Other staining methods are employed as needed. Twenty metaphases are usually examined. If a clone is suspected but not confirmed in 20 metaphases, an additional 10 cells will be analyzed. Minimal evidence for the presence of an abnormal clone is defined as 2 or more metaphases with the same structural abnormality or chromosome gain (trisomy), or 3 or more metaphases lacking the same chromosome. Five to 10 metaphases are captured using a computerized imaging system, and 1 or more karyograms from each clone are prepared to document the type of abnormality and to permit systematic interpretation of the anomalies.(Dewald GW, Hicks GA, Dines D, Gordon H: Usefulness of culture methods to aid cytogenetic analyses for the diagnosing of malignant pleural effusions. Mayo Clin Proc 1982;57:488-494)

PDF Report

No

Day(s) and Time(s) Test Performed

Specimens are processed Monday through Sunday.

Results reported Monday through Friday, 8 a.m.-5 p.m.

Analytic Time

13 days

Maximum Laboratory Time

14 days

Specimen Retention Time

Any remaining specimen is discarded at the time results are reported.

Performing Laboratory Location

Rochester

Fees and 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 Regional Manager. 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. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information

88239, 88291- Tissue culture for tumor, Interpretation and report

88264 w/modifier 52-Chromosome analysis less than 20 cells (if appropriate)

88264-Chromosome analysis with 20 to 25 cells (if appropriate)

88264, 88285-Chromosome analysis with greater than 25 cells (if appropriate)

88283-Additional specialized banding technique (if appropriate)

LOINC® Information

Test ID	Test Order Name	Order LOINC Value
CHRBF	Chromosomes, Body Fluid	In Process

Result ID	Test Result Name	Result LOINC Value
52342	Result Summary	50397-9
52344	Interpretation	69965-2
52343	Result	82939-0
CG772	Reason for Referral	42349-1
52345	Specimen	31208-2
52346	Source	31208-2
52348	Method	49549-9
52347	Banding Method	62359-5
54627	Additional Information	48767-8
52349	Released By	18771-6