

## Overview

### Useful For

Obtaining cultured cells for specialized testing including enzymatic and molecular genetic

### Genetics Test Information

### Additional Tests

| Test Id | Reporting Name                   | Available Separately | Always Performed |
|---------|----------------------------------|----------------------|------------------|
| CRYOB   | Cryopreserve for Biochem Studies | No                   | Yes              |

### Testing Algorithm

This processing test is for culturing skin fibroblasts or other biopsies for biochemical or molecular genetic studies. No analysis or interpretation of results is performed.

When this test is ordered, cryopreservation will always be performed at an additional charge. However, for multiple assays on a patient utilizing the ordered fibroblast culture, only one culture is required regardless of the number of assays ordered.

Once confluent flasks are established, the cultures are sent to other laboratories, either within Mayo Clinic Laboratories or to external sites, based on the specific testing requested. To avoid delays, indicate testing to be performed and provide external lab paperwork for send out testing.

If viable cells are not obtained within 30 days, client will be notified.

*Mycoplasma* screening will be performed on all successfully grown fibroblast cultures. If *Mycoplasma* is detected, all pending fibroblast clinical testing will be cancelled, and the samples will be discarded.

### Special Instructions

- [Biochemical Genetics Patient Information](#)

### Method Name

FIBR: Cultivated from Biopsy as Monolayer

CRYOB: Fibroblast Subculture followed by Cryopreservation and Storage

**NY State Available**

Yes

**Specimen****Specimen Type**

Tissue

**Ordering Guidance**

This test is most useful for skin biopsy specimens. The specimen is cryopreserved for a minimum of 3 years.

This test is **not appropriate for** products of conception (POC) or chorionic villus sampling (CVS) specimens. If this test is ordered for either a POC or CVS specimen, the test will be canceled and CULFB / Fibroblast Culture for Molecular Testing, Chorionic Villi/Products of Conception will be performed as the appropriate test.

If ordering this test to obtain DNA for testing at a different laboratory location, see Necessary Information.

**Necessary Information**

1. Include patient clinical history with request. This information will be used for any testing performed on the cultured cells.
2. Indicate the tests to be performed on the fibroblast culture cells.

**Note:** For testing performed on fibroblasts at locations other than Mayo Clinic Laboratories (MCL), a **MCL Test ID and test requisition for the requested laboratory are required**. Prior to specimen collection, call Mayo Lab Inquiry at 800-533-1710 to confirm availability of send-out testing options. Courtesy DNA extraction on fibroblast cultures **will not be performed** for tests not in the MCL Referral catalog.

**Specimen Required**

Submit only 1 of the following specimens:

**Specimen Type:** Cultured fibroblasts

**Container/Tube:** T-75 or T-25 flask

**Specimen Volume:** 1 Full T-75 flask or 2 full T-25 flasks

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**Specimen Stability Information:** Ambient/Refrigerated

**Specimen Type:** Skin biopsy

**Supplies:** Fibroblast Biopsy Transport Media (T115)

**Container/Tube:** Sterile container with any standard cell culture media (eg, minimal essential media, RPMI 1640). The solution should be supplemented with 1% penicillin and streptomycin. Tubes of culture media can be supplied upon request (Eagle's minimum essential medium with 1% penicillin and streptomycin).

**Specimen Volume:** 4-mm punch

**Specimen Stability Information:** Refrigerated/Ambient

## Forms

[Biochemical Genetics Patient Information](#) (T602)

## Reject Due To

Tissue in formalin or fixative preservative    Reject

## Specimen Stability Information

| Specimen Type | Temperature        | Time | Special Container |
|---------------|--------------------|------|-------------------|
| Tissue        | Varies (preferred) |      |                   |

## Clinical & Interpretive

### Clinical Information

Cultures of skin fibroblasts are useful for specialized tests requiring skin cells. These cells can be cultured and tested at Mayo Clinic Laboratories or sent to external laboratories performing these specialized tests. In addition, cells are frozen for a minimum of 3 years for potential future studies on cultured cells or for molecular genetic testing.

### Reference Values

Not applicable

### Interpretation

### Cautions

Potential interfering factors:

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- Lack of viable cells
  - Bacterial contamination
  - Failure to transport tissue in an appropriate media
  - Excessive transport time
  - Exposure of the specimen to temperature extremes (freezing or >30 degrees C)
  - Improper packaging may result in broken or leaky specimen containers or contamination of specimens during transport

## Performance

### Method Description

Submitted biopsy specimens are minced, placed in a culture flask with additional culture media supplemented with fetal calf serum, and incubated. When the fibroblasts have grown from the pieces of tissue (2-4 weeks), the cultures are expanded and then cryopreserved (CRYOB / Cryopreservation for Biochemical Studies). If specific molecular or biochemical testing is concurrently ordered, cells will be harvested or prepared for indicated testing. Submitted cultured cells are examined for cell integrity and fed fresh media. Once grown to confluency, the cultures are expanded and then, if indicated, cryopreserved. (Unpublished Mayo method)

### PDF Report

No

### Specimen Retention Time

3 years minimum-Check with lab for availability

### Performing Laboratory Location

Rochester

## Fees & Codes

### Test Classification

Not Applicable

### CPT Code Information

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88233-Fibroblast culture

88240-Cryopreservation for biochemical studies

**LOINC® Information**

| Test ID | Test Order Name    | Order LOINC Value |
|---------|--------------------|-------------------|
| FIBR    | Fibroblast Culture | 96300-9           |

| Result ID | Reporting Name     | LOINC®  |
|-----------|--------------------|---------|
| 8482      | Fibroblast Culture | 96300-9 |