Overview

Useful For
Producing fibroblast cultures that can be used for genetic analysis

Testing Algorithm
This processing test is for culturing fibroblast or chorionic villus specimens for cytogenetic or molecular genetic testing only.

Once confluent flasks are established, the cultures are sent to other laboratories, either within Mayo Clinic or to external sites, based on the specific testing requested.

Special Instructions
- Final Disposition of Fetal/Stillborn Remains

Method Name
Cell Culture

NY State Available
Yes

Specimen

Specimen Type
Tissue

Shipping Instructions
Advise Express Mail or equivalent if not on courier service

Necessary Information
Provide a reason for referral 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.

The additional tests desired must be indicated on the request form that accompanies the specimen.

Specimen Required
Submit only 1 of the following specimens:

Specimen Type: Autopsy

Supplies: Hank's Solution (T132)

Container/Tube: Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline

Specimen Volume: 4-mm diameter

Collection Instructions:
1. Wash biopsy site with an antiseptic soap.
2. Thoroughly rinse area with sterile water.

3. Do not use alcohol or iodine preparations.

4. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis.

**Specimen Type:** Chorionic villi

**Supplies:** CVS Media (RPMI) and Small Dish (T095)

**Container/Tube:** 15-mL tube containing 15 mL of transport media

**Specimen Volume:** 20-30 mg

**Collection Instructions:**

1. Collect specimen by the transabdominal or transcervical method.

2. Transfer the chorionic villi specimen to a Petri dish containing transport medium.

3. Using a stereomicroscope and sterile forceps, assess the quality and quantity of the villi and remove any blood clots and maternal decidua.

**Specimen Type:** Products of conception or stillbirth

**Supplies:** Hank’s Solution (T132)

**Container/Tube:** Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline

**Specimen Volume:** 1 cm(3) of placenta (including 20 mg of chorionic villi) and a 1 cm(3) biopsy specimen of muscle/fascia from the thigh

**Collection Instructions:** If a fetus cannot be specifically identified, collect 50 mg villus material or tissue that appears to be of fetal origin.

**Additional Information:** Do not send entire fetus.

**Specimen Type:** Skin biopsy

**Supplies:** Hank’s Solution (T132)

**Container/Tube:** Sterile container with sterile Hank's balanced salt solution, Ringer's solution, or normal saline

**Specimen Volume:** 4-mm diameter

**Collection Instructions:**

1. Wash biopsy site with an antiseptic soap.

2. Thoroughly rinse area with sterile water.
3. **Do not** use alcohol or iodine preparations.

4. A local anesthetic may be used.

5. Biopsy specimens are best taken by punch biopsy to include full thickness of dermis.

**Forms**

[Final Disposition of Fetal/Stillborn Remains](#) (if fetal specimen is sent) in Special Instructions. Only required for products of conception or stillbirth specimen.

**Specimen Minimum Volume**

See Specimen Required

**Reject Due To**

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

**Specimen Stability Information**

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
<th>Special Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tissue</td>
<td>Refrigerated (preferred)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ambient</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Clinical and Interpretive**

**Clinical Information**

Fibroblast cells may be used to perform a wide range of laboratory tests. Prior to testing, the tissue may need to be cultured to obtain adequate numbers of cells.

**Reference Values**

Not applicable

**Cautions**

Interfering factors:

- Inadequate amount of specimen may not permit adequate analysis
- Exposure of the specimen to temperature extremes (freezing or > 30 degrees C) may destroy cells and interfere with attempts to culture cells
- Improper packaging may result in broken, leaky, and contaminated specimens during transport
- Transport time should not exceed 2 days
- Contamination by maternal cells may interfere with attempts to culture cells and may cause interpretive problems

**Clinical Reference**

Performance

Method Description

Products of Conception/Autopsy/Stillbirth/Skin Biopsy:

The biopsy specimen is cut into small pieces, treated with collagenase, and placed in a tissue culture flask with Chang and MEM alpha-medium, 20% fetal bovine serum, and antibiotics to establish a fibroblast culture. The cultures are trypsinized into 1 to 3 T25 tissue culture flasks or 1 to 2 T75 tissue culture flasks.

Chorionic Villi Specimen (CVS):

The CVS is thoroughly cleaned using sterile forceps to remove the remaining maternal decidua and blood clots. The villi are then treated with trypsin and collagenase. The cells are grown in Chang and MEM-alpha medium for 5 to 10 days.( Â In The AGT Cytogenetics Laboratory Manual Fourth edition. Edited by MS Arsham, MJ Barch, HJ Lawce. John Wiley and Sons Inc, Hoboken, NJ, 2017, 182-184)

PDF Report

No

Day(s) and Time(s) Test Performed

Samples processed Monday through Sunday. Results reported Monday through Friday, 8 a.m.-5 p.m. CST.

Analytic Time

41 days

Maximum Laboratory Time

42 days

Specimen Retention Time

Cell cultures: 6 months; Fresh tissue not utilized to establish cultures: 1 month

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

Not Applicable

CPT Code Information

88233

88240
## LOINC® Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CULFB</td>
<td>Fibroblast Culture for Genetic Test</td>
<td>In Process</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Result ID</th>
<th>Test Result Name</th>
<th>Result LOINC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>52327</td>
<td>Result Summary</td>
<td>50397-9</td>
</tr>
<tr>
<td>52329</td>
<td>Interpretation</td>
<td>69965-2</td>
</tr>
<tr>
<td>52328</td>
<td>Result</td>
<td>82939-0</td>
</tr>
<tr>
<td>CG770</td>
<td>Reason for Referral</td>
<td>42349-1</td>
</tr>
<tr>
<td>CG899</td>
<td>Specimen</td>
<td>31208-2</td>
</tr>
<tr>
<td>52331</td>
<td>Source</td>
<td>31208-2</td>
</tr>
<tr>
<td>52332</td>
<td>Method</td>
<td>49549-9</td>
</tr>
<tr>
<td>54625</td>
<td>Additional Information</td>
<td>48767-8</td>
</tr>
<tr>
<td>52333</td>
<td>Released By</td>
<td>18771-6</td>
</tr>
</tbody>
</table>