MEDICARE COVERAGE OF LABORATORY TESTING

Please remember when ordering laboratory tests that are billed to Medicare/Medicaid or other federally funded programs, the following requirements apply:

1. Only tests that are medically necessary for the diagnosis or treatment of the patient should be ordered. Medicare does not pay for screening tests except for certain specifically approved procedures and may not pay for non-FDA approved tests or those tests considered experimental.
2. If there is reason to believe that Medicare will not pay for a test, the patient should be informed. The patient should then sign an Advance Beneficiary Notice (ABN) to indicate that he or she is responsible for the cost of the test if Medicare denies payment.
3. The ordering physician must provide an ICD-10 diagnosis code or narrative description, if required by the fiscal intermediary or carrier.
4. Organ- or disease-related panels should be billed only when all components of the panel are medically necessary.
5. Both ARUP- and client-customized panels should be billed to Medicare only when every component of the customized panel is medically necessary.
6. Medicare National Limitation Amounts for CPT codes are available through the Centers for Medicare & Medicaid Services (CMS) or its intermediaries. Medicaid reimbursement will be equal to or less than the amount of Medicare reimbursement.

The CPT Code(s) for test(s) profiled in this bulletin are for informational purposes only. The codes reflect our interpretation of CPT coding requirements, based upon AMA guidelines published annually. CPT codes are provided only as guidance to assist you in billing. ARUP strongly recommends that clients reconfirm CPT code information with their local intermediary or carrier. CPT coding is the sole responsibility of the billing party.

The regulations described above are only guidelines. Additional procedures may be required by your fiscal intermediary or carrier.

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**0051265 Achondroplasia (FGFR3) 2 Mutations, Fetal AD PCR FE**

**Specimen Required:**
- **Collect:** Fetal specimen: Cultured amniocytes: Two T-25 flasks at 80 percent confluency.
- **OR cultured CVS:** Two T-25 flasks at 80 percent confluency.
- **If the client is unable to culture amniocytes or CVS, this can be arranged by contacting ARUP Client Services at (800) 522-2787.**
- **AND maternal whole blood specimen:** Lavender (EDTA), pink (K<sub>2</sub>EDTA), or yellow (ACD Solution A or B).
- **Specimen Preparation:** Cultured amniocytes AND cultured CVS: Transport two T-25 flasks at 80 percent confluency filled with culture media. Backup cultures must be retained at the client's institution until testing is complete.
- **Maternal Whole Blood Specimen:** Transport 3 mL whole blood. (Min: 1 mL)
  - **Storage/Transport Temperature:** Cultured amniocytes and cultured CVS: CRITICAL ROOM TEMPERATURE. Must be received within 48 hours of shipment due to lability of cells.
  - **Maternal Whole Blood Specimen:** Refrigerated.

**Remarks:** Please contact an ARUP genetic counselor at 800-242-2787 x2141 prior to sample submission. Patient History Form is available on the ARUP Web site or by contacting ARUP Client Services. Unacceptable Conditions: Frozen specimens in glass collection tubes.

**Stability (collection to initiation of testing):**
- **Cultured amniocytes and cultured CVS:** Room Temperature: 48 hours; Refrigerated: Unacceptable; Frozen: Unacceptable
- **Maternal Whole Blood Specimen:** Room Temperature: 72 hours; Refrigerated: 1 week; Frozen: 1 month

**Interpretive Data:**

**Background information for Achondroplasia (FGFR3) 2 Mutations, Fetal:**
**Characteristics:** Short stature with disproportionately short arms and legs, a large head, usually normal life span and intelligence; increased risk for death in infancy from compression of spinal cord and/or upper airway obstruction.

**Incidence:** 1:25,000.

**Inheritance:** Autosomal dominant; 80 percent arise from de novo mutations.

**Penetrance:** 100 percent.

**Cause:** Pathogenic FGFR3 gene mutation.

**Clinical Sensitivity:** Two mutations, c.1138G>A and c.1138G>C, in the FGFR3 gene account for greater than 99 percent of cases.

**Methodology:** Polymerase chain reaction (PCR) and fluorescence monitoring.

**Analytical Sensitivity and Specificity:** Greater than 99 percent.

**Limitations:** Mutations other than c.1138G>A and c.1138G>C will not be detected. Diagnostic errors can occur due to rare sequence variations.

For quality assurance purposes, ARUP Laboratories will confirm the above result at no charge following delivery. Order Confirmation of Fetal Testing and include a copy of the original fetal report (or the mother's name and date of birth) with the test submission. Please contact an ARUP genetic counselor at (800) 242-2787 extension 2141 prior to specimen submission.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.
**0050024**  Albumin, Body Fluid  
**ALB-BF**

**Performed:** Sun-Sat  
**Reported:** 1-3 days

**0050200**  Albumin, CSF  
**ALB CSF**

**Performed:** Sun-Sat  
**Reported:** 1-3 days

**New Test 3004753**  Allergen, Food, Nut Component Panel IgE  
**NUT COMP**

**Methodology:** Quantitative Enzyme Immunoassay/ImmunoCAP Fluorescent Enzyme Immunoassay  
**Performed:** Varies  
**Reported:** 3-8 days

**Specimen Required:** Collect: Plain red or serum separator tube (SST).  
**Specimen Preparation:** Separate serum from cells ASAP or within 2 hours of collection. Transfer 2 mL serum to an ARUP Standard Transport Tube. (Min: 1 mL)  
**Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.**  
**Storage/Transport Temperature:** Refrigerated. Also acceptable: Room temperature or frozen  
**Stability (collection to initiation of testing):** Ambient: 28 days; Refrigerated: 28 days; Frozen: 28 days

**Note:** Included: Cashew, hazelnut, walnut components.

**CPT Code(s):** 86008 x6

New York DOH Approved.

**HOTLINE NOTE:** Refer to the Test Mix Addendum for interface build information.

**0080001**  Angiotensin Converting Enzyme, Serum  
**ACE**

**Reference Interval:**  
Effective May 16, 2022  
0-6 years: 18-90 U/L  
7-14 years: 24-121 U/L  
15-17 years: 18-101 U/L  
18 years and older: 16-85 U/L
Ankylosing Spondylitis (HLA-B27) Genotyping

Reference Interval: By report

Interpretive Data:

Background Information for Ankylosing Spondylitis (HLA-B27) Genotyping:

Characteristics: Ankylosing spondylitis (AS) is a chronic inflammatory disease that primarily causes pain and inflammation of the joints between the vertebrae of the spine and the sacroiliac joints. Inflammation and pain may occur in other parts of the body as well. HLA-B27 is strongly associated with ankylosing spondylitis (AS) as well as with Reiter syndrome, anterior uveitis, psoriatic arthritis, and inflammatory bowel disease.

Incidence: Greater than 90 percent of patients with AS are HLA-B27 positive compared to 5-10 percent of the general population.

Penetrance: Two to eight percent of individuals with HLA-B27 will develop AS.

Methodology: Polymerase chain reaction (PCR) and fluorescent hybridization probes.

Analytical Sensitivity & Specificity: 99 percent

Limitations: This test does not rule out the B*27:06 and 27:09 alleles, which are not associated with spondyloarthropathies. Certain rare alleles present in less than 1 percent of the population will not be detected. Other rare, or uncharacterized alleles may occur which may lead to false positive or false negative results.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Beta Globin (HBB) Sequencing

New Test 3004547

Methodology: Massively Parallel Sequencing

Performed: Varies

Reported: 3 weeks

Specimen Required:
- Collect: Lavender or pink (EDTA) or yellow (ACD solution A or B).
- Specimen Preparation: Transport 3 mL whole blood. (Min: 3 mL)
- Storage/Transport Temperature: Refrigerated
- Unacceptable Conditions: Serum or plasma; grossly hemolyzed or frozen specimens; saliva, buccal brush, or swab; FFPE tissue.
- Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval: By report

Interpretive Data:

Refer to report

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Note: Gene Tested: HBB (NM_000518)
Deletion/duplication analysis is not available for this gene.

CPT Code(s): 81364

New York DOH approval pending. Call for status update.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.
**New Test** 3004550 Beta Globin (HBB) Sequencing, Fetal BG NGS FE

**Additional Technical Information**

**Methodology:** Massively Parallel Sequencing
**Performed:** Varies
**Reported:** 10-14 days; if culture is required, an additional 1 to 2 weeks is required for processing time

**Specimen Required:**
- **Fetal Specimen:** Four (4) T-25 flasks at 80% confluent of cultured amniocytes or cultured chorionic villus sampling (CVS).
- **Maternal Whole Blood Specimen:** Lavender (EDTA), pink (K2EDTA), or yellow (ACD solution A or B).

**Specimen Preparation:**
- Cultured Amniocytes or Cultured CVS: Fill flasks with culture media. Transport four (4) T-25 flasks at 80 percent confluent of cultured amniocytes or cultured CVS filled with culture media. Backup cultures must be retained at the client's institution until testing is complete. **If the client is unable to culture amniocytes, this can be arranged by contacting ARUP Client Services at (800) 522-2787 ext. 2141 prior to test submission.**
- Maternal Whole Blood Specimen: Transport 3 mL whole blood. (Min: 2 mL).

**Storage/Transport Temperature:**
- Cultured Amniocytes or Cultured CVS: CRITICAL ROOM TEMPERATURE. Must be received within 48 hours of shipment due to viability of cells.
- Maternal Whole Blood Specimen: Room temperature

**Reference Interval:** By report

**Interpretive Data:** Refer to report

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

**Note:** Gene tested: HBB (NM_000518)
Deletion/duplication analysis is not performed for this gene.

Reported times are based on receiving the four (4) T-25 flasks at 80 percent confluent. Cell culture time is independent of testing turn-around time. Maternal specimen is recommended for proper test interpretation. Order Maternal Cell Contamination.

**CPT Code(s):** 81364, 81265 Fetal Cell Contamination (FCC)

New York DOH approval pending. Call for status update.

**HOTLINE NOTE:** Refer to the Test Mix Addendum for interface build information.

**0050254 Borrelia burgdorferi Antibodies, IgG and IgM by Immunoblot** LYME WB

**Specimen Required:**
- **Collect:** Serum separator tube.
- **Specimen Preparation:** Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.15 mL)

**Storage/Transport Temperature:** Refrigerated.

**Unacceptable Conditions:** CSF or plasma. Contaminated, heat-inactivated, severely hemolyzed, severely lipemic, and severely icteric specimens.

**Stability (collection to initiation of testing):** After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)
**Borrelia burgdorferi Antibody, IgG by Immunoblot** (LYME G WB)

**Specimen Required:**
- Collect: Serum separator tube.
- Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.1 mL)
- Storage/Transport Temperature: Refrigerated.
- Unacceptable Conditions: CSF or plasma. Contaminated, heat-inactivated, severely hemolyzed, severely lipemic, and severely icteric specimens.

**Stability (collection to initiation of testing):**
- After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**Borrelia burgdorferi Antibody, IgM by Immunoblot** (LYME M WB)

**Specimen Required:**
- Collect: Serum separator tube.
- Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.15 mL)
- Storage/Transport Temperature: Refrigerated.
- Unacceptable Conditions: CSF or plasma. Contaminated, heat-inactivated, severely hemolyzed, severely lipemic, and severely icteric specimens.

**Stability (collection to initiation of testing):**
- After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**New Test**

**Breast Carcinoma Dual Stain by Immunohistochemistry** (BRCARCDIHC)

**Methodology:** Immunohistochemistry

**Performed:** Mon-Fri

**Reported:** 1-3 days

**Specimen Required:**
- Collect: Tissue or cells.
- Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed specimen (cells must be prepared into a cellblock). Protect paraffin block and/or slides from excessive heat. Transport tissue block or 5 unstained (3- to 5-micron thick sections), positively charged slides in a tissue transport kit (ARUP supply #47808) available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787. Min: 2 slides. If sending precut slides, do not oven bake.
- Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
- Remarks: IMMUNOHISTOCHEMISTRY ORDERING AND SUBMISSION DETAILS: Submit electronic request. If you do not have electronic ordering capability, use an ARUP Immunohistochemistry Stain Form (#32978) with an ARUP client number. For additional technical details, contact ARUP Client Services at (800) 522-2787.
- Unacceptable Conditions: Specimens submitted with nonrepresentative tissue type. Depleted specimens.

**Interpretive Data:**
This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

**Note:** The following antibodies are utilized in this dual stain: CK5/CK14/p63 (brown) and CK8/CK18 (red).

**CPT Code(s):** 88344

New York DOH Approved.

**HOTLINE NOTE:** Refer to the Test Mix Addendum for interface build information.
New Test 3004795  CD22 by Immunohistochemistry CD22IHC

Available Now
Click for Pricing

Immunohistochemistry Stain Form
Recommended (ARUP form #32978)

Methodology: Immunohistochemistry
Performed: Mon-Fri
Reported: 1-3 days

Specimen Required: Collect Tissue or cells.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed specimen (cells must be prepared into a cellblock). Protect paraffin block and/or slides from excessive heat. Transport tissue block or 5 unstained (3- to 5-micron thick sections), positively charged slides in a Tissue Transport Kit (ARUP supply #47808) available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787. (Min: 2 slides). If sending precut slides, do not oven bake.
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: IMMUNOHISTOCHEMISTRY ORDERING AND SUBMISSION DETAILS: Submit electronic request. If you do not have electronic ordering capability, use an ARUP Immunohistochemistry Stain Form (#32978) with an ARUP client number. For additional technical details, contact ARUP Client Services at (800) 522-2787.
Unacceptable Conditions: Specimens submitted with nonrepresentative tissue type. Depleted specimens.

Interpretive Data:
This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Note:
This test is performed as a stain and return (technical) service only.

CPT Code(s): 88342
New York DOH Approved.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.
### Cystic Fibrosis (CFTR) Sequencing and Deletion/Duplication (CFTR NGS)

#### Additional Technical Information

**Methodology:** Massively Parallel Sequencing/Sequencing

**Performed:** Varies

**Reported:** 3 weeks

**Specimen Required:**
- **Collect:** Lavender or pink (EDTA) or yellow (ACD solution A or B).
- **Specimen Preparation:** Transport 3 mL whole blood. (Min: 2 mL)
- **Storage/Transport Temperature:** Refrigerated.
- **Unacceptable Conditions:** Serum or plasma; grossly hemolyzed or frozen specimens; saliva, buccal brush, or swab; FFPE tissue.

**Stability (collection to initiation of testing):**
- Ambient: 72 hours
- Refrigerated: 1 week
- Frozen: Unacceptable

**Reference Interval:** By report

**Interpretive Data:**
Refer to report.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

**Note:** Gene Tested: CFTR

**CPT Code(s):** 81222, 81223

New York DOH approval pending. Call for status update.

#### Chikungunya Antibodies, IgG and IgM (CHIKPAN)

**Specimen Required:**
- **Collect:** Serum or plasma (heparin, citrate, or EDTA)
- **Specimen Preparation:** Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.15 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. **Mark specimens plainly as "acute or convalescent."**
- **Storage/Transport Temperature:** Refrigerated
- **Unacceptable Conditions:** Contaminated, heat-inactivated, hemolyzed, or severely lipemic specimens.

**Stability (collection to initiation of testing):**
- After separation from cells: Ambient: 48 hours
- Refrigerated: 2 weeks
- Frozen: 1 year

#### Chikungunya Antibody, IgG (CHIKG)

**Specimen Required:**
- **Collect:** Serum or plasma (heparin, citrate, or EDTA)
- **Specimen Preparation:** Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.15 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. **Mark specimens plainly as "acute or convalescent."**
- **Storage/Transport Temperature:** Refrigerated
- **Unacceptable Conditions:** Contaminated, heat-inactivated, hemolyzed, or severely lipemic specimens.

**Stability (collection to initiation of testing):**
- After separation from cells: Ambient: 48 hours
- Refrigerated: 2 weeks
- Frozen: 1 year

(avoid repeated freeze/thaw cycles)
Chikungunya Antibody, IgM

**Specimen Required:**
- Collect: Serum or plasma (heparin, citrate, or EDTA)
- **Specimen Preparation:** Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.15 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. **Mark specimens plainly as “acute or convalescent.”**
- **Storage/Transport Temperature:** Refrigerated.
- **Unacceptable Conditions:** Contaminated, heat-inactivated, hemolyzed, or severely lipemic specimens.
- **Stability (collection to initiation of testing):** After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**New Test 3004430 Circulating Immune Complex Panel CIC-C3, C1Q**

**Methodology:** Semi-Quantitative Enzyme-Linked Immunosorbent Assay
**Performed:** Saturday, Monday, Thursday
**Reported:** 2-9 days

**Specimen Required:**
- Collect: Plain red or serum separator tube (SST).
- **Specimen Preparation:** Allow complete clotting of red blood cells (up to 1 hour), then separate serum from cells within 30 minutes and freeze immediately. Transfer TWO (2) 1 mL aliquots of serum to individual ARUP Standard Transport Tubes. (Min: 0.5 mL/aliquot)
- **Storage/Transport Temperature:** CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.
- **Unacceptable Conditions:** Non-frozen specimens. Specimens exposed to repeated freeze/thaw cycles.
- Grossly hemolyzed, lipemic, and icteric specimens
- **Stability (After separation from cells):** Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 2 weeks

**Reference Interval:**

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<td>Circulating Immune Complex, C1q Binding</td>
<td>Effective February 19, 2019 Less than or equal to 3.9 µg Eq/mL</td>
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<tr>
<td>3004431</td>
<td>Circulating Immune Complex, C3 fragments</td>
<td>Less than or equal to 15 µg Eq/mL</td>
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**Interpretive Data:**

Many autoimmune disorders, chronic infections, and malignancies are associated with circulating immune complexes. Quantitation of immune complexes assists in staging immunologic disorders. Detection of circulating immune complexes is not essential to any specific diagnosis. Circulating immune complexes may be found without any evident pathology and positive results do not necessarily implicate immune complex-related disease process. Values between 15 and 20 µg Eq/mL are considered equivocal for the Circulating Immune Complex, C3 fragments assay. Repeat testing using a new specimen is recommended, if clinically indicated.

**CPT Code(s):** 86332 x2

New York DOH Approved.

**HOTLINE NOTE:** Refer to the Test Mix Addendum for interface build information.
**Circulating Immune Complex, C1q Binding**

**Performed:** Saturday, Monday, and Thursday  
**Reported:** 2-9 days

**Specimen Required:** Collect: Plain red or serum separator tube (SST)  
Specimen Preparation: Allow complete clotting of red blood cells (up to 1 hour), then separate serum from cells within 30 minutes and freeze immediately. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.3 mL) If ordered in conjunction with a Circulating Immune Complex, C3 fragments, transfer TWO (2) 1 mL aliquots of serum to individual ARUP Standard Transport Tubes.

Storage/Transport Temperature: CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.

Unacceptable Conditions: Non-frozen specimens.

Stability (collection to initiation of testing): After separation from cells: Ambient: 2 hours; Refrigerated: Unacceptable; Frozen: 2 weeks (avoid repeated freeze/thaw cycles)

**HOTLINE NOTE:** There is a clinically significant charting name change associated with this test.  
Change the charting name for component 0050301, C1q Binding Assay from C1q Binding Assay to Circulating Immune Complex, C1q Binding.

**Circulating Immune Complex, C3 fragments**

**New Test:** 3004431  
**Click for Pricing**

**Methodology:** Semi-Quantitative Enzyme-Linked Immunosorbent Assay

**Performed:** Saturday, Monday, Thursday  
**Reported:** 2-9 days

**Specimen Required:** Collect: Plain red or serum separator tube (SST).  
Specimen Preparation: Allow complete clotting of red blood cells (up to 1 hour), then separate serum from cells within 30 minutes and freeze immediately. Transport 1 mL serum. (Min: 0.5 mL) If ordered in conjunction with a C1q Binding Assay, transfer TWO (2) 1 mL aliquots of serum to individual ARUP Standard Transport Tubes.

Storage/Transport Temperature: CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.

Unacceptable Conditions: Non-frozen specimens. Specimens exposed to repeated freeze/thaw cycles.

Grossly hemolyzed, lipemic, and icteric specimens

Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 20 days

**Reference Interval:** Less than or equal to 15 µg Eq/mL

**Interpretive Data:**

Many autoimmune disorders, chronic infections, and malignancies are associated with circulating immune complexes. Quantitation of immune complexes assists in staging immunologic disorders. Detection of circulating immune complexes is not essential to any specific diagnosis. Circulating immune complexes may be found without any evident pathology and positive results do not necessarily implicate immune complex-related disease process. Values between 15 and 20 µg Eq/mL are considered equivocal for the Circulating Immune Complex, C3 fragments assay. Repeat testing using a new specimen is recommended, if clinically indicated

**CPT Code(s):** 86332

New York DOH Approved.

**HOTLINE NOTE:** Refer to the Test Mix Addendum for interface build information.
**0050170**  
*Coccidioides* Antigens by Complement Fixation

### Specimen Required:
- **Collect:** Serum Separator Tube (SST)
- **Specimen Preparation:** Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.6 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of acute specimens.
- **Storage/Transport Temperature:** Refrigerated.
- **Remarks:** Mark specimens plainly as "acute" or "convalescent".
- **Unacceptable Conditions:** Other body fluids. Contaminated, hemolyzed, icteric, or lipemic specimens.
- **Stability (collection to initiation of testing):** Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**HOTLINE NOTE:** Remove information found in the Note field.

### 3002996  
*Coccidioides* Antigens by Complement Fixation and Immunodiffusion, CSF

### Methodology:
- Complement Fixation/Immunodiffusion

### Specimen Required:
- **Collect:** CSF
- **Specimen Preparation:** Transfer 2 mL CSF to an ARUP Standard Transport Tube. (Min: 1 mL). Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens.
- **Storage/Transport Temperature:** Refrigerated.
- **Remarks:** Mark specimens plainly as "acute" or "convalescent".
- **Unacceptable Conditions:** Other body fluids. Contaminated, hemolyzed, xanthochromic, or severely lipemic specimens.
- **Stability (collection to initiation of testing):** Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**Reference Interval:**
*Effective May 16, 2022*

<table>
<thead>
<tr>
<th>Test Number</th>
<th>Components</th>
<th>Reference Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000059</td>
<td><em>Coccidioides</em> by Immunodiffusion, CSF</td>
<td>Not detected</td>
</tr>
<tr>
<td></td>
<td><em>Coccidioides</em> Antibody by CF, CSF</td>
<td>Less than 1:2</td>
</tr>
</tbody>
</table>

### Interpretive Data:
Refer to report.

**Note:** The immunodiffusion component of this test uses culture filtrates of *Coccidioides immitis* and includes CF and TP antigens.
Methodology: Complement Fixation/Immunodiffusion

Specimen Required: Collect: Serum Separator Tube (SST)  
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 2 mL serum to an ARUP Standard Transport Tube. (Min: 0.6 mL). Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens.  
Storage/Transport Temperature: Refrigerated.  
Remarks: Mark specimens plainly as "acute" or "convalescent".

Unacceptable Conditions: Other body fluids. Contaminated, hemolyzed, icteric, or lipemic specimens.

Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

Reference Interval:

<table>
<thead>
<tr>
<th>Test Number</th>
<th>Components</th>
<th>Reference Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>0050170</td>
<td>Coccidioides Antibody by ID</td>
<td>Not detected</td>
</tr>
<tr>
<td>0050183</td>
<td>Coccidioides Antibody by CF</td>
<td>Less than 1:2</td>
</tr>
</tbody>
</table>

Note: This immunodiffusion test uses culture filtrates of Coccidioides immitis and includes CF and TP antigens.

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 0050183, Coccidioides immitis Abs, Precipitin from Coccidioides immitis Abs, Precipitin to Coccididioides by Immunodiffusion, Serum.

Interpretive Data:
Any titer suggests past or current infection. However, greater than 30 percent of cases with chronic residual pulmonary disease have negative Complement Fixation (CF) tests. Titters of less than 1:32 (even as low as 1:2) may indicate past infection or self-limited disease anticoccidioidal CF antibody titers in excess of 1:16 may indicate disseminated infection. CF serology may be used to follow therapy. Antibody in CSF is considered diagnostic for coccidioidal meningitis, although 10 percent of patients with coccidioidal meningitis will not have antibody in CSF.

HOTLINE NOTE: Remove information found in the Note field.
**3000055  Coccidioides Antibodies IgG by Immunoassay, CSF**

**Methodology:** Enzyme-Linked Immunosorbent Assay (ELISA)

**Specimen Required:** Collect: CSF

**Specimen Preparation:** Transfer 1 mL CSF to an ARUP Standard Transport Tube. (Min: 0.3 mL). Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens.

**Storage/Transport Temperature:** Refrigerated.

**Remarks:** Mark specimens plainly as “acute” or “convalescent”.

**Unacceptable Conditions:** Other body fluids. Contaminated, hemolyzed, xanthochromic, or severely lipemic specimens.

**Stability (collection to initiation of testing):** Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**Interpretive Data:**
IgG antibodies usually appear by the third week of infection and may persist for years. Both tube precipitin (TP) and CF antigens are represented in the ELISA tests.

**Note:** This immunoassay uses recombinant and native *Coccidioides* antigens, including CF and TP antigens.

---

**3000056  Coccidioides Antibodies IgM by Immunoassay, CSF**

**Methodology:** Enzyme-Linked Immunosorbent Assay (ELISA)

**Specimen Required:** Collect: CSF

**Specimen Preparation:** Transfer 1 mL CSF to an ARUP Standard Transport Tube. (Min: 0.3 mL). Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens.

**Storage/Transport Temperature:** Refrigerated.

**Remarks:** Mark specimens plainly as “acute” or “convalescent”.

**Unacceptable Conditions:** Other body fluids. Contaminated, hemolyzed, xanthochromic, or severely lipemic specimens.

**Stability (collection to initiation of testing):** Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**Interpretive Data:**
In most symptomatic patients, IgM antibodies usually appear by the second week of infection and disappear by the fourth month. Both tube precipitin (TP) and CF antigens are represented in the ELISA tests.

**Note:** This immunoassay uses recombinant and native *Coccidioides* antigens, including CF and TP antigens.
**Methodology:** Complement Fixation/Immunodiffusion/Enzyme-Linked Immunosorbent Assay (ELISA)

**Specimen Required:**
- **Specimen Preparation:** Transfer 2 mL CSF to an ARUP Standard Transport Tube. (Min: 1 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens.
- **Storage/Transport Temperature:** Refrigerated.

**Remarks:** Mark specimens plainly as "acute" or "convalescent".

**Unacceptable Conditions:** Other body fluids. Contaminated, hemolyzed, xanthochromic, or severely lipemic specimens.

**Stability (collection to initiation of testing):**
- Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**Reference Interval:**

<table>
<thead>
<tr>
<th>Test Number</th>
<th>Components</th>
<th>Reference Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000059</td>
<td>Coccidioides Antibody by CF, CSF</td>
<td>Less than 1:2</td>
</tr>
<tr>
<td>3000055</td>
<td>Coccidioides Antibody IgG ELISA, CSF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.2 IV or less</td>
<td>Negative - No significant level of Coccidioides IgG antibody detected.</td>
</tr>
<tr>
<td></td>
<td>0.3 IV or greater</td>
<td>Positive - Presence of IgG antibody to Coccidioides detected, suggestive of current or past infection.</td>
</tr>
<tr>
<td>3000056</td>
<td>Coccidioides Antibody IgM ELISA, CSF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.2 IV or less</td>
<td>Negative - No significant level of Coccidioides IgM antibody detected.</td>
</tr>
<tr>
<td></td>
<td>0.3 IV or greater</td>
<td>Positive - Presence of IgM antibody to Coccidioides detected, suggestive of current or recent infection.</td>
</tr>
</tbody>
</table>

**Interpretive Data:**
Refer to report.

**Note:** The immunoassay component of this test uses recombinant and native Coccidioides antigens, including the CF and TP antigens. The immunodiffusion component of this test uses culture filtrates of Coccidioides immitis and includes CF and TP antigens.
**0050588  Coccidioides Antibodies Panel, Serum**

**Methodology:** Complement Fixation/Immunodiffusion/Enzyme-Linked Immunosorbent Assay (ELISA)

**Specimen Required:*** Collect: Serum Separator Tube (SST)
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 2 mL serum to an ARUP Standard Transport Tube. (Min: 0.6 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens.

Storage/Transport Temperature: Refrigerated.

Remarks: Mark specimens plainly as "acute" or "convalescent".

Unacceptable Conditions: Other body fluids. Contaminated, hemolyzed, icteric, or lipemic specimens.

Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**Reference Interval:***

Effective May 16, 2022

<table>
<thead>
<tr>
<th>Test Number</th>
<th>Components</th>
<th>Reference Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>0050170</td>
<td>Coccidioides Antibody by CF</td>
<td>Less than 1:2</td>
</tr>
<tr>
<td></td>
<td>Coccidioides Antibody by ID</td>
<td>Not detected</td>
</tr>
<tr>
<td>0050179</td>
<td>Coccidioides Antibody, IgG by ELISA</td>
<td>0.9 IV or less</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative - No significant level of <em>Coccidioides</em> IgG antibody detected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.0-1.4 IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Equivocal - Questionable presence of <em>Coccidioides</em> IgG antibody detected. Repeat testing in 10-14 days may be helpful.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.5 IV or greater</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Positive - Presence of IgG antibody to <em>Coccidioides</em> detected, suggestive of current or past infection.</td>
</tr>
<tr>
<td>0050178</td>
<td>Coccidioides Antibody, IgM by ELISA</td>
<td>0.9 IV or less</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Negative - No significant level of Coccidioides IgM antibody detected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.0-1.4 IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Equivocal - Questionable presence of <em>Coccidioides</em> IgM antibody detected. Repeat testing in 10-14 days may be helpful.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.5 IV or greater</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Positive - Presence of IgM antibody to <em>Coccidioides</em> detected, suggestive of current or recent infection.</td>
</tr>
</tbody>
</table>

**Note:** The immunodiffusion component of this test uses culture filtrates of *Coccidioides immitis* and includes CF and TP antigens.

**HOTLINE NOTE:** There is a clinically significant charting name change associated with this test.
Change the charting name for component 0050183, Coccidioides immitis Abs, Precipitin from Coccidioides immitis Abs, Precipitin to Coccidioides by Immunodiffusion, Serum.
**Coccidioides Antibodies Reflexive Panel, Serum**

**Methodology:** Complement Fixation/Immunodiffusion/Enzyme-Linked Immunosorbent Assay (ELISA)

**Specimen Required:**
- **Collect:** Serum Separator Tube (SST)
- **Specimen Preparation:** Separate from cells ASAP or within 2 hours of collection. Transfer 2 mL serum to an ARUP Standard Transport Tube. (Min: 0.6 mL). Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens.
- **Storage/Transport Temperature:** Refrigerated.

**Remarks:** Mark specimens plainly as "acute" or "convalescent".

**Unacceptable Conditions:** Other body fluids. Contaminated, hemolyzed, icteric, or lipemic specimens.

**Stability (collection to initiation of testing):** Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

### Reference Interval:

<table>
<thead>
<tr>
<th>Test Number</th>
<th>Components</th>
<th>Reference Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>0050179</td>
<td>Coccidioides Antibody, IgG by ELISA</td>
<td>0.9 IV or less</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.0-1.4 IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.5 IV or greater</td>
</tr>
<tr>
<td>0050178</td>
<td>Coccidioides Antibody, IgM by ELISA</td>
<td>0.9 IV or less</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.0-1.4 IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.5 IV or greater</td>
</tr>
</tbody>
</table>

- **Coccidioides Titer, Complement Fixation**
  - Less than 1:2
  - Not detected

**Note:** *Coccidioides* Antibodies, IgM and IgG by Immunoassay, Serum is used to screen for coccidioidal antibodies. If the immunoassay testing is equivocal or positive for IgM and/or IgG, then *Coccidioides* Antibodies by Immunodiffusion and *Coccidioides* Antibody Titer by Complement Fixation, Serum will be added. Additional charges apply.

**Coccidioides Antibodies, IgG by Immunoassay, Serum**

**Methodology:** Enzyme-Linked Immunosorbent Assay (ELISA)

**Specimen Required:**
- **Collect:** Serum Separator Tube (SST)
- **Specimen Preparation:** Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.3 mL). Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens.
- **Storage/Transport Temperature:** Refrigerated.

**Remarks:** Mark specimens plainly as "acute" or "convalescent".

**Unacceptable Conditions:** Other body fluids. Contaminated, hemolyzed, icteric, or lipemic specimens.

**Stability (collection to initiation of testing):** Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**Note:** This immunoassay uses recombinant and native *Coccidioides* antigens, including CF and TP antigens.
### Coccidioides Antibodies, IgM and IgG by Immunoassay, CSF

**Methodology:** Enzyme-Linked Immunosorbent Assay (ELISA)

**Specimen Required:**
- **Collect:** CSF
- **Specimen Preparation:** Transfer 2 mL CSF to an ARUP Standard Transport Tube. (Min: 0.3 mL). Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens.
- **Storage/Transport Temperature:** Refrigerated.
- **Remarks:** Mark specimens plainly as "acute" or "convalescent".
- **Stability (collection to initiation of testing):** Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**Interpretive Data:**
Refer to report.

**Note:** This immunoassay uses recombinant and native *Coccidioides* antigens, including CF and TP antigens.

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### Coccidioides Antibodies, IgM and IgG by Immunoassay, Serum

**Methodology:** Enzyme-Linked Immunosorbent Assay (ELISA)

**Specimen Required:**
- **Collect:** Serum Separator Tube (SST)
- **Specimen Preparation:** Separate from cells ASAP or within 2 hours of collection. Transfer 2 mL serum to an ARUP Standard Transport Tube. (Min: 0.6 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens.
- **Storage/Transport Temperature:** Refrigerated.
- **Remarks:** Mark specimens plainly as "acute" or "convalescent".
- **Stability (collection to initiation of testing):** Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**Note:** This immunoassay uses recombinant and native *Coccidioides* antigens, including CF and TP antigens.

---

### Coccidioides Antibodies, IgM by Immunoassay, Serum

**Methodology:** Enzyme-Linked Immunosorbent Assay (ELISA)

**Specimen Required:**
- **Collect:** Serum Separator Tube (SST)
- **Specimen Preparation:** Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.3 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens.
- **Storage/Transport Temperature:** Refrigerated.
- **Remarks:** Mark specimens plainly as "acute" or "convalescent".
- **Stability:** Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

**Note:** This immunoassay uses recombinant and native *Coccidioides* antigens, including CF and TP antigens.
New Test 3004720 Connexin 26 (GJB2) Sequencing and Deletion/Duplication CX26 NGS

Click for Pricing

Additional Technical Information

Methodology: Massively Parallel Sequencing
Performed: Varies
Reported: 3 weeks

Specimen Required: Collect: Lavender or pink (EDTA) or yellow (ACD solution A or B).
Specimen Preparation: Transport 3 mL whole blood. (Min: 3 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Serum or plasma; grossly hemolyzed or frozen specimens; saliva, buccal brush, or swab; FFPE tissue.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval: By report

Interpretive Data:
Refer to report.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Note: Gene Tested: GJB2 (NM_004004)

CPT Code(s): 81252; 81479

New York DOH approval pending. Call for status update.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.
C-Telopeptide, Beta-Cross-Linked, Serum

Performed: Sun - Sat
Reported: Within 24 hours

Reference Interval:
Effective May 16, 2022

<table>
<thead>
<tr>
<th>Age</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 months-6 years</td>
<td>500-1800 pg/mL</td>
<td>238-1019 pg/mL</td>
</tr>
<tr>
<td>7-9 years</td>
<td>566-1690 pg/mL</td>
<td>238-1019 pg/mL</td>
</tr>
<tr>
<td>10-12 years</td>
<td>503-2077 pg/mL</td>
<td>238-1019 pg/mL</td>
</tr>
<tr>
<td>13-15 years</td>
<td>160-1590 pg/mL</td>
<td>238-1019 pg/mL</td>
</tr>
<tr>
<td>16-17 years</td>
<td>167-933 pg/mL</td>
<td>238-1019 pg/mL</td>
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<tr>
<td>18-29 years</td>
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<td>30-39 years</td>
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<td>225-936 pg/mL</td>
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<td>40-49 years</td>
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<td>182-801 pg/mL</td>
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<tr>
<td>50-59 years</td>
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<td>161-737 pg/mL</td>
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<tr>
<td>60-69 years</td>
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<td>132-752 pg/mL</td>
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<tr>
<td>70 years or greater</td>
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<td>118-776 pg/mL</td>
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<tr>
<td>Premenopausal</td>
<td>136-689 pg/mL</td>
<td></td>
</tr>
<tr>
<td>Postmenopausal</td>
<td>177-1015 pg/mL</td>
<td></td>
</tr>
</tbody>
</table>

Cystic Fibrosis (CFTR) Expanded Variant Panel

Specimen Required: Collect: Lavender (EDTA), pink (K<sub>2</sub>EDTA).
Specimen Preparation: Transport 3 mL whole blood. (Min: 1 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma or serum. Specimens collected in sodium heparin, yellow (ACD solution), or lithium heparin tubes.
Frozen specimens in glass collection tubes.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: 1 month

Interpretive Data:
Refer to report.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Note: The Cystic Fibrosis (CFTR) Expanded Variant Panel includes the 23 pathogenic CF variants recommended by the American College of Medical Genetics for carrier screening as well as many more.

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 2013677, CF Common Variants Interp from CF Common Variants Interp to CF Expanded Variant Panel Interp.
**2013663**  Cystic Fibrosis (CFTR) Expanded Variant Panel with Reflex to Sequencing  
CF VAR SEQ

Specimen Required: Collect: Lavender (EDTA), pink (K2EDTA).
Specimen Preparation: Transport 3 mL whole blood. (Min: 2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma or serum. Specimens collected in sodium heparin, yellow (ACD solution), or lithium heparin tubes.
Frozen specimens in glass collection tubes.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: 1 month

Interpretive Data:
Refer to report.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Note: If less than two pathogenic variants are identified by the Cystic Fibrosis (CFTR) Expanded Variant Panel, then CFTR gene sequencing will be performed. Additional charges apply for each tier performed.

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 2013681, Cystic Fibrosis, 165 Var. w/Rflx, Interp from Cystic Fibrosis, 165 Var. w/Rflx, Interp to CF Expanded Var Rflx to Seq Interp.

**2013664**  Cystic Fibrosis (CFTR) Expanded Variant Panel with Reflex to Sequencing and Reflex to Deletion/Duplication  
CFVAR COMP

Specimen Required: Collect: Lavender (K2EDTA), pink (K2EDTA).
Specimen Preparation: Transport 5 mL whole blood. (Min: 3 mL)
Storage/Transport Temperature: Refrigerated.
Remarks:
Unacceptable Conditions: Plasma or serum. Specimens collected in sodium heparin, yellow (ACD solution A or B), or lithium heparin tubes. Frozen specimens in glass collection tubes.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: 1 month

Interpretive Data:
Refer to report.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Note: If less than two pathogenic variants are identified by the Cystic Fibrosis (CFTR) Expanded Variant Panel, then CFTR gene sequencing will be performed. Following sequencing, if less than two pathogenic variants are identified, then CFTR deletion/duplication analysis will be performed. Additional charges will apply for each tier performed.

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 2013682, CF 165 Exp Var. Rfx to Seq Rfx DD, Interp from CF 165 Exp Var. Rfx to Seq Rfx DD, Interp to CF Exp Var Rfx to Seq Rfx DD Interp.
**Cystic Fibrosis (CFTR) Expanded Variant Panel, Fetal**

**Specimen Required:**
- **Fetal Specimen:** Two T-25 flasks of cultured amniocytes at 80 percent confluency. *If the client is unable to culture amniocytes, this can be arranged by contacting ARUP Client Services at (800) 522-2787.*
- **Maternal Whole Blood Specimen:** Lavender (EDTA), pink (K2EDTA).
- **Specimen Preparation: Cultured Amniocytes:** Fill flasks with culture media. Backup cultures must be retained at the client's institution until testing is complete.
- **Maternal Whole Blood Specimen:** Transport 3 mL whole blood. (Min. 1 mL)

**Storage/Transport Temperature:**
- **Cultured Amniocytes:** CRITICAL ROOM TEMPERATURE. Must be received within 48 hours of shipment due to lability of cells.
- **Maternal Whole Blood Specimen:** Refrigerated.

**Remarks:**
- **Maternal whole blood sample is recommended for proper test interpretation; order Maternal Cell Contamination.**
- **Patient History Form is available on the ARUP Web site or by contacting ARUP Client Services.**
- **Unacceptable Conditions:**
  - **Maternal Whole Blood Specimen:** Plasma or serum. Specimens collected in sodium heparin, yellow (ACD solution), or lithium heparin tubes. Frozen specimens in glass collection tubes.

**Stability (collection to initiation of testing):**
- **Fetal Specimen:** Ambient: 48 hours; Refrigerated: Unacceptable; Frozen: Unacceptable
- **Maternal Whole Blood Specimen:** Ambient: 72 hours; Refrigerated: 1 week; Frozen: 1 month

**Interpretive Data:**
- **Refer to report.**

For quality assurance purposes, ARUP Laboratories will confirm the above result at no charge following delivery. Order Confirmation of Fetal Testing and include a copy of the original fetal report (or the mother's name and date of birth) with the test submission. Please contact an ARUP genetic counselor at (800) 242-2787 extension 2141 prior to specimen submission.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

**Note:**
- The Cystic Fibrosis (CFTR) Expanded Variant Panel includes 23 pathogenic CFTR variants recommended by the American College of Medical Genetics for population carrier screening.

**HOTLINE NOTE:** There is a clinically significant charting name change associated with this test.
- Change the charting name for component 2013680, Cystic Fibrosis, 165 Var Fetal, Interp from Cystic Fibrosis, 165 Var Fetal, Interp to CF, Expanded Var Pan Fetal, Interp.

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<table>
<thead>
<tr>
<th>Test Code</th>
<th>Description</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>0050210</td>
<td>Diphtheria Antibody, IgG</td>
<td>DIP</td>
</tr>
<tr>
<td>0050779</td>
<td>Diphtheria, Tetanus, and <em>H. Influenzae b</em> Antibodies, IgG</td>
<td>DTH</td>
</tr>
</tbody>
</table>
New Test  
3004583  Drug Detection Panel, Meconium, Qualitative  

Time Sensitive  
Drug Test Table Meconium

Methodology: Qualitative Liquid Chromatography/Tandem Mass Spectrometry
Performed: Sun-Sat
Reported: 1-3 days

Specimen Required: Collect: All meconium (blackish material) excreted until milk/formula-based stool (yellow-green) appears.

Specimen Preparation: Transport all available meconium (4 g is preferred) to routine urine collection cup or Security Kit for Meconium/Umbilical Drug Detection (ARUP supply #51548) available online through eSupply using ARUP Connect™ or by contacting ARUP Client Services at (800) 522-2787.

Storage/Transport Temperature: Refrigerated temperature.

Unacceptable Conditions: Unknown fluids, pharmaceutical preparation, and breast milk. Diapers, cotton swabs, baby wipes, tongue depressors, bottles.

Stability (collection to initiation of testing): Ambient: 1 week; Refrigerated: 3 weeks; Frozen: 1 year

Reference Interval:

<table>
<thead>
<tr>
<th>Drugs/Drug Classes</th>
<th>Cutoff Concentrations (ng/g)</th>
<th>Drugs/Drug Classes</th>
<th>Cutoff Concentrations (ng/g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buprenorphine</td>
<td>20</td>
<td>Amphetamine</td>
<td>20</td>
</tr>
<tr>
<td>Norbuprenorphine</td>
<td>20</td>
<td>Benzoylecgonine</td>
<td>20</td>
</tr>
<tr>
<td>Naloxone</td>
<td>20</td>
<td>Meth-OH Benzoylecgonine</td>
<td>20</td>
</tr>
<tr>
<td>Codeine</td>
<td>20</td>
<td>Cocainethene</td>
<td>20</td>
</tr>
<tr>
<td>Dihydrocodeine</td>
<td>20</td>
<td>Cocaine</td>
<td>20</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>10</td>
<td>MDMA (Ecstasy)</td>
<td>20</td>
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<tr>
<td>Hydrocodone</td>
<td>20</td>
<td>Methamphetamine</td>
<td>20</td>
</tr>
<tr>
<td>Norhydrocodone</td>
<td>20</td>
<td>Phenetermine</td>
<td>20</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>20</td>
<td>Alprazolam</td>
<td>5</td>
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<tr>
<td>Meperidine</td>
<td>20</td>
<td>Alpha-OH Alprazolam</td>
<td>5</td>
</tr>
<tr>
<td>Methadone</td>
<td>10</td>
<td>Butalbital</td>
<td>50</td>
</tr>
<tr>
<td>Methadone metabolite</td>
<td>10</td>
<td>Clonazepam</td>
<td>5</td>
</tr>
<tr>
<td>6-Acetylmorphine</td>
<td>20</td>
<td>7-Aminoclonazepam</td>
<td>5</td>
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<tr>
<td>Morphine</td>
<td>20</td>
<td>Diazepam</td>
<td>5</td>
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<tr>
<td>Methylphenidate</td>
<td>20</td>
<td>Lorazepam</td>
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<tr>
<td>Oxycodone</td>
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<td>Midazolam</td>
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<td>Noroxycodone</td>
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<td>Alpha-OH Midazolam</td>
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<tr>
<td>Oxymorphone</td>
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<td>Nondiazepam</td>
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<tr>
<td>Tapentadol</td>
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<td>Oxazepam</td>
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<tr>
<td>Tramadol</td>
<td>20</td>
<td>Phenobarbital</td>
<td>200</td>
</tr>
<tr>
<td>N-desmethytramadol</td>
<td>20</td>
<td>Temazepam</td>
<td>20</td>
</tr>
<tr>
<td>O-desmethytramadol</td>
<td>20</td>
<td>Zolpidem</td>
<td>10</td>
</tr>
<tr>
<td>Gabapentin</td>
<td>20</td>
<td>Phencyclidine (PCP)</td>
<td>10</td>
</tr>
</tbody>
</table>

Interpretive Data:
Methodology: Qualitative Liquid Chromatography/Tandem Mass Spectrometry

Detection of drugs in meconium is intended to reflect maternal drug use during approximately the last trimester of a full-term pregnancy. The pattern and frequency of drug(s) used by the mother cannot be determined by this test. A negative result does not exclude the possibility that a mother used drugs during pregnancy. Detection of drugs in meconium depends on the extent of maternal drug use, as well as drug stability, unique characteristics of drug deposition in meconium, and the performance of the analytical method. Drugs administered during labor and delivery may be detected. Detection of drugs in meconium does not insinuate impairment and may not affect outcomes for the infant. Interpretive questions should be directed to the laboratory.

For medical purposes only; not valid for forensic use.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.
CPT Code(s): 80326; 80347; 80364; 80355 (Alt code: G0481)

New York DOH Approved.

**HOTLINE NOTE:** Refer to the Test Mix Addendum for interface build information.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006621</td>
<td>Drug Detection Panel, Umbilical Cord Tissue, Qualitative</td>
<td>TOF SCR CD</td>
</tr>
<tr>
<td>2007479</td>
<td>Drug Profile, Targeted by Tandem Mass Spectrometry and Enzyme Immunoassay, Urine</td>
<td>PAIN HYB U</td>
</tr>
<tr>
<td>2009288</td>
<td>Drug Profile, Targeted with Interpretation by Tandem Mass Spectrometry and Enzyme Immunoassay, Urine</td>
<td>PAIN HYB 2</td>
</tr>
<tr>
<td>0051626</td>
<td>Epstein-Barr Virus Antibody to Viral Capsid Antigen, IgA</td>
<td>EBV A</td>
</tr>
</tbody>
</table>

**Specimen Required:** Collect: Serum separator tube.
- Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 0.5 mL serum to an ARUP Standard Transport Tube. (Min: 0.1 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimen plainly as "acute" or "convalescent."
- Storage/Transport Temperature: Refrigerated.
- Unacceptable Conditions: Contaminated or heat-inactivated specimens. Grossly hemolytic, icteric or, lipemic specimens.
- Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 30 days
Additional Technical Information

Methodology: Massively Parallel Sequencing
Performed: Varies
Reported: 3 weeks

Specimen Required: Collect: Lavender or pink (EDTA), or yellow (ACD solution A or B).
Specimen Preparation: Transport 3 mL whole blood. (Min: 2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Serum or plasma; grossly hemolyzed or frozen specimens; saliva, buccal brush, or swab; FFPE tissue.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval: By report

Interpretive Data:
Refer to report.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Note: Gene Tested: TTR (NM_000371)
CPT Code(s): 81404

New York DOH approval pending. Call for status update.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.
Methodology: Immunodiffusion

Specimen Required:
- Collect: Serum separator tube (SST)
- Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.4 mL)
- Storage/Transport Temperature: Refrigerated.
- Unacceptable Conditions: Other body fluids. Contaminated, hemolyzed, icteric, or lipemic specimens.

Specimen Preparation:
- Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.4 mL)
- Storage/Transport Temperature: Refrigerated.
- Unacceptable Conditions: Other body fluids. Contaminated, hemolyzed, icteric, or lipemic specimens.

Reference Interval:
- After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

<table>
<thead>
<tr>
<th>Test Number</th>
<th>Components</th>
<th>Reference Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>0050171</td>
<td>Aspergillus spp. Antibodies by Immunodiffusion</td>
<td>None detected</td>
</tr>
<tr>
<td>0050172</td>
<td>Blastomyces dermatitidis Antibodies by Immunodiffusion</td>
<td>None detected</td>
</tr>
<tr>
<td>0050174</td>
<td>Histoplasma spp. Antibodies by Immunodiffusion</td>
<td>None detected</td>
</tr>
<tr>
<td></td>
<td>Coccidioides Antibodies by Immunodiffusion</td>
<td>Not Detected</td>
</tr>
</tbody>
</table>

**HOTLINE NOTE:** There is a clinically significant charting name change associated with this test.
Change the charting name for component 0050183, Coccidioides immitis Abs, Precipitin from Coccidioides immitis Abs, Precipitin to Coccidioides by Immunodiffusion, Serum.
New Test 3004716 Galactosemia (GALT) Sequencing and Deletion/Duplication GALT NGS

Additional Technical Information

Methodology: Massively Parallel Sequencing
Performed: Varies
Reported: 3 weeks

Specimen Required: Collect: Lavender or pink (EDTA) or yellow (ACD solution A or B).
Specimen Preparation: Transport 3 mL whole blood. (Min: 2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Serum or plasma; grossly hemolyzed or frozen specimens; saliva, buccal brush, or swab; FFPE tissue.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval: By report

Interpretive Data:
Refer to report.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Note: Gene Tested: GALT (NM_000155)

CPT Code(s): 81406; 81479

New York DOH approval pending. Call for status update.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.
Genetic Carrier Screen, (CF, FXS, and SMA) with Reflex to Methylation
(Temporary Delay as of 01/21/2021 - no referral available)

Specimen Required:
- Collect: Lavender (K2EDTA). Also acceptable: Pink (K2EDTA).
- Specimen Preparation: Transport 5 mL whole blood. (Min: 3 mL)
- Storage/Transport Temperature: Refrigerated.
- Unacceptable Conditions: Plasma or serum. Specimens collected in sodium heparin, yellow (ACD solution A), or lithium heparin tubes. Frozen specimens in glass collection tubes.
- Stability (collection to initiation of testing): Ambient: 1 week; Refrigerated: 1 month; Frozen: 1 month

Interpretive Data:
- Refer to report.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Note:
- Cystic Fibrosis (CF): The Cystic Fibrosis (CFTR) Expanded Variant Panel includes the 23 pathogenic CF variants recommended by the American College of Medical Genetics for population carrier screening as well as many others.
- Fragile X: If a CGG repeat of 100 or greater is detected by PCR and Capillary Electrophoresis; methylation analysis will be added. Additional charges apply.

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 2013677, CFystic Fibrosis, Expanded 165 Variants Panel, Interp from CFystic Fibrosis, Expanded 165 Variants Panel, Interp to CF Expanded Variant Panel Interp.

Haemophilus influenzae b Antibody, IgG

Perform: Sun-Sat
Report: 1-3 days

Hearing Loss, Nonsyndromic, Connexin 30 (GJB6) 2 Deletions

Specimen Required:
- Collect: Lavender (EDTA), pink (K2EDTA), or yellow (ACD Solution A or B).
- Specimen Preparation: Transport 3 mL whole blood. (Min: 1 mL)
- Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature
- Stability (collection to initiation of testing): Ambient: 1 week; Refrigerated: 1 month; Frozen: Unacceptable

Interpretive Data:
- Background: Hearing Loss, Nonsyndromic, Connexin 30 (GJB6) 2 Deletions:
- Characteristics: Moderate to profound nonsyndromic hearing loss (NSHL). Large GJB6 gene deletions involving cis-regulatory elements for GJB2 (connexin 26) result in the loss of expression of GJB2. Thus, compound heterozygosity for a pathogenic GJB2 variant and GJB6 large deletion results in NSHL.
- Incidence: Approximately 1 in 30 individuals with NSHL has a GJB6 deletion; 1 in 100,000 in the general population. Twenty percent of GJB2 heterozygotes with nonsyndromic hearing loss have a GJB6 deletion; homozygosity for GJB6 deletions is rare.
- Inheritance: Autosomal recessive.
- Cause: Pathogenic germline variants in GJB6.
- Variants Tested: 309kb del(GJB6-D13S1830, also known as 342kb) and 232kb del(GJB6-D13S1854).
- Clinical Sensitivity: Dependent on ethnicity.
- Methodology: Multiplex PCR using deletion-specific primers, followed by capillary gel electrophoresis.
- Analytical Sensitivity and Specificity: Greater than 99 percent.
- Limitations: GJB6 variants other than the two targeted deletions will not be identified. The etiology of hearing loss due to other genetic or environmental causes will not be determined. Diagnostic errors can occur due to rare sequence variations. Interpretation of this test result may be impacted if this patient has had an allogeneic stem cell transplantation.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.
### Hemoglobin Evaluation Reflexive Cascade (HB CASCADE)

**Methodology:**
High Performance Liquid Chromatography/Electrophoresis/RBC Solubility/Polymerase Chain Reaction/Fluorescence Resonance Energy Transfer/Sequencing/Massively Parallel Sequencing

### Hereditary Hemolytic Anemia Cascade (HHACASCADE)

**Methodology:**
High Performance Liquid Chromatography (HPLC)/Electrophoresis/RBC Solubility/Polymerase Chain Reaction (PCR)/Fluorescence Resonance Energy Transfer/Sequencing/Spectrophotometry/Visual Identification/Quantitative Enzymatic/Quantitative Flow Cytometry/Cytochemical Stain/Multiplex Ligation-Dependent Probe Amplification/Massively Parallel Sequencing

### Herpes Simplex Virus Type 1 and/or 2 Antibodies, IgM by ELISA (HSV MC)

**Specimen Required:**
Collect: Serum Separator Tube (SST).

**Specimen Preparation:**
Separate from cells ASAP or within 2 hours of collection. Transfer 0.5 mL serum to an ARUP Standard Transport Tube. (Min: 0.1 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as “acute” or “convalescent.”

**Storage/Transport Temperature:**
Refrigerated.

**Unacceptable Conditions:**
Contaminated, heat-inactivated, hemolyzed, icteric, or severely lipemic specimens.

**Stability (collection to initiation of testing):**
Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

### Herpes Simplex Virus Type 1 and/or 2 Antibodies, IgM by ELISA, CSF (HSV MC CSF)

**Specimen Required:**
Collect: CSF.

**Specimen Preparation:**
Transfer 0.5 mL CSF to an ARUP Standard Transport Tube. (Min: 0.2 mL)

**Storage/Transport Temperature:**
Refrigerated.

**Unacceptable Conditions:**
Contaminated, heat-inactivated, hemolyzed, icteric, or severely lipemic specimens.

**Stability (collection to initiation of testing):**
Ambient: 8 hours; Refrigerated: 2 weeks; Frozen: 1 year

### Histoplasma Galactomannan Antigen Quantitative by EIA, Urine (HISTOGM U)

**Specimen Required:**
Collect: Random urine.

**Specimen Preparation:**
Transfer 2 mL urine to an ARUP Standard Transport Tube.

**Storage/Transport Temperature:**
Refrigerated.

**Unacceptable Conditions:**
Specimens other than urine. Urine in boric acid. Serum; refer to test Histoplasma Antigen by EIA, Serum (ARUP test code 0092522).

**Stability (collection to initiation of testing):**
Ambient: 24 hours; Refrigerated: 2 weeks; Frozen: 2 weeks

### Interpretive Data:

- **Less than 0.4 ng/ml = Not Detected**
- **0.4-0.7 ng/mL = Detected (below the limit of quantification)**
- **0.8-24.0 ng/mL = Detected**
- **Greater than 24.0 ng/mL = Detected (above the limit of quantification)**

The quantitative range of this assay is 0.8-24.0 ng/mL. Antigen concentrations between 0.4-0.7 or >24.0 ng/mL fall outside the linear range of the assay and cannot be accurately quantified.

This EIA test should be used in conjunction with other diagnostic procedures, including microbiological culture, histological examination of biopsy samples, and/or radiographic evidence, to aid in the diagnosis of histoplasmosis.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.
Huntington Disease (HD) Mutation by PCR (Extended TAT as of 11/20/20-no referral available)

Specimen Required:
- Collect: Lavender (EDTA), pink (K₂EDTA), or yellow (ACD Solution A or B).
- Specimen Preparation: Transport 3 mL whole blood. (Min: 1 mL)
- Storage/Transport Temperature: Preferred transport temp: Refrigerated. Also acceptable: Room temperature.
- Remarks: A completed HD specific consent form, signed by the patient (or legal guardian) and physician, is required for all specimens. Testing for patients under the age of 18 years or fetal specimens is not offered. Presymptomatic patients are strongly encouraged to be tested through a counseling program approved by the Huntington Disease Society of America at (800) 345-4372.
- Call Genetics Processing with additional questions at 800-242-2787 ext 3301.
- Stability (collection to initiation of testing): Room temperature: 1 week; Refrigerated: 1 month; Frozen: unacceptable

Interpretive Data:
Background Information for Huntington Disease (HD) Mutation by PCR:
- Characteristics: Neurodegenerative disorder causing progressive cognitive, motor, and psychiatric disturbances typically beginning at 35–44 years of age. An estimated 5 percent of individuals with HD are symptomatic as juveniles and 25 percent of individuals after age 50.
- Incidence: 1 in 15,000.
- Inheritance: Autosomal dominant.
- Cause: Expanded number of CAG repeats in the HTT gene. HD allele with reduced penetrance 36-39 CAG repeats; HD allele with full penetrance 40 or more CAG repeats.
- Clinical Sensitivity and Specificity: 99 percent.
- Methodology: Triplet repeat-primed polymerase chain reaction (PCR) followed by size analysis using capillary electrophoresis. Repeat sizing precision is +/- 2 for alleles less than or equal to 50 repeats, +/- 3 for alleles with 51 to 75 repeats, and +/- 4 for alleles greater than 75 repeats.
- Analytical Sensitivity and Specificity: 99 percent.
- Limitations: Other neurodegenerative disorders will not be detected. Diagnostic errors can occur due to rare sequence variations. Interpretation of this test result may be impacted if this patient has had an allogeneic stem cell transplantation.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

<table>
<thead>
<tr>
<th>Allele type</th>
<th>Number of CAG Repeats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal allele</td>
<td>less than or equal to 26</td>
</tr>
<tr>
<td>Mutable normal (intermediate) allele</td>
<td>27-35</td>
</tr>
<tr>
<td>HD allele with reduced penetrance</td>
<td>36-39</td>
</tr>
<tr>
<td>HD allele with full penetrance</td>
<td>greater than or equal to 40</td>
</tr>
</tbody>
</table>

HOTLINE NOTE: Remove information found in the Reference Interval field.

Immunoglobulin A (IGA)

| 0050340 | Performed: Sun-Sat | Reported: 1-3 Days |

Immunoglobulin G (IGG)

| 0050350 | Performed: Sun-Sat | Reported: 1-3 Days |

Immunoglobulin G, CSF (IGGCSF)

<p>| 3003485 | Performed: Sun-Sat | Reported: 1-3 days |</p>
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Temperature</th>
<th>Storage/Transport Temperature</th>
<th>Unacceptable Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>0050676</td>
<td>Immunoglobulin G, CSF Index</td>
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</tr>
<tr>
<td></td>
<td>Performed: Sun-Sat</td>
<td></td>
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<tr>
<td></td>
<td>Reported: 1-3 days</td>
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<tr>
<td>0050355</td>
<td>Immunoglobulin M</td>
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<td>Performed: Sun-Sat</td>
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<tr>
<td></td>
<td>Reported: 1-3 Days</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0051069</td>
<td>Influenza A &amp; B Virus Antibodies, IgG &amp; IgM</td>
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</tr>
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<td></td>
<td>Specimen Required: Collect: Serum separator tube</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.05 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as &quot;acute&quot; or &quot;convalescent.&quot; Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen. Unacceptable Conditions: Bacterially contaminated, heat-inactivated, hemolyzed, icteric, lipemic, or turbid specimens. Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year</td>
<td></td>
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<tr>
<td>0051074</td>
<td>Influenza A Virus Antibody, IgG</td>
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<td></td>
<td>Specimen Required: Collect: Serum separator tube</td>
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<td></td>
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<tr>
<td></td>
<td>Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.05 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as &quot;acute&quot; or &quot;convalescent.&quot; Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen. Unacceptable Conditions: Bacterially contaminated, heat-inactivated, hemolyzed, icteric, lipemic, or turbid specimens. Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year</td>
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<tr>
<td>0051081</td>
<td>Influenza A Virus Antibody, IgM</td>
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<td>Specimen Required: Collect: Serum separator tube</td>
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<tr>
<td></td>
<td>Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.05 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as &quot;acute&quot; or &quot;convalescent.&quot; Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen. Unacceptable Conditions: Bacterially contaminated, heat-inactivated, hemolyzed, icteric, lipemic, turbid specimens. Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year</td>
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<tr>
<td>0051080</td>
<td>Influenza B Virus Antibody, IgG</td>
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<tr>
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<td>Specimen Required: Collect: Serum separator tube</td>
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<tr>
<td></td>
<td>Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.05 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as &quot;acute&quot; or &quot;convalescent.&quot; Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen. Unacceptable Conditions: Bacterially contaminated, heat-inactivated, hemolyzed, icteric, lipemic, or turbid specimens. Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
HOTLINE: Effective May 16, 2022

**HOTLINE**

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**0051079**

**Influenza B Virus Antibody, IgM**

Specimen Required: Collect: Serum separator tube.

Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.05 mL) Parallel testing is preferred and convalescent specimens must be received within 30 days from receipt of the acute specimens. Mark specimens plainly as “acute” or “convalescent.”

Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen.

Unacceptable Conditions: Bacterially contaminated, heat-inactivated, hemolyzed, icteric, lipemic, or turbid specimens.

Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year

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**3003801**

**JAK2 (V617F) Mutation by ddPCR, Qualitative with Reflex to JAK2 Exon 12 Mutation Analysis by PCR**

Specimen Required: Collect: Whole blood or bone marrow: Lavender (EDTA).

Specimen Preparation: Whole Blood: Do not freeze. Transport 5 mL whole blood. (Min: 1 mL)

Bone Marrow: Do not freeze. Transport 3 mL bone marrow. (Min: 1 mL)

Storage/Transport Temperature: Refrigerated.

Unacceptable Conditions: Plasma, serum, FFPE tissue blocks/slides, or fresh or frozen tissue. Specimens collected in anticoagulants other than EDTA. Clotted or grossly hemolyzed specimens.

Stability (collection to initiation of testing): Refrigerated: 4 days; Frozen: Unacceptable

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**2002357**

**JAK2 Exon 12 Mutation Analysis by PCR**

Specimen Required: Collect: Whole blood or bone marrow (EDTA). Also acceptable: DNA extracted by CLIA certified lab.

Specimen Preparation: Whole Blood: Do not freeze. Transport 5 mL whole blood. (Min: 1 mL)

Bone Marrow: Do not freeze. Transport 3 mL bone marrow. (Min: 1 mL)

Extracted DNA: Transport 40 uL DNA with at least 50 ng/uL concentration. (Min: 40 uL) Transport DNA in a tissue transport kit (ARUP Supply #47808) available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787.

Storage/Transport Temperature: Refrigerated.

Unacceptable Conditions: Plasma, serum, FFPE tissue blocks/slides, or frozen tissue. Specimens collected in anticoagulants other than EDTA. Clotted or grossly hemolyzed specimens.

Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 4 days; Frozen: Unacceptable

Extracted DNA: Ambient: 1 month; Refrigerate: Indefinitely; Frozen: Indefinitely
### Kappa Lambda Dual Stain by Immunohistochemistry (KLDUAL IHC)

**Methodology:** Immunohistochemistry  
**Performed:** Mon-Fri  
**Reported:** 1-3 days

**Specimen Required:** Collect: Tissue or cells.  
**Specimen Preparation:** Formalin fix (10 percent neutral buffered formalin) and paraffin embed specimen (cells must be prepared into a cellblock). Protect paraffin block and/or slides from excessive heat. Transport tissue block or 5 unstained (3- to 5-micron thick sections), positively charged slides in a Tissue Transport Kit (ARUP supply #47808 highly recommended but not required) available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787. (Min: 2 slides). If sending precut slides, do not oven bake.  
**Storage/Transport Temperature:** Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.  

**Remarks:** IMMUNOHISTOCHEMISTRY ORDERING AND SUBMISSION DETAILS: Submit electronic request. If you do not have electronic ordering capability, use an ARUP Immunohistochemistry Stain Form (#32978) with an ARUP client number. For additional technical details, contact ARUP Client Services at (800) 522-2787.  
**Unacceptable Conditions:** Specimens submitted with nonrepresentative tissue type. Depleted specimens.  

**Interpretive Data:**
This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.  

**Note:** The following antibodies are utilized in this dual stain: kappa (CH15) and lambda (SHL53).  
This test is performed as a stain and return (technical) service only.  

**CPT Code(s):** 88344  
New York DOH Approved.

**HOTLINE NOTE:** Refer to the Test Mix Addendum for interface build information.

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### Leishmania Antibody, IgG (Visceral Leishmaniasis) (LEISH IGG)

**Specimen Required:** Collect: Serum separator tube.  
**Specimen Preparation:** Transfer 0.5 mL serum to an ARUP Standard Transport Tube. (Min: 0.1 mL)  
**Storage/Transport Temperature:** Refrigerated.  
**Unacceptable Conditions:** Serum containing glycerol or other viscous materials. Hemolyzed specimens.  
**Stability (collection to initiation of testing):** After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year
**New Test 3001605 Lynch Syndrome Panel, Sequencing and Deletion/Duplication LS NGS**

**Patient History for Lynch Syndrome**

**Additional Technical Information**

**Methodology:** Massively Parallel Sequencing/Sequencing/Multiplex Ligation-dependent Probe Amplification

**Performed:** Varies

**Reported:** 3-6 weeks

**Specimen Required:**
- **Collect:** Lavender or pink (EDTA) or yellow (ACD solution A or B).
- **Specimen Preparation:** Transport 3 mL whole blood. (Min: 2 mL)
- **Storage/Transport Temperature:** Refrigerated.
- **Unacceptable Conditions:** Serum or plasma; grossly hemolyzed or frozen specimens; saliva, buccal brush, or swab; FFPE tissue; DNA.
- **Stability (collection to initiation of testing):** Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable

**Reference Interval:** By report

**Interpretive Data:**
Refer to report.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

**Note:** Genes Tested: EPCAM*, MLH1, MSH2, MSH6, PMS2
*Deletion/duplication only; sequencing is not available for this gene.

**CPT Code(s):** 81292; 81294; 81295; 81297; 81298; 81300; 81317; 81319; 81403

New York DOH approval pending. Call for status update.

**HOTLINE NOTE:** Refer to the Test Mix Addendum for interface build information.

**New Test 0054441 Measles (Rubeola) Antibody, IgM, CSF MEASLMCSF**

**Specimen Required:**
- **Collect:** CSF.
- **Specimen Preparation:** Transfer 0.5 mL CSF to an ARUP Standard Transport Tube. (Min: 0.2 mL)
- **Storage/Transport Temperature:** Refrigerated. Also acceptable: Frozen.
- **Unacceptable Conditions:** Contaminated, heat-inactivated, or hemolyzed specimens.
- **Stability (collection to initiation of testing):** Ambient: 8 hours; Refrigerated: 2 weeks; Frozen: 1 year

**Reference Interval:** By report

**Interpretive Data:**
Refer to report.
New Test
Available Now
3004572
Multiple Endocrine Neoplasia Type 2 (MEN2), RET Sequencing
MEN2 NGS

Patient History for Multiple Endocrine Neoplasia 2, RET Gene Testing

Additional Technical Information

Methodology: Massively Parallel Sequencing
Performed: Varies
Reported: 3 weeks

Specimen Required:
- Collect: Lavender or pink (EDTA) or yellow (ACD solution A or B).
- Specimen Preparation: Transport 3 mL whole blood. (Min: 2 mL)
- Storage/Transport Temperature: Refrigerated.
- Unacceptable Conditions: Serum or plasma; grossly hemolyzed or frozen specimens; saliva, buccal brush, or swab; FFPE tissue.

Stability (collection to initiation of testing):
- Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval: By report

Interpretive Data:
Refer to report.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Note: Gene Tested: RET (NM_020975)

CPT Code(s): 81406

New York DOH approval pending. Call for status update.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.

0054443
Mumps Virus Antibody IgM, CSF
MUMPSMCSF

Specimen Required:
- Collect: CSF.
- Specimen Preparation: Transfer 0.5 mL CSF to an ARUP Standard Transport Tube. (Min: 0.2 mL)
- Storage/Transport Temperature: Refrigerated. Also acceptable: Frozen.
- Unacceptable Conditions: Contaminated, heat-inactivated, or hemolyzed specimens.
- Stability (collection to initiation of testing): Ambient: 8 hours; Refrigerated: 2 weeks; Frozen: 1 year
New Test 3004788 Pancreatitis Panel (CFTR, CTRC, PRSS1, SPINK1), Sequencing PANC NGS

Additional Technical Information

Methodology: Massively Parallel Sequencing/Sequencing
Performed: Varies
Reported: 3 weeks

Specimen Required:
- Collect: Lavender or pink (EDTA) or yellow (ACD solution A or B).
- Specimen Preparation: Transport 3 mL whole blood. (Min: 2 mL)
- Storage/Transport Temperature: Refrigerated.
- Unacceptable Conditions: Serum or plasma; grossly hemolyzed or frozen specimens; saliva, buccal brush, or swab; FFPE tissue.

Reference Interval: By report

Interpretive Data:
Refer to report.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Note: Genes Tested: CFTR, CTRC, PRSS1, SPINK1

CPT Code(s): 81223; 81404; 81405

New York DOH approval pending. Call for status update.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.

S-100B Protein, Serum

Reference Interval: Effective May 16, 2022

<table>
<thead>
<tr>
<th>Age</th>
<th>Reference Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>19 years and older</td>
<td>0-96 ng/L</td>
</tr>
<tr>
<td>3 years to 19 years</td>
<td>less than or equal to 160 ng/L</td>
</tr>
<tr>
<td>25 months to 3 years</td>
<td>less than or equal to 170 ng/L</td>
</tr>
<tr>
<td>10 months to 25 months</td>
<td>less than or equal to 230 ng/L</td>
</tr>
<tr>
<td>5 months to 10 months</td>
<td>less than or equal to 350 ng/mL</td>
</tr>
<tr>
<td>0 days to 5 months</td>
<td>less than or equal to 510 ng/mL</td>
</tr>
</tbody>
</table>
New Test 3004727 SATB2 by Immunohistochemistry SATB2 IHC

Immunohistochemistry Stain Form
Recommended (ARUP form #32978)

Methodology: Immunohistochemistry
Performed: Mon-Fri
Reported: 1-3 days

Specimen Required: Collect: Tissue or cells.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed specimen (cells must be prepared into a cellblock). Protect paraffin block and/or slides from excessive heat. Transport tissue block or 5 unstained (3- to 5-micron thick sections), positively charged slides in a Tissue Transport Kit (ARUP supply #47808) available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787. (Min: 2 slides). If sending precut slides, do not oven bake.
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: IMMUNOHISTOCHEMISTRY ORDERING AND SUBMISSION DETAILS: Submit electronic request. If you do not have electronic ordering capability, use an ARUP Immunohistochemistry Stain Form (#32978) with an ARUP client number. For additional technical details, contact ARUP Client Services at (800) 522-2787.
Unacceptable Conditions: Specimens submitted with nonrepresentative tissue type. Depleted specimens.

Interpretive Data:
This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the U.S. Food and Drug Administration. This test was performed in a CLIA-certified laboratory and is intended for clinical purposes.

Note:
This test is performed as a stain and return (technical) service only.

CPT Code(s): 88342

New York DOH Approved.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.
New Test 3004603 SHOX Deficiency Disorders, Sequencing and Deletion/Duplication SHOX NGS

Patient History for SHOX Deficiency Disorders Testing

Additional Technical Information

Methodology: Massively Parallel Sequencing/ Multiplex Ligation-dependent Probe Amplification

Performed:Varies

Reported:3-6 weeks

Specimen Required: Collect: Lavender or pink (EDTA) or yellow (ACD solution A or B). Specimen Preparation: Transport 3 mL whole blood. (Min: 2 mL)

Storage/Transport Temperature: Refrigerated

Unacceptable Conditions: Serum or plasma; grossly hemolyzed or frozen specimens; saliva, buccal brush, or swab; FFPE tissue; DNA.

Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval: By report

Interpretive Data:

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

Note: Gene Tested: SHOX (NM_000451), exon 6b (NM_006883) is not sequenced.

CPT Code(s): 81405; 81479

New York DOH approval pending. Call for status update.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.

0050535 Tetanus Antibody, IgG TETANUS

Performed: Sun-Sat

Reported: 1-3 days

2006550 Thyroglobulin by LC-MS/MS, Serum or Plasma THYROG MS

Specimen Required: Collect: Serum separator tube or green (sodium or lithium heparin), Potassium EDTA Specimen Preparation: Separate from cells: Transport 1.5 mL serum or plasma. (Min: 0.7 mL)

Storage/Transport Temperature: Refrigerated or Frozen.

Unacceptable Conditions: Samples left ambient for greater than 1 day; Grossly lipemic samples.

Stability (collection to initiation of testing): After separation from cells: Ambient: 1 day; Refrigerated: 1 week; Frozen: 1 year

2006685 Thyroglobulin, Serum or Plasma with Reflex to LC-MS/MS or CIA THYROGRFX

Specimen Required: Collect: Serum Separator Tube (SST). Also acceptable: Green (Sodium or Lithium Heparin). Specimen Preparation: Transfer 3 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 1.5 mL)

Storage/Transport Temperature: Frozen.

Unacceptable Conditions: EDTA or K2EDTA plasma. Grossly lipemic samples. Any fluid other than noted above. (See Thyroglobulin, Fine Needle Aspiration (FNA) (ARUP test code 0020753) for ordering alternate fluids).

Stability (collection to initiation of testing): After separation from cells: Ambient: 8 hours; Refrigerated: 1 week; Frozen: 6 months
**0051076**  
*Trypanosoma cruzi* Antibody, IgG  
CHAGAS G

**Specimen Required:**
- **Collect:** Serum separator tube.
  - **Specimen Preparation:** Separate serum from cells ASAP or within 2 hours of collection. Transfer 0.5 mL serum to an ARUP Standard Transport Tube. (Min: 0.3 mL) Parallel testing is preferred and convalescent specimens **must** be received within 30 days of the acute specimens. **Mark specimens plainly as "acute" or "convalescent."**
  - **Storage/Transport Temperature:** Refrigerated. Also acceptable: Room temperature or frozen.
  - **Unacceptable Conditions:** Plasma. Bacterially contaminated, heat-inactivated, hemolyzed, icteric, lipemic, or turbid specimens.
  - **Stability (collection to initiation of testing):** After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year

**005416**  
Urticaria-Induced Basophil Activation  
UIBA

**Performed:**  
Tuesday

**Reported:**  
7-16 days
The following will be discontinued from ARUP’s test menu on May 16, 2022.
Replacement test options are supplied if applicable.

<table>
<thead>
<tr>
<th>Test Number</th>
<th>Test Name</th>
<th>Refer To Replacement</th>
</tr>
</thead>
<tbody>
<tr>
<td>0092311</td>
<td>Barbiturates - Confirmation – Meconium</td>
<td>Drug Detection Panel, Meconium, Qualitative (3004558)</td>
</tr>
<tr>
<td>0050578</td>
<td>Beta Globin (HBB) Gene Sequencing</td>
<td>Beta Globin (HBB) Sequencing (3004547)</td>
</tr>
<tr>
<td>2010117</td>
<td>Beta Globin (HBB) Sequencing and Deletion/Duplication (Temporary Referral as of 12/07/20)</td>
<td></td>
</tr>
<tr>
<td>0050388</td>
<td>Beta Globin (HBB) Sequencing, Fetal</td>
<td>Beta Globin (HBB) Sequencing, Fetal (3004550)</td>
</tr>
<tr>
<td>2003445</td>
<td>Breast Carcinoma b72.3 by Immunohistochemistry</td>
<td></td>
</tr>
<tr>
<td>2011601</td>
<td>Buprenorphine, Meconium, Quantitative</td>
<td>Drug Detection Panel, Meconium, Qualitative (3004583)</td>
</tr>
<tr>
<td>0092312</td>
<td>Cocaine and Metabolites - Confirmation/Quantitation – Meconium</td>
<td>Drug Detection Panel, Meconium, Qualitative (3004583)</td>
</tr>
<tr>
<td>0051774</td>
<td>Connexin 26 (GJB2), Sequencing</td>
<td>Connexin 26 (GJB2) Sequencing and Deletion/Duplication (3004720)</td>
</tr>
<tr>
<td>0051110</td>
<td>Cystic Fibrosis (CFTR) Sequencing (Temporary Referral as of 12/07/20)</td>
<td>Cystic Fibrosis (CFTR) Sequencing and Deletion/Duplication (3004745)</td>
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<tr>
<td>0051640</td>
<td>Drugs of Abuse Confirmation/Quantitation - Amphetamines (Amphetamine and Methamphetamine) – Meconium</td>
<td>Drug Detection Panel, Meconium, Qualitative (3004583)</td>
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<tr>
<td>0092520</td>
<td>Drugs of Abuse Confirmation/Quantitation - Benzodiazepines – Meconium</td>
<td>Drug Detection Panel, Meconium, Qualitative (3004583)</td>
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<td>0092313</td>
<td>Drugs of Abuse Confirmation/Quantitation - Methadone and Metabolite - Meconium</td>
<td>Drug Detection Panel, Meconium, Qualitative (3004583)</td>
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<tr>
<td>0092314</td>
<td>Drugs of Abuse Confirmation/Quantitation - Opiates – Meconium</td>
<td>Drug Detection Panel, Meconium, Qualitative (3004583)</td>
</tr>
<tr>
<td>0092315</td>
<td>Drugs of Abuse Panel, Meconium - Screen with Reflex to Confirmation/Quantitation</td>
<td>Drug Detection Panel, Meconium, Qualitative (3004583)</td>
</tr>
<tr>
<td>2014035</td>
<td>Familial Transthyretin Amyloidosis (TTR) Sequencing</td>
<td>Familial Transthyretin Amyloidosis (TTR) Sequencing (3004531)</td>
</tr>
<tr>
<td>2003981</td>
<td>Kappa Light Chains by Immunohistochemistry</td>
<td>Kappa Lambda Dual Stain by IHC (3004541)</td>
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<tr>
<td>0050667</td>
<td>Lambda Light Chains by Immunohistochemistry</td>
<td>Kappa Lambda Dual Stain by IHC (3004541)</td>
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<tr>
<td>0051390</td>
<td>Multiple Endocrine Neoplasia Type 2 (MEN2), RET Gene Mutations by Sequencing (Temporary Referral as of 12/07/20)</td>
<td>Multiple Endocrine Neoplasia Type 2 (MEN2), RET Sequencing (3004572)</td>
</tr>
<tr>
<td>3001768</td>
<td>Pancreatitis (PRSS1) Sequencing and Deletion/Duplication</td>
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<tr>
<td>2002012</td>
<td>Pancreatitis (SPINK1) Sequencing</td>
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<tr>
<td>2010876</td>
<td>Pancreatitis, Panel (CFTR, CTRC, PRSS1, SPINK1) Sequencing (Temporary Referral as of 12/07/20)</td>
<td>Pancreatitis Panel (CFTR, CTRC, PRSS1, SPINK1), Sequencing (3004788)</td>
</tr>
<tr>
<td>0092315</td>
<td>Phencyclidine (PCP) - Confirmation/Quantitation – Meconium</td>
<td>Drug Detection Panel, Meconium, Qualitative (3004583)</td>
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<tr>
<td>0050302</td>
<td>Raji Cell Immune Complex Assay</td>
<td>Circulating Immune Complex, C3 fragments (3004431)</td>
</tr>
<tr>
<td>3001401</td>
<td>SHOX-Related Disorders, Deletion/Duplication with Reflex to Sequencing</td>
<td>SHOX Deficiency Disorders, Sequencing and Deletion/Duplication (3004603)</td>
</tr>
</tbody>
</table>