HOTLINE: Effective August 17, 2020

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.

Hotline Page #	Test Number	Summary of Changes by Test Name	Name Change	Methodology	Performed/Reported Schedule	Specimen Requirements	Reference Interval	Interpretive Data	Note	CPT Code	Component Change	Other Interface Change	New Test	Inactive
6	3001302	*ALK* Gene Rearrangements by FISH, Lung									x			
51	0093514	Allergen, Food, Sage IgE												x
51	2006438	Allergen, Fungi and Molds, *Pityrosporum orbiculare*/Malassezia IgE												x
7	2008893	Amphiphysin Antibody, IgG			x	x				x				
7	3002791	Androgen Receptor by Immunohistochemistry											x	
7	0060845	Antibiotic Level, Aztreonam			x									
7	2004886	Antibiotic Level, Ceftazidime			x									
8	0060844	Antibiotic Level, Meropenem			x									

Hotline Page #	Test Number	Summary of Changes by Test Name	Name Change	Methodology	Performed/Reported Schedule	Specimen Requirements	Reference Interval	Interpretive Data	Note	CPT Code	Component Change	Other Interface Change	New Test	Inactive
8	0060843	Antibiotic Level, Nafcillin			x									
8	0060842	Antibiotic Level, Piperacillin			x									
8	0060841	Antibiotic Level, Ticarcillin			x									
8	0060846	Antifungal Level, 5-Fluorocytosine (5-FC)			x									
8	0099007	Antimony, Blood				x	x	x	x					
9	0050317	Antinuclear Antibodies (ANA), IgG by ELISA with Reflex to ANA HEp-2 Substrate, IgG by IFA and ENA Confirmation							x			x		
9	0050080	Antinuclear Antibodies (ANA), IgG by ELISA with Reflex to ANA, HEp-2 Substrate, IgG by IFA							x			x		
9	3000082	Antinuclear Antibody (ANA) with HEp-2 Substrate, IgG by IFA						x	x			x		
10	3000601	Antinuclear Antibody (ANA) with HEp-2 Substrate, IgG by IFA with Reflex by Pattern							x			x		
10	0050101	*Aspergillus* Antibodies by CF and ID			x	x								
10	0050100	*Aspergillus* Antibody by CF				x								
10	0050171	*Aspergillus* spp. Antibodies by Immunodiffusion			x									
11	3002787	Autoimmune Encephalitis Reflexive Panel, CSF											x	
12	3002887	Autoimmune Neurologic Disease Reflexive Panel, CSF											x	
14	2013944	Autoimmune Neurologic Disease Reflexive Panel, Serum					x		x	x		x		
16	0092099	B-Cell CD20 Expression									x			
17	3001311	*BCL6* (3q27) Gene Rearrangement by FISH									x			
17	3002729	Beta Amyloid Protein by Immunohistochemistry											x	
17	0050578	Beta Globin (*HBB*) Gene Sequencing					x	x						
18	3000231	*Blastomyces dermatitidis* Antibodies by EIA with Reflex to Immunodiffusion, CSF			x									
18	3000236	*Blastomyces dermatitidis* Antibodies by EIA with Reflex to Immunodiffusion, Serum			x									
18	0050172	*Blastomyces dermatitidis* Antibodies by Immunodiffusion			x	x								
18	0060117	*Bordetella pertussis* Culture			x									
51	0020140	Calcium, Ionized, Whole Blood												x
51	0092303	Calprotectin, Fecal												x
19	3002859	Calprotectin, Fecal by Immunoassay											x	
51	0080469	Chromogranin A												x
20	3002867	Chromogranin A, Serum											x	

Hotline Page #	Test Number	Summary of Changes by Test Name	Name Change	Methodology	Performed/Reported Schedule	Specimen Requirements	Reference Interval	Interpretive Data	Note	CPT Code	Component Change	Other Interface Change	New Test	Inactive
20	2007130	Chromosome Analysis, Bone Marrow with Reflex to Genomic Microarray			x									
20	2005763	Chromosome Analysis, Constitutional Blood, with Reflex to Genomic Microarray	x		x									
20	2002289	Chromosome Analysis, Constitutional Peripheral Blood	x											
20	2007131	Chromosome Analysis, Leukemic Blood with Reflex to Genomic Microarray			x									
21	2005762	Chromosome Analysis, Products of Conception, with Reflex to Genomic Microarray			x									
51	2006366	Chronic Granulomatous Disease (NCF1) Exon 2 GT Deletion												x
51	3000544	Chronic Granulomatous Disease Panel (CYBB Sequencing and NCF1 Exon 2 GT Deletion)												x
51	3000541	Chronic Granulomatous Disease, X-Linked (CYBB) Sequencing												x
21	0060140	*Clostridium difficile* Culture with Reflex to Cytotoxin Cell Assay			x									
21	3000061	*Coccidioides* Antibodies Panel, CSF by CF, ID, ELISA			x									
21	0050588	*Coccidioides* Antibodies Panel, Serum by CF, ID, ELISA			x									
21	3001982	Coccidioides Antibody Reflexive Panel			x									
21	0050183	*Coccidioides immitis* Antibodies by Immunodiffusion			x									
21	3000058	*Coccidioides immitis* by Immunodiffusion, CSF			x									
21	3000480	Comprehensive Systemic Sclerosis Panel										x		
22	0060360	*Corynebacterium diphtheriae* Culture			x									
22	0050503	Coxsackie A9 Virus Antibodies by CF				x	x							
22	3000479	Criteria Systemic Sclerosis Panel										x		
22	2009353	Cytogenomic SNP Microarray with Five-Cell Chromosome Study, Constitutional Blood	x											
22	3001304	*DDIT3 (CHOP)* (12q13) Gene Rearrangement by FISH									x			
22	0013039	Donath Landsteiner				x								
23	0092420	Drug Screen 9 Panel, Serum or Plasma - Immunoassay Screen with Reflex to Mass Spectrometry Confirmation/Quantitation					x							
23	3001310	*EGFR* Gene Amplification by FISH									x			
23	3001305	*EWSR1* (22q12) Gene Rearrangement by FISH									x			

Hotline Page #	Test Number	Summary of Changes by Test Name	Name Change	Methodology	Performed/Reported Schedule	Specimen Requirements	Reference Interval	Interpretive Data	Note	CPT Code	Component Change	Other Interface Change	New Test	Inactive
23	3001297	*FOXO1* (*FKHR*) (13q14) Gene Rearrangement by FISH									x			
51	2005350	*Francisella tularensis* Antibodies, IgG and IgM												x
24	3002912	Francisella tularensis Antibodies, IgG and IgM with Reflex to Agglutination											x	
51	2005353	*Francisella tularensis* Antibody, IgG												x
25	3002913	Francisella tularensis Antibody, IgG with Reflex to Agglutination											x	
51	2005354	*Francisella tularensis* Antibody, IgM												x
26	3002914	Francisella tularensis Antibody, IgM with Reflex to Agglutination											x	
26	0050164	Fungal Antibodies by Immunodiffusion			x	x								
27	3000235	Fungal Antibodies with Reflex to *Blastomyces dermatitidis* Antibodies by Immunodiffusion				x								
27	3000230	Fungal Antibodies with Reflex to *Blastomyces dermatitidis* Antibodies by Immunodiffusion, CSF				x								
27	3000548	*FUS* (16p11) Gene Rearrangement by FISH									x			
27	3002788	Glutamic Acid Decarboxylase Antibody, CSF											x	
51	0050613	Hemoglobin (Hb) A2 and F by Column												x
28	3002644	Hemoglobin (Hb) A2 and F by Column with Reflex to Electrophoresis											x	
51	0081348	Hemoglobin F												x
29	3002645	Hemoglobin F with Reflex to Electrophoresis											x	
29	3001234	Hepatitis C Virus (HCV) GenoSure NS3 and NS4A											x	
51	2010647	Hepatitis C Virus (HCV) NS3/4A Protease Inhibitor Resistance, GenoSure												x
30	0050625	*Histoplasma* Antibodies by CF				x								
30	0050627	*Histoplasma* Antibodies by CF & ID			x	x								
30	0050174	*Histoplasma* spp. Antibodies by Immunodiffusion			x	x								
31	3002850	HLA Antibody Screen, Class I and Class II											x	
31	3002061	HLA Class I and II Panel (A,B,C,*DRB1*, *DQA1*, *DQB1*, *DPB1*) by Next Generation Sequencing										x		
31	3002062	HLA Class I and II Panel (A,B,C,*DRB1*, *DRB345*, *DQA1*, *DQB1*, *DPA1*, *DPB1*) by Next Generation Sequencing										x		
31	3002307	HLA Class I Panel (ABC) by Next Generation Sequencing										x		

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51	2008438	Human Immunodeficiency Virus Type 1 (HIV-1) Drug Resistance (GenoSURE PRIme)												x
32	3001238	Human Immunodeficiency Virus Type 1 (HIV-1) GenoSure PRIme											x	
32	3001246	Human Immunodeficiency Virus Type 1 (HIV-1) Trofile Co-Receptor Tropism											x	
51	0051367	Hypochondroplasia (FGFR3) 2 Mutations												x
32	3001298	*IGH-BCL2* Fusion, t(14;18) by FISH									x			
33	3001306	*IGH-CCND1* Fusion, t(11;14) by FISH									x			
33	3001299	*IGH-MYC* Fusion t(8;14) by FISH									x			
33	3001784	Interstitial Lung Disease Autoantibody Panel										x		
33	3001568	*IRF4/DUSP22* (6p25) Gene Rearrangement by FISH									x			
51	0040105	Kleihauer-Betke Stain for Fetal Hemoglobin												x
33	0060113	*Legionella* Species, Culture			x									
33	0050119	Lupus Comprehensive Reflexive Panel							x			x		
34	3001301	*MDM2* Gene Amplification by FISH									x			
34	3001313	*MET* Gene Amplification by FISH									x			
34	0049302	Mismatch Repair by Immunohistochemistry									x			
34	2002327	Mismatch Repair by Immunohistochemistry with Reflex to *BRAF* Codon 600 Mutation and *MLH1* Promoter Methylation									x			
34	2005270	Mismatch Repair by Immunohistochemistry with Reflex to *MLH1* Promoter Methylation									x			
35	2007967	Motor and Sensory Neuropathy Evaluation with Immunofixation Electrophoresis and Reflex to Titer and Neuronal Immunoblot					x		x	x		x		
39	2007966	Motor and Sensory Neuropathy Evaluation with Reflex to Titer and Neuronal Immunoblot					x		x	x		x		
40	3001300	*MYC* (8q24) Gene Rearrangement by FISH									x			
40	3001307	*MYCN* (*N-MYC*) Gene Amplification by FISH									x			
40	2003294	*Mycoplasma hominis* Culture, Urogenital Source			x									
41	2013805	Natural Killer Cell and Natural Killer T-Cell Panel				x	x	x		x	x	x		
51	2007963	Neuronal Nuclear Antibodies (Hu, Ri, Yo) IgG by Immunoblot												x
42	3002917	Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum											x	
42	0060093	*Nocardia* Culture and Gram Stain			x									
43	3002780	Nuclear Protein in Testis by Immunohistochemistry											x	

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43	0060720	Organism Identification by 16S rDNA Sequencing			x									
43	3001309	1p/19q Deletion by FISH									x			
43	0092628	P/Q-Type Voltage-Gated Calcium Channel (VGCC) Antibody				x								
51	0080526	Pancreatic Elastase, Fecal by ELISA												x
44	3002858	Pancreatic Elastase, Fecal by Immunoassay											x	
44	2007961	Paraneoplastic Antibodies (PCCA/ANNA) by IFA with Reflex to Titer and Immunoblot					x		x	x		x		
45	2010841	Paraneoplastic Antibodies (PCCA/ANNA) by IFA with Reflex to Titer and Immunoblot, CSF					x			x				
51	2013955	Paraneoplastic Reflexive Panel												x
46	3002929	Paraneoplastic Reflexive Panel											x	
46	3000134	Prostate Health Index			x									
47	3001053	Red Blood Cell Antigen Genotyping			x	x		x						
47	3001312	*RET* Gene Rearrangements by FISH									x			
48	3001308	*ROS1* by FISH									x			
48	2007965	Sensory Neuropathy Antibody Panel with Reflex to Titer and Neuronal Immunoblot					x		x	x		x		
48	3002886	SOX1 Antibody, IgG by Immunoblot, CSF											x	
49	3002885	SOX1 Antibody, IgG by Immunoblot, Serum											x	
49	3001303	*SS18* (*SYT*) (18q11) Gene Rearrangement by FISH									x			
49	3002633	*TFE3* Gene Rearrangement by FISH									x			
50	3002570	Trofile (DNA) Co-Receptor Tropism											x	
51	0093370	Trofile Co-Receptor Tropism												x
50	0060714	Unusual Organism Culture			x									
50	3002479	Autoimmune Liver Disease Reflexive Panel							x			x		
50	3002480	Primary Biliary Cholangitis Panel							x			x		

3001302 ***ALK* Gene Rearrangements by FISH, Lung** **ALK_FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002935, Total Cell Count
Remove component 3000702, Total Cell Count

2008893 Amphiphysin Antibody, IgG — AMPHIPHYS

Performed: Mon, Thu, Sat
Reported: 1-4 days

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: 0.30 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma. Contaminated, heat-inactivated, hemolyzed, or lipemic specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

CPT Code(s): 84182

New Test Available Now Click for Pricing — 3002791 Androgen Receptor by Immunohistochemistry — AR IHC

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

Specimen Required: Collect: Tissue.
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 (recommended but not required), (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.
Unacceptable Conditions: Specimens submitted with nonrepresentative tissue type. Depleted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Interpretive Data:

See Compliance Statement B: www.aruplab.com/CS

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.

0060845 Antibiotic Level, Aztreonam — ML AZTREO

Performed: Sun-Sat
Reported: 2-3 days

2004886 Antibiotic Level, Ceftazidime — ML CEFTAZ

Performed: Sun-Sat
Reported: 2-3 days

0060844 **Antibiotic Level, Meropenem** **ML MERO**

Performed: Sun-Sat
Reported: 2-3 days

0060843 **Antibiotic Level, Nafcillin** **ML NAF**

Performed: Sun-Sat
Reported: 2-3 days

0060842 **Antibiotic Level, Piperacillin** **ML PIP**

Performed: Sun-Sat
Reported: 2-3 days

0060841 **Antibiotic Level, Ticarcillin** **ML TICAR**

Performed: Sun-Sat
Reported: 2-3 days

0060846 **Antifungal Level, 5-Fluorocytosine (5-FC)** **ML 5-FLUOR**

Performed: Sun-Sat
Reported: 2-3 days

0099007 **Antimony, Blood** **ANT B**

Specimen Required: Patient Prep: Diet, medication, and nutritional supplements may introduce interfering substances. Patient should be encouraged to discontinue nutritional supplements, vitamins, minerals, and non-essential over-the-counter medications (upon the advice of their physician).
Collect: Glass BD Trace Element Free (K_2EDTA or Na_2EDTA) Tube.
Specimen Preparation: Transport whole blood in the original collection tube. (Min: 0.5 mL)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated.
Unacceptable Conditions: Specimens collected in containers other than specified. Specimens transported in containers other than specified. Heparin anticoagulant. Clotted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: Less than or equal to 3.0 µg/L

Interpretive Data:
Elevated results may be due to skin or collection-related contamination, including the use of a noncertified antimony-free collection tubes (including plastic BD Vacutainer Trace Element Tubes) or transport tube. If contamination concerns exist due to elevated levels of blood antimony, confirmation with a second specimen collected in a certified antimony-free tube is recommended.

Blood antimony levels predominantly reflect recent exposure and are most useful in the diagnosis of acute poisoning. Blood concentrations in unexposed individuals rarely exceed 3 µg/L. The form of antimony greatly influences distribution and elimination. Trivalent antimony readily enters red blood cells, has an extended half-life on the order of weeks to months, and is eliminated predominantly through the bile. Pentavalent antimony resides in the plasma, has a relatively short half-life on the order of hours to days, and is eliminated predominantly through the kidneys. Reported symptoms after toxic antimony exposure vary based upon route of exposure, duration and antimony source and may include abdominal pain, dyspnea, nausea, vomiting, dermatitis and eye irritation. Clinical presentation is similar to that of inorganic arsenic exposure.
See Compliance Statement B: www.aruplab.com/CS

Note: BD Plastic Royal Blue (Na_2EDTA/K_2EDTA) collection tubes are not certified to be antimony-free.

0050317 Antinuclear Antibodies (ANA), IgG by ELISA with Reflex to ANA HEp-2 Substrate, IgG by IFA and ENA Confirmation — ANA REF

Note: ANA lacks diagnostic specificity, and is associated with in variety diseases (cancers, autoimmune, infectious, and inflammatory conditions) and occurs in healthy individuals in varying prevalence. The lack of diagnostic specificity requires confirmation of positive ANA by more-specific serologic tests, which may be guided by the pattern(s) observed.

Specimens are screened for ANA using ELISA. If ANA IgG is detected by ELISA, then Antinuclear Antibody (ANA), HEp-2, IgG by IFA will be added. If ANA, IgG by IFA is confirmed positive with a titer of 1:80 or greater, then a titer and pattern will be reported. In addition, samples positive for ANA, IgG by IFA will reflex to Double-Stranded DNA (dsDNA) Antibody, IgG by ELISA; Jo-1 Antibody, IgG; Smith/RNP (ENA) Antibody, IgG; Scleroderma (Scl-70) (ENA) Antibody, IgG; Smith (ENA) Antibody, IgG; SSA 52 and 60 (Ro) (ENA) Antibodies, IgG; and SSB (La) (ENA) Antibody, IgG. If Double-Stranded DNA (dsDNA) Antibody, IgG by ELISA is detected, then Double-Stranded DNA (dsDNA) Antibody, IgG by IFA (using *Crithidia luciliae*) will be added. Additional charges apply.

ANA identified by indirect fluorescence assay (IFA) using HEp-2 substrate and IgG-specific conjugate at a screening dilution of 1:80. Positive nuclear patterns reported include homogeneous, speckled, centromere, nucleolar, or nuclear dots. Positive cytoplasmic patterns reported include reticular/AMA, discrete/GW body-like, polar/golgi-like, rods and rings, or cytoplasmic speckled patterns. All positive results are reported with endpoint titers at no additional charge.

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add component 3002774, Cytoplasm Pattern to reflexive orderable 3000478

0050080 Antinuclear Antibodies (ANA), IgG by ELISA with Reflex to ANA, HEp-2 Substrate, IgG by IFA — ANA

Note: ANA lacks diagnostic specificity, and is associated with a variety of diseases (cancers, autoimmune, infectious, and inflammatory conditions) and occurs in healthy individuals in varying prevalence. The lack of diagnostic specificity requires a confirmation of positive ANA by more-specific serologic tests, which may be guided by the pattern(s) observed.

If ANA are detected by ELISA, then Antinuclear Antibody (ANA), HEp-2, IgG by IFA will be added. Additional charges apply

ANA identified by indirect fluorescence assay (IFA) using HEp-2 substrate and IgG-specific conjugate at a screening dilution of 1:80. Positive nuclear patterns reported include homogeneous, speckled, centromere, nucleolar, or nuclear dots. Positive cytoplasmic patterns reported include reticular/AMA, discrete/GW body-like, polar/golgi-like, rods and rings, or cytoplasmic speckled patterns. All positive results are reported with endpoint titers at no additional charge.

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add component 3002774, Cytoplasm Pattern to reflexive orderable 3000478

3000082 Antinuclear Antibody (ANA) with HEp-2 Substrate, IgG by IFA — ANA IFA AB

Interpretive Data:
Presence of antinuclear antibodies (ANA) is a hallmark feature of systemic autoimmune rheumatic diseases (SARD). However, ANA lacks diagnostic specificity and is associated with a variety of diseases (cancers, autoimmune, infectious, and inflammatory conditions) and may also occur in healthy individuals in varying prevalence. The lack of diagnostic specificity requires confirmation of positive ANA by more specific serologic tests. ANA (nuclear reactivity) positive patterns reported include centromere, homogeneous, nuclear dots, nucleolar, or speckled. ANA (cytoplasmic reactivity) positive patterns reported include reticular/AMA, discrete/GW body-like, polar/golgi-like, cytoplasmic speckled or rods and rings. All positive patterns are reported to endpoint titers (1:2560). Reported patterns may help guide differential diagnosis, although they may not be specific for individual antibodies or diseases. Mitotic staining patterns not reported. Negative results do not necessarily rule out SARD.

Note: ANA identified by indirect fluorescence assay (IFA) using HEp-2 substrate and IgG-specific conjugate at a screening dilution of 1:80. Positive nuclear patterns reported include homogeneous, speckled, centromere, nucleolar, or nuclear dots. Positive cytoplasmic patterns reported include reticular/AMA, discrete/GW body-like, polar/golgi-like, rods and rings, or cytoplasmic speckled patterns. All positive results are reported with endpoint titers at no additional charge.

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add component 3002774, Cytoplasm Pattern to reflexive orderable 3000478

3000601 Antinuclear Antibody (ANA) with HEp-2 Substrate, IgG by IFA with Reflex by Pattern — ANA AB PAT

Note: The Antinuclear Antibody (ANA), IgG by IFA with Reflex by IFA Pattern begins with Nuclear Antibody (ANA) by IFA, IgG. Depending on findings, one or more reflexive tests may be required. Tests added may include Double-Stranded DNA (dsDNA) Antibody, IgG by ELISA; Double-Stranded DNA (dsDNA) Antibody, IgG by IFA (using *Crithidiae luciliae*); Chromatin Antibody, IgG; Smith/RNP (ENA) Antibody, IgG; Fibrillarin (U3 RNP) Antibody, IgG; Smith (ENA) Antibody, IgG; SSA 52 (Ro) (ENA) Antibody, IgG; SSA 60 (Ro) (ENA) Antibody, IgG; SSB (La) (ENA) Antibody, IgG; Scleroderma (Scl-70) (ENA) Antibody, IgG; PM/Scl-100 Antibody, IgG, by Immunoblot; and/or RNA Polymerase III Antibody, IgG. Additional charges apply.

ANA identified by indirect fluorescence assay (IFA) using HEp-2 substrate and IgG-specific conjugate at a screening dilution of 1:80. Positive nuclear patterns reported include homogeneous, speckled, centromere, nucleolar, or nuclear dots. Positive cytoplasmic patterns reported include reticular/AMA, discrete/GW body-like, polar/golgi-like, rods and rings, or cytoplasmic speckled patterns. All positive results are reported with endpoint titers at no additional charge.

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add component 3002774, Cytoplasm Pattern to reflexive orderable 3000478

0050101 *Aspergillus* Antibodies by CF and ID — ASPER PRO

Performed: Sun-Fri
Reported: 3-6 days

Specimen Required: Collect: Serum separator tube.
Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer1 mL serum to an ARUP Standard Transport Tube. (Min: 0.5 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 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)

0050100 *Aspergillus* Antibody by CF — ASPER

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: 0.4 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 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)

0050171 *Aspergillus* spp. Antibodies by Immunodiffusion — ASPER PPT

Performed: Sun-Fri
Reported: 3-6 days

New Test **3002787** **Autoimmune Encephalitis Reflexive Panel, CSF** **AENCEPHCSF**
Click for Pricing

Methodology: Semi-Quantitative Indirect Fluorescent Antibody/Quantitative Radioimmunoassay/Semi-Quantitative Enzyme-Linked Immunosorbent Assay
Performed: Tue
Reported: 3-10 days

Specimen Required: Collect: CSF
Specimen Preparation: Transfer three (3) 1 mL CSF aliquots to ARUP Standard Transport Tubes. (Min: 0.5 mL/aliquot)
Storage/Transport Temperature: Frozen.
Unacceptable Conditions: Contaminated specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: 1 month (avoid repeated freeze/thaw cycles)

Reference Interval:

Test Number	Components	Reference Interval
3002788	Glutamic Acid Decarboxylase Antibody, CSF	0.0 – 5.0 IU/mL
2005164	N-methyl-D-Aspartate Receptor Antibody, IgG, CSF with Reflex to Titer N-methyl-D-Aspartate Receptor Ab, CSF	< 1:1
2011699	Aquaporin-4 Receptor Antibody, IgG by IFA, CSF with Reflex to Titer Neuromyelitis Optica/AQP4-IgG, CSF Rflx	Less than 1:1
3001257	Alpha-Amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, CSF	Less than 1:1
3001267	Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, CSF	Less than 1:1
3001387	Voltage-Gated Potassium Channel (VGKC) Antibody, CSF	Negative: 0.0-1.1 pmol/L Positive: 1.2 pmol/L or greater
3001986	Contactin-Associated Protein-2 Antibody, IgG with Reflex to Titer, CSF	Less than 1:1
3001992	Leucine-Rich, Glioma-Inactivated Protein 1 Antibody, IgG with Reflex to Titer, CSF	Less than 1:1

Interpretive Data:
Refer to report.
See Compliance Statement D: www.aruplab.com/CS

Note: If NMDA CSF antibody IgG is positive, then an NMDA CSF antibody IgG titer is reported. Additional charges apply.
If AQP4 antibody IgG is positive, then an AQP4 antibody IgG titer is reported. Additional charges apply.
If Alpha-Amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, CSF IgG is positive, then an Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody Titer, IgG, CSF is reported. Additional charges apply.
If Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, CSF is positive, then a Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody Titer, IgG, CSF is performed. Additional charges apply.
If CASPR2 antibody IgG is positive, then CASPR2 antibody IgG titer will be added. Additional charges apply.
If LGI1 antibody IgG is positive, then LGI1 antibody IgG titer will be added. Additional charges apply.

CPT Code(s): 86255; if reflexed, add 86256
86255; if reflexed, add 86256
86255; if reflexed, add 86256
86255; if reflexed, add 86256
83519
86341
86255; if reflexed, add 86256
86255; if reflexed, add 86256

New York DOH approval pending. Call for status update.

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

New Test **3002887** **Autoimmune Neurologic Disease Reflexive Panel, CSF** **NEURORCSF**

Click for Pricing

Supplemental Resources

Methodology: Semi-Quantitative Indirect Fluorescent Antibody/Qualitative Immunoblot/Quantitative Radioimmunoassay/Semi-quantitative Enzyme-Linked Immunosorbent Assay

Performed: Tue

Reported: 3-10 days

Specimen Required: Collect: CSF
Specimen Preparation: Transfer three 1 mL CSF aliquots to ARUP Standard Transport Tubes. (Min: 0.5 mL/aliquot)
Storage/Transport Temperature: Frozen
Unacceptable Conditions: Fluid other than CSF. Grossly hemolyzed specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: 1 month (avoid repeated freeze/thaw cycles)

Reference Interval:

Test Number	Components	Reference Interval
2005164	N-methyl-D-Aspartate Receptor Antibody, IgG, CSF with Reflex to Titer	< 1:1
3001257	Alpha-Amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, CSF	Less than 1:1
3001267	Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, CSF	Less than 1:1
3001986	Contactin-Associated Protein-2 Antibody, IgG with Reflex to Titer, CSF	Less than 1:1
3001387	Voltage-Gated Potassium Channel (VGKC) Antibody, CSF	Negative: 0.0-1.1 pmol/L Positive: 1.2 pmol/L or greater
2010841	Paraneoplastic Antibodies (PCCA/ANNA) by IFA with Reflex to Titer and Immunoblot, CSF	**Test Number / Components / Reference Interval** Paraneoplastic Abs (PCCA/ANNA) IgG, CSF: None Detected Neuronal Nuclear Ab Titer, IgG CSF: Less than 1:1 Purkinje Cell Antibody Titer IgG, CSF: Less than 1:1 2010847 Neuronal Nuclear Abs IgG ImmunoBlot, CSF: **Components / Reference Interval** Neuronal Nuclear Ab (Hu) IgG, IB, CSF: Negative Neuronal Nuclear Ab (Ri) IgG, IB, CSF: Negative Neuronal Nuclear Ab (Yo) IgG, IB, CSF: Negative
3001992	Leucine-Rich, Glioma-Inactivated Protein 1 Antibody, IgG with Reflex to Titer, CSF	Less than 1:1
3002257	CV2.1 Screen by IFA with Reflex to Titer, CSF	Less than 1:1
3002788	Glutamic Acid Decarboxylase Antibody, CSF	0.0-5.0 IU/mL
3002904	SOX1 Antibody, IgG by Immunoblot, CSF	Negative

Interpretive Data:
Refer to Report
See Compliance Statement D: www.aruplab.com/CS

Note: If NMDA CSF antibody IgG is positive, then an NMDA CSF antibody IgG titer is reported. Additional charges apply.
If Alpha-Amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, CSF IgG is positive, then an Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody Titer, IgG, CSF is reported. Additional charges apply.
If Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, CSF is positive, then a Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody Titer, IgG, CSF is performed. Additional charges apply.
If CASPR2 antibody IgG is positive, then CASPR2 antibody IgG titer will be added. Additional charges apply.

PCCA/ANNA antibodies are screened by IFA. If the IFA screen is indeterminate then the Immunoblot will be added. If the IFA screen is positive at 1:1, then a specific titer (PCCA or ANNA) and Immunoblot will be added. Additional charges apply.
If LGI1 antibody IgG is positive, then LGI1 antibody IgG titer will be added. Additional charges apply.
If CV2.1 Antibody IgG Screen by IFA, CSF is positive, then CV2.1 Antibody IgG Titer, CSF will be added. Additional charges apply.

CPT Code(s):
86255; if reflexed, add 86256
86255; if reflexed, add 86256
86255; if reflexed, add 86256
86255; if reflexed, add 86256
83519
86255; if reflexed add 84182 x3 and/or 86256
86255; if reflexed, add 86256
86255; if reflexed, add 86256
86341
84182

New York DOH approval pending. Call for status update.

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

2013944	**Autoimmune Neurologic Disease Reflexive Panel, Serum**	**NEURO R**

Reference Interval:

Test Number	Components	Reference Interval
0050746	Striated Muscle Antibodies, IgG with Reflex to Titer	Less than 1:40
2004221	N-methyl-D-Aspartate Receptor Antibody, IgG, Serum with Reflex to Titer	< 1:10
2001771	Glutamic Acid Decarboxylase Antibody	0.0-5.0 IU/mL
2013956	CV2.1 Screen by IFA with Reflex to Titer	Less than 1:10
0092628	P/Q-Type Voltage-Gated Calcium Channel (VGCC) Antibody	Effective November 14, 2011 Negative: 0.0 to 24.5 pmol/L Indeterminate: 24.6 to 45.6 pmol/L Positive: 45.7 pmol/L or greater
2005636	Titin Antibody	Effective January 17, 2012 **Titin Antibody** Negative: 0.00-0.45 IV Indeterminate: 0.46-0.71 IV Positive: 0.72 IV or greater
2004890	Voltage-Gated Potassium Channel (VGKC) Antibody, Serum	Negative: 31 pmol/L or less Indeterminate: 32-87 pmol/L Positive: 88 pmol/L or greater
2003036	Aquaporin-4 Receptor Antibody	Effective October 3, 2016 Negative: 2.9 U/mL or less Positive: 3.0 U/mL or greater
0080009	Acetylcholine Receptor Binding Antibody	Negative: 0.0-0.4 nmol/L Positive: 0.5 nmol/L or greater
2007961	Paraneoplastic Antibodies (PCCA/ANNA) by IFA with Reflex to Titer and Immunoblot	Effective August 17, 2020

Test Number	Components	Reference Interval
	Purkinje Cell/Neuronal Nuclear IgG Scrn	None Detected
	Neuronal Nuclear Antibody (ANNA) IFA Titer, IgG	Less than 1:10
	Purkinje Cell Antibody, Titer	Less than 1:10
3002917	Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum	**Components** / **Reference Interval** Neuronal Nuclear Ab (Hu) IgG, IB, Serum: Negative Neuronal Nuclear Ab (Ri) IgG, IB, Serum: Negative Neuronal Nuclear Ab (Yo) IgG, IB, Serum: Negative Neuronal Nuclear Ab (Tr/DNER) IgG, IB: Negative

2008893	Amphiphysin Antibody, IgG	Negative
2013320	Aquaporin-4 Receptor Antibody, IgG by IFA with Reflex to Titer, Serum	Less than 1:10
2009456	Leucine-Rich, Glioma-Inactivated Protein 1 Antibody, IgG with Reflex to Titer, Serum	Less than 1:10

2009452	Contactin-Associated Protein-2 Antibody, IgG with Reflex to Titer, Serum	Less than 1:10
0099521	Acetylcholine Receptor Modulating Antibody	Effective August 20, 2012
		Negative: 0-45% modulating Positive: 46% or greater modulating
	N-Type Calcium Channel Antibody	
		Negative: 0.0 to 69.9 pmol/L Indeterminate: 70.0 to 110.0 pmol/L Positive: 110.1 pmol/L or greater
3001260	Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, Serum	Less than 1:10
3001270	Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, Serum	Less than 1:10
3001277	Myelin Oligodendrocyte Glycoprotein (MOG) Antibody, IgG by IFA with Reflex to Titer, Serum	Less than 1:10

Note: If Striated Muscle Ab is detected, then a titer will be added. Additional charges apply.
If N-methyl-D-Aspartate Receptor Antibody is positive, then titer will be added. Additional charges apply.
If CV2.1 Antibody IgG Screen by IFA is positive, then a titer will be added. Additional charges apply.
If Aquaporin-4 Receptor Antibody IgG by ELISA is positive, then Aquaporin-4 Receptor Antibody, IgG by IFA will be added. If positive, then a titer will be added. Additional charges apply.
If Acetylcholine Receptor Binding Antibody result is greater than 0.4 nmol/L then Acetylcholine Receptor Modulating Antibody will be added. Additional charges apply.
Purkinje Cell (PCCA) antibody and Neuronal Nuclear (ANNA) antibody IgG are screened by IFA. If the IFA screen is indeterminate, then a Neuronal Nuclear Antibodies (Hu, Ri, Yo, and Tr/DNER) IgG by Immunoblot will be added. If the IFA screen is positive at 1:10 or greater, then a PCCA/ANNA antibodies titer and Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot will be added. Additional charges apply.
If LGI1 antibody IgG is positive, then LGI1 antibody IgG titer will be added. Additional charges apply.
If CASPR2 antibody IgG is positive, then CASPR2 antibody IgG titer will be added. Additional charges apply.
If Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, Serum is positive, then an Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody Titer, IgG, Serum is reported. Additional charges apply.
If Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, Serum is positive, then a Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody Titer, IgG, Serum is performed. Additional charges apply.
If Myelin Oligodendrocyte Glycoprotein (MOG) Antibody, IgG by IFA with Reflex to Titer, Serum is positive, then a Myelin Oligodendrocyte Glycoprotein (MOG) Antibody Titer, IgG is performed. Additional charges apply.

CPT Code(s): 83519 x4; 83516 x2; 84182; 86255 x9; 86341; if reflexed add 86256; if reflexed add 86256; if reflexed add 86256; if reflexed add 86255 if further reflexed add 86256; if reflexed add 83516; if reflexed add 84182 x4 and/or 86256; if reflexed, add 86256; if reflexed, add 86256; if reflexed, add 86256; if reflexed, add 86256; if reflexed, add 86256; if reflexed add 86256.

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add reflex to 3002917, Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum
Remove reflex from 2007963, Neuronal Nuclear Antibodies (Hu, Ri, Yo) IgG by Immunoblot

0092099 B-Cell CD20 Expression CD20

HOTLINE NOTE: There is a component change associated with this test.
Remove component 0096213, % CD19
Remove component 0096214, % CD20

3001311 *BCL6* (3q27) Gene Rearrangement by FISH — BCL6_FISH

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002937, Total Cell Count
Remove component 3000702, Total Cell Count

New Test 3002729 Beta Amyloid Protein by Immunohistochemistry — B AMYL IHC

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

Specimen Required: Collect: Tissue.
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 (recommended but not required), (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.
Unacceptable Conditions: Specimens submitted with nonrepresentative tissue type. Depleted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Interpretive Data:

See Compliance Statement B: www.aruplab.com/CS

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.

0050578 Beta Globin (*HBB*) Gene Sequencing — BGSEQ

Interpretive Data:
Background Information: Beta Globin (*HBB*) Sequencing
Characteristics: Structural hemoglobinopathies or thalassemias (insufficient or absent beta-chain production).
Incidence: Varies with ethnicity.
Inheritance: Usually autosomal recessive, infrequently autosomal dominant.
Cause: Pathogenic variants in the *HBB* gene.
Clinical Sensitivity: Up to 97 percent, depending upon ethnicity.
Methodology: Bidirectional sequencing of the *HBB* coding regions, intron-exon boundaries, 5' proximal promoter and untranslated region, 3'polyadenylation signal, and intronic variants c.93-21 (IVS-I-110), c.316-197 (IVS-II-654), c.316-146 (IVS-II-705), c.316-106 (IVS-II-745), and c.316-86_316-85 (IVS-II-765 L1).
Analytical sensitivity: 99 percent.
Limitations: Diagnostic errors can occur due to rare sequence variations. Large deletions and variants in distal regulatory elements are not detected.

See Compliance Statement C: www.aruplab.com/CS

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

3000231 ***Blastomyces dermatitidis* Antibodies by EIA with Reflex to Immunodiffusion, CSF** **BLST R CSF**

Performed: Sun-Sat
Reported: 2-6 days

3000236 ***Blastomyces dermatitidis* Antibodies by EIA with Reflex to Immunodiffusion, Serum** **BLST R SER**

Performed: Sun-Sat
Reported: 2-6 days

0050172 ***Blastomyces dermatitidis* Antibodies by Immunodiffusion** **BLASTO PPT**

Performed: Sun-Fri
Reported: 3-6 days

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: 0.15 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Body fluids.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

0060117 ***Bordetella pertussis* Culture** **MC PERT**

Performed: Sun-Sat
Reported: Negative at 8 days
Positives as soon as detected

New Test **3002859** **Calprotectin, Fecal by Immunoassay** **CALPRO FEC**

Click for Pricing

Additional Technical Information

Methodology: Quantitative Chemiluminescent Immunoassay
Performed: Sun-Sat
Reported: 1-3 days

Specimen Required: Collect: Stool.
Specimen Preparation: Transfer 5 g stool to an unpreserved stool transport vial (ARUP Supply #40910). Available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787. (Min: 1 g)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Specimens in media or preservatives.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 7 days; Frozen: 30 days

Reference Interval:

49 µg/g or less	Normal
50-120 µg/g	Borderline elevated, test should be re-evaluated in 4-6 weeks.
121 µg/g	Elevated

Interpretive Data:

Fecal Calprotectin is an indicator of the presence of neutrophils in stool and is not specific for IBD. Other intestinal ailments including GI infections and colorectal cancer can result in elevated concentrations of calprotectin. The diagnosis of IBD cannot be established solely on the basis of a positive calprotectin result. Patients with IBD fluctuate between active and inactive stages of disease. Calprotectin results may also fluctuate.

CPT Code(s): 83993

New York DOH Approved.

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

New Test **3002867** **Chromogranin A, Serum** **CGA**
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Methodology: Immunofluorescence
Performed: Mon, Wed, Fri, Sun
Reported: 1-5 days

Specimen Required: Collect: Serum separator tube or plain red.
Specimen Preparation: Allow serum specimen to clot completely at room temperature. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Frozen.
Unacceptable Conditions: Plasma.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 3 days; Frozen: 4 weeks

Reference Interval: 0-103 ng/mL

Interpretive Data:
This test is performed using the BRAHMS CGA II Kryptor kit. Results obtained with different methods or kits cannot be used interchangeably. Results cannot be interpreted as absolute evidence of the presence or absence of malignant disease.

Nontumor-related elevations of Chromogranin A can be observed in gastrointestinal, cardiovascular, and renal disorders, as well as with proton pump inhibitor (PPI) therapy. It is recommended to stop PPI treatment for at least two weeks prior to testing. Moderate H2-receptor antagonist therapy does not lead to significant elevations of Chromogranin A.

See Compliance Statement D: www.aruplab.com/CS

CPT Code(s): 86316

New York DOH approval pending. Call for status update.

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

2007130 **Chromosome Analysis, Bone Marrow with Reflex to Genomic Microarray** **BM REFLEX**

Performed: Sun-Sat
Reported: 3-10 days
If reflexed: 7-12 additional days required for microarray.

2005763 **Chromosome Analysis, Constitutional Blood, with Reflex to Genomic Microarray** **PB REFLEX**

Performed: Sun-Sat
Reported: 3-10 days
If reflexed: 7-12 additional days required for microarray.

2002289 **Chromosome Analysis, Constitutional Peripheral Blood** **CHR PB**

HOTLINE NOTE: Name change only.

2007131 **Chromosome Analysis, Leukemic Blood with Reflex to Genomic Microarray** **LKB REFLEX**

Performed: Sun-Sat
Reported: 3-10 days
If reflexed: 7-12 additional days required for microarray.

2005762	**Chromosome Analysis, Products of Conception, with Reflex to Genomic Microarray**	**POC REFLEX**

Performed: Sun-Sat
Reported: 2-3 weeks
If reflexed: 10-15 additional days are required for microarray

0060140	***Clostridium difficile* Culture with Reflex to Cytotoxin Cell Assay**	**MC CDIF**

Performed: Sun-Sat
Reported: Negative at 4 days
Positives as soon as detected

3000061	***Coccidioides* Antibodies Panel, CSF by CF, ID, ELISA**	**COCCIABCSF**

Performed: Sun-Sat
Reported: 3-6 days

0050588	***Coccidioides* Antibodies Panel, Serum by CF, ID, ELISA**	**COCCI PAN**

Performed: Sun-Sat
Reported: 3-6 days

3001982	**Coccidioides Antibody Reflexive Panel**	**COCCI R**

Performed: Sun-Sat
Reported: 1-6 days

0050183	***Coccidioides immitis* Antibodies by Immunodiffusion**	**COCCI-PPT**

Performed: Sun-Sat
Reported: 3-6 days

3000058	***Coccidioides immitis* by Immunodiffusion, CSF**	**COCCIP CSF**

Performed: Sun-Sat
Reported: 3-6 days

3000480	**Comprehensive Systemic Sclerosis Panel**	**SCL COMPRE**

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add component 3002774, Cytoplasm Pattern to reflexive orderable 3000478

0060360 *Corynebacterium diphtheriae* Culture — MC DIPH

Performed: Sun-Sat
Reported: Negative at 4 days
Positives as soon as detected

Specimen Required: Collect: Nasopharynx, throat, or wound swab.
Swab nasopharynx and throat at the site of membrane or inflammation to increase recovery. Swab base of cleansed wound, if present. Submit each swab with a separate test order.
Specimen Preparation: Place swab in bacterial transport media.
Storage/Transport Temperature: Room temperature.
Remarks: Specimen source preferred.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: Unacceptable; Frozen: Unacceptable

0050503 Coxsackie A9 Virus Antibodies by CF — COX A9

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: 0.3 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, 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)

Reference Interval: Less than 1:8

Interpretive Data:
Single positive antibody titers of greater than 1:32 may indicate past or current infection. Seroconversion or an increase in titers between acute and convalescent sera of at least fourfold is considered strong evidence of current or recent infection.

3000479 Criteria Systemic Sclerosis Panel — SSC PANEL

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add component 3002774, Cytoplasm Pattern to reflexive orderable 3000478

2009353 Cytogenomic SNP Microarray with Five-Cell Chromosome Study, Constitutional Blood — SNP CHR PB

HOTLINE NOTE: Name change only.

3001304 *DDIT3 (CHOP)* (12q13) Gene Rearrangement by FISH — DDIT3 FISH

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002938, Total Cell Count
Remove component 3000702, Total Cell Count

0013039 Donath Landsteiner — IRL-DL

Specimen Required: Collect: Plain Red.
Specimen Preparation: Maintain specimen at 37°C until serum is separated from cells. Transport 3 mL serum. (Min: 2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: **Separator or gel tubes.**
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 1 week; Frozen: Unacceptable

0092420 Drug Screen 9 Panel, Serum or Plasma - Immunoassay Screen with Reflex to Mass Spectrometry Confirmation/Quantitation — DRUG SCRSP

Reference Interval:
Effective August 17, 2020

Drugs Covered and Cutoff Concentrations

Drugs/Drug Classes	Screen
Amphetamines	20 ng/mL
Methamphetamine	20 ng/mL
Barbiturates	50 ng/mL
Benzodiazepines	50 ng/mL
Buprenorphine	1 ng/mL
Cannabinoids	20 ng/mL
Cocaine	20 ng/mL
Methadone	25 ng/mL
Opiates	20 ng/mL
Oxycodone	20 ng/mL
Phencyclidine	10 ng/mL

3001310 *EGFR* Gene Amplification by FISH — EGFR_FISH

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002939, Total Cell Count
Remove component 3000702, Total Cell Count

3001305 *EWSR1* (22q12) Gene Rearrangement by FISH — EWSR1_FISH

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002940, Total Cell Count
Remove component 3000702, Total Cell Count

3001297 *FOXO1* (*FKHR*) (13q14) Gene Rearrangement by FISH — FKHR_FISH

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002941, Total Cell Count
Remove component 3000702, Total Cell Count

New Test **3002912** **Francisella tularensis Antibodies, IgG and IgM with Reflex to Agglutination** **FTULARPANR**

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Methodology: Semi-Quantitative Enzyme-Linked Immunosorbent Assay
Performed: Mon, Wed, Fri
Reported: 1-6 days

Specimen Required: Collect: Serum separator tube (SST) or Plain Red/Red-Top
Specimen Preparation: Separate serum or plasma from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.6 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Contaminated, heat-inactivated, or turbid specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval:

Test Number	Components	Reference Interval	
3002913	*Francisella tularensis* Antibody, IgG with Reflex to Agglutination		
		9 U/mL or less	Negative - No significant level of IgG antibody to *Francisella tularensis* detected.
		10-15 U/mL	Equivocal - Questionable presence of IgG antibody to *Francisella tularensis*. Repeat testing in 10-14 days may be helpful.
		16 U/mL or greater	Positive - Presence of IgG antibody to *Francisella tularensis* detected, suggestive of current or past exposure/immunization.
3002914	*Francisella tularensis* Antibody, IgM with Reflex to Agglutination		
		9 U/mL or less	Negative - No significant level of IgM antibody to *Francisella tularensis* detected.
		10-15 U/mL	Equivocal - Questionable presence of IgM antibody to *Francisella tularensis*. Repeat testing in 10-14 days may be helpful.
		16 U/mL or greater	Positive - Presence of IgM antibody to *Francisella tularensis* detected, suggestive of current or recent exposure/immunization.

Interpretive Data:
Cross- reactivity with *Brucella* and *Yersinia* antibodies may occur. Therefore, results should be interpreted with caution and correlated with clinical information. The best evidence for current infection is a significant change on two appropriately timed specimens, where both tests are performed in the same laboratory at the same time.
See Compliance Statement D: www.aruplab.com/CS

Note: If the ELISA testing is equivocal or positive for IgG and/or IgM, then Francisella tularensis Antibodies by Agglutination will be added. Additional charges apply.

CPT Code(s): 86668 x2, if reflexed add 86000

New York DOH Approved.

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

New Test **3002913** **Francisella tularensis Antibody, IgG with Reflex to Agglutination** **FTULARG R**

Click for Pricing

Methodology: Semi-Quantitative Enzyme-Linked Immunosorbent Assay
Performed: Mon, Wed, Fri
Reported: 1-6 days

Specimen Required: Collect: Serum separator tube (SST) or Plain Red/Red-Top.
Specimen Preparation: Separate serum or plasma from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.6 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Contaminated, heat-inactivated, or turbid specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval:

9 U/mL or less	Negative - No significant level of IgG antibody to *Francisella tularensis* detected.
10-15 U/mL	Equivocal - Questionable presence of IgG antibody to *Francisella tularensis*. Repeat testing in 10-14 days may be helpful.
16 U/mL or greater	Positive - Presence of IgG antibody to *Francisella tularensis* detected, suggestive of current or past exposure/immunization.

Interpretive Data:
Cross-reactivity with *Brucella* and *Yersinia* antibodies may occur. Therefore, results should be interpreted with caution and correlated with clinical information. The best evidence for current infection is a significant change on two appropriately timed specimens, where both tests are performed in the same laboratory at the same time.
See Compliance Statement D: www.aruplab.com/CS

Note: If the ELISA testing is equivocal or positive, then Francisella tularensis Antibodies by Agglutination will be added. Additional charges apply.

CPT Code(s): 86668; if reflexed add 86000

New York DOH Approved.

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

New Test **3002914** **Francisella tularensis Antibody, IgM with Reflex to Agglutination** **FTULARM R**

Click for Pricing

Methodology: Semi-Quantitative Enzyme-Linked Immunosorbent Assay
Performed: Mon, Wed, Fri
Reported: 1-6 days

Specimen Required: Collect: Serum separator tube (SST) or Plain Red/Red-Top.
Specimen Preparation: Separate serum or plasma from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.6 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Contaminated, heat-inactivated, or turbid specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval:

9 U/mL or less	Negative - No significant level of IgM antibody to *Francisella tularensis* detected.
10-15 U/mL	Equivocal - Questionable presence of IgM antibody to *Francisella tularensis*. Repeat testing in 10-14 days may be helpful.
16 U/mL or greater	Positive - Presence of IgM antibody to *Francisella tularensis* detected, suggestive of current or recent exposure/immunization.

Interpretive Data:
Cross-reactivity with *Brucella* and *Yersinia* antibodies may occur. Therefore, results should be interpreted with caution and correlated with clinical information. The best evidence for current infection is a significant change on two appropriately timed specimens, where both tests are performed in the same laboratory at the same time.
See Compliance Statement D: www.aruplab.com/CS

Note: If the ELISA testing is equivocal or positive, then Francisella tularensis Antibodies by Agglutination will be added. Additional charges apply.

CPT Code(s): 86668; if reflexed add 86000

New York DOH Approved.

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

0050164 **Fungal Antibodies by Immunodiffusion** **FUNG PPT**

Performed: Sun-Fri
Reported: 3-6 days

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: 0.4 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Body fluid.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

3000235 **Fungal Antibodies with Reflex to *Blastomyces dermatitidis* Antibodies by Immunodiffusion** **FUNG R SER**

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 the acute specimens.
Storage/Transport Temperature: Refrigerated.
Remarks: **Mark specimens plainly as acute or convalescent.**
Unacceptable Conditions: Hemolyzed, icteric, or 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)

3000230 **Fungal Antibodies with Reflex to *Blastomyces dermatitidis* Antibodies by Immunodiffusion, CSF** **FUNG R CSF**

Specimen Required: Collect: CSF
Specimen Preparation: Transfer 1 mL CSF to an ARUP Standard Transport Tube. (Min: 0.6 mL)
Storage/Transport Temperature: Refrigerated.
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)

3000548 ***FUS* (16p11) Gene Rearrangement by FISH** **FUS FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002942, Total Cell Count
Remove component 3000702, Total Cell Count

New Test **3002788** **Glutamic Acid Decarboxylase Antibody, CSF** **GAD AB CSF**
Click for Pricing

Methodology: Semi-quantitative Enzyme-Linked Immunosorbent Assay
Performed: Sun-Fri
Reported: 1-3 days

Specimen Required: Collect: Cerebral Spinal Fluid (CSF)
Specimen Preparation: Transfer 1 mL CSF to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Frozen.
Unacceptable Conditions: Fluid other than CSF. Grossly hemolyzed specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: 3 months

Reference Interval: 0.0-5.0 IU/mL

Interpretive Data:
A value greater than 5.0 IU/mL is considered positive for glutamic acid decarboxylase antibody (GAD AB CSF).

This assay is intended for the semi-quantitative determination of the GAD Ab in human CSF. Results should be interpreted within the context of clinical symptoms.

See Compliance Statement B: www.aruplab.com/CS

CPT Code(s): 86341

New York DOH approval pending. Call for status update.

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

New Test **3002644** **Hemoglobin (Hb) A2 and F by Column with Reflex to Electrophoresis** **HB A2F COL**

Click for Pricing

Methodology: High Performance Liquid Chromatography/Electrophoresis
Performed: Sun-Sat
Reported: 1-4 days

Specimen Required: Collect: Lavender (EDTA) or pink (K_2EDTA).
Specimen Preparation: Transport 5 mL whole blood. (Min: 0.2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Frozen or room temperature specimens.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval:

Age-Defined Normal Hemoglobin Reference Intervals

Age	Hb A_2 Percent	Hb F Percent
0-1 month	0.0-1.4	45.8-91.7
2 months	0.0-2.0	32.7-85.2
3 months	0.1-2.6	14.5-73.7
4 months	0.8-3.0	4.2-56.9
5 months	1.5-3.3	1.0-38.1
6-8 months	1.8-3.5	0.9-19.4
9-12 months	1.9-3.5	0.6-11.6
13-23 months	1.9-3.5	0.0-8.5
2 years and older	2.0-3.5	0.0-2.1

Interpretive Data:
In laboratory testing to confirm a diagnosis of a β-thalassemia trait diagnosis, Hb A_2 levels should be considered in conjunction with family history and additional laboratory data, including serum iron and iron binding capacity, red cell morphology, hemoglobin, hematocrit, and mean corpuscular volume (MCV).

Patients with a combination of iron deficiency and β-thalassemia may have a normal A_2 level. In these cases, elevated A_2 level cannot be used to screen for β-thalassemia in these cases.

Patient State	Hb A_2 Level	Hb F Level
Heterozygous β-thalassemia	4-9%	1-5%
Homozygous β-thalassemia	Normal or Increased	80-100%
Heterozygous HPFH	Less than 1.5%	10-20%
Homozygous HPFH	Absent	100%

Note: Recommend quantitation of hemoglobin for definitive diagnosis after 1 year of age. If abnormal peaks suggestive of a hemoglobin variant are detected, then Capillary Electrophoresis will be added to aid in confirmation and identification of the variant. Additional charges apply

CPT Code(s): 83021; if reflexed, add 83020

New York DOH Approved.

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

New Test **3002645** **Hemoglobin F with Reflex to Electrophoresis** **HGB F**
Click for Pricing

Methodology: High Performance Liquid Chromatography/Electrophoresis
Performed: Sun-Sat
Reported: 1-3 days

Specimen Required: Collect: Lavender (EDTA) or pink (K_2EDTA).
Specimen Preparation: Transport 3 mL whole blood. (Min: 0.2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Frozen or room temperature specimens.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval:
Age-Defined Normal Hemoglobin Reference Intervals

Age	Hgb F Percent
0-1 month	45.8-91.7
2 months	32-7-85.2
3 months	14.5-73.7
4 months	4.2-56.9
5 months	1.0-38.1
6-8 months	0.9-19.4
9-12 months	0.6-11.6
13-23 months	0.0-8.5
2 years and older	0.0-2.1

Interpretive Data: Refer to report.

Note: This assay measures percentage of hemoglobin F only. If abnormal peaks suggestive of a hemoglobin variant are detected, then Capillary Electrophoresis will be added to aid in confirmation and identification of the variant. Additional charges apply. For complete hemoglobin evaluation, order Hemoglobin Evaluation with Reflex to Electrophoresis and/or RBC Solubility (0050610).

CPT Code(s): 83021; if reflexed, add 83020

New York DOH Approved.

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

New Test **3001234** **Hepatitis C Virus (HCV) GenoSure NS3 and NS4A** **HCV NS3/4A**
Click for Pricing

Methodology: Polymerase Chain Reaction/Sequencing
Performed: Varies
Reported: 10-17 days

Specimen Required: Collect: Lavender (EDTA) or Plasma Preparation Tube (PPT).
Specimen Preparation: Separate from cells within 6 hours of collection. Transfer 3 mL plasma to an ARUP Standard Transport Tube and freeze immediately. (Min: 3 mL)
Storage/Transport Temperature: **CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.**
Unacceptable Conditions: Thawed specimens.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 2 weeks

Reference Interval: By report

Note: Procedure should be used for patients with HCV genotype (subtype) 1a or 1b and a viral load greater than 2000 IU/mL.

CPT Code(s): 87900; 87902

New York DOH Approved.

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

0050625 *Histoplasma* Antibodies by CF — HISTO

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: 0.4 mL) Parallel testing is preferred and convalescent specimens **must** be received within 30 days from receipt of acute specimens. **Mark specimens plainly as acute or convalescent.**
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Contaminated 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)

0050627 *Histoplasma* Antibodies by CF & ID — HISTO PAN

Performed: Sun-Fri
Reported: 3-6 days

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: 0.5 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 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)

0050174 *Histoplasma* spp. Antibodies by Immunodiffusion — HISTO PPT

Performed: Sun-Fri
Reported: 3-6 days

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 0.15 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Body fluids.
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 Available Now Click for Pricing

3002850 **HLA Antibody Screen, Class I and Class II** **HLAABSCN**

Methodology: Multiplex Bead Assay
Performed: Varies
Reported: 3-7 days

Specimen Required: Collect: Plain red.
Specimen Preparation: Transfer 5 mL serum to ARUP Standard Transport Tubes. (Min. 2 mL)
Storage/Transport Temperature: Refrigerated
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 month; Frozen: 2 years

Reference Interval: By report

Interpretive Data:
Background Information for HLA Antibody Screen, Class I and Class II
Purpose: To detect HLA Class I and Class II IgG antibodies.
Analytical Sensitivity & Specificity: More sensitive than traditional lymphocyte cytotoxicity procedures.
Limitations: Only detects IgG antibody isotype; IgM antibodies are not detected. This test does not provide information on the specificities of the HLA antibodies detected.
Test Results: Results are reported as positive or negative for HLA Class I and Class II antibodies.
This test was developed and its performance characteristics determined by the H&I laboratory at the University of Utah Health under the accreditation guidelines from the American Society for Histocompatibility and Immunogenetics (ASHI). Some tests or reagents have not been cleared or approved by the FDA.

CPT Code(s): 86828

New York DOH approval pending. Call for status update.

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

3002061 **HLA Class I and II Panel (A,B,C,*DRB1, DQA1, DQB1, DPB1*) by Next Generation Sequencing** **HLA 7LOCI**

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 3002593, HLA Class I-Locus Bw*, Allele 1 from HLA Class I-Locus Bw*, Allele 1 to Bw, Allele 1.
Change the charting name for component 3002594, HLA Class I-Locus Bw*, Allele 2 from HLA Class I-Locus Bw*, Allele 2 to Bw, Allele 2.

3002062 **HLA Class I and II Panel (A,B,C,*DRB1, DRB345, DQA1, DQB1, DPA1, DPB1*) by Next Generation Sequencing** **HLA 11LOCI**

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 3002593, HLA Class I-Locus Bw*, Allele 1 from HLA Class I-Locus Bw*, Allele 1 to Bw, Allele 1.
Change the charting name for component 3002594, HLA Class I-Locus Bw*, Allele 2 from HLA Class I-Locus Bw*, Allele 2 to Bw, Allele 2.

3002307 **HLA Class I Panel (ABC) by Next Generation Sequencing** **HLACLASSI**

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 3002593, HLA Class I-Locus Bw*, Allele 1 from HLA Class I-Locus Bw*, Allele 1 to Bw, Allele 1.
Change the charting name for component 3002594, HLA Class I-Locus Bw*, Allele 2 from HLA Class I-Locus Bw*, Allele 2 to Bw, Allele 2.

New Test **3001238** **Human Immunodeficiency Virus Type 1 (HIV-1) GenoSure PRIme** **HIV GSPRI**

Click for Pricing

Methodology: Polymerase Chain Reaction/Sequencing
Performed: Varies
Reported: 7-13 days

Specimen Required: Collect: Lavender (EDTA) or Plasma Preparation Tube (PPT).
Specimen Preparation: Separate from cells within 6 hours of collection. Transfer 5 mL plasma to ARUP Standard Transport Tubes and freeze immediately. (Min: 3 mL)
Storage/Transport Temperature: **CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.**
Unacceptable Conditions: Thawed specimens.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 2 years

Reference Interval: By Report

Note: Procedure should be used for patients with documented HIV-1 infection and viral loads greater than 500 copies/mL.

CPT Code(s): 87900; 87901; 87906

New York DOH Approved.

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

New Test **3001246** **Human Immunodeficiency Virus Type 1 (HIV-1) Trofile Co-Receptor Tropism** **HIV TROFIL**

Click for Pricing

Methodology: Recombinant virus, single replication
Performed: Varies
Reported: 16-23 days

Specimen Required: Collect: Lavender (K_2EDTA) or Plasma Preparation Tube (PPT).
Specimen Preparation: Separate from cells within 6 hours of collection. Transfer 3 mL plasma to an ARUP Standard Transport Tube and freeze immediately. (Min: 3 mL)
Storage/Transport Temperature: **CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.**
Unacceptable Conditions: Thawed specimens.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 2 weeks

Note: Procedure should be used for patients with documented HIV-1 infection and viral loads greater than 1000 copies/mL.

CPT Code(s): 87999

New York DOH Approved.

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

3001298 ***IGH-BCL2* Fusion, t(14;18) by FISH** **BCL2_FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002936, Total Cell Count
Remove component 3000702, Total Cell Count

3001306 ***IGH-CCND1* Fusion, t(11;14) by FISH** **IGHCC_FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002943, Total Cell Count
Remove component 3000702, Total Cell Count

3001299 ***IGH-MYC* Fusion t(8;14) by FISH** **IGHMC FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002944, Total Cell Count
Remove component 3000702, Total Cell Count

3001784 **Interstitial Lung Disease Autoantibody Panel** **ILD PANEL**

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add component 3002774, Cytoplasm Pattern to reflexive orderable 3000478

3001568 ***IRF4/DUSP22* (6p25) Gene Rearrangement by FISH** **IRF4 FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002945, Total Cell Count
Remove component 3000702, Total Cell Count

0060113 ***Legionella* Species, Culture** **MC LEGION**

Performed: Sun-Sat
Reported: Negative at 8 days
Positives as soon as detected

Specimen Required: Collect: Respiratory specimens: Abscess material, aspirates, BAL, fluids, secretions, sputum, or tissue; **OR** pericardial fluid or blood in SPS Vacutainer® tube for microbiology (ARUP supply #24964). Available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787.
Specimen Preparation: **Fluid:** Transfer to a sterile container. Place each specimen in an individually sealed bag. (Min. 0.5 mL)
Tissue: Place on gauze moistened with sterile nonbacteriostatic saline to prevent drying and transport in sterile container.
Blood: Transport blood in SPS tube.
Storage/Transport Temperature: Refrigerated. For nonblood specimens: If delay in transport (greater than 48 hours), transport frozen.
Remarks: Specimen source preferred.
Unacceptable Conditions: Stool, urine, wounds, or other nonrespiratory sites. Dry specimens. Specimens in preservatives or viral transport medium (M4, UTM).
Stability (collection to initiation of testing): Ambient: 2 hours; Refrigerated: 48 hours; Frozen: 1 week

0050119 **Lupus Comprehensive Reflexive Panel** **LUPUS COMP**

Note: Initial testing includes RF, C3, C4, and ANA. Specimens are screened for ANA using ELISA. If antibodies are detected, then an IFA titer will be added. ANA identified by indirect fluorescence assay (IFA) using HEp-2 substrate and IgG-specific conjugate at a screening dilution of 1:80. Positive nuclear patterns reported include homogeneous, speckled, centromere, nucleolar, or nuclear dots. Positive cytoplasmic patterns reported include reticular/AMA, discrete/GW body-like, polar/golgi-like, rods and rings, or cytoplasmic speckled patterns. All positive results are reported with endpoint titers at no additional charge. If confirmed by IFA, then specimen will be tested for Thyroid Peroxidase (TPO) Antibody; Anti-Scl-70 (ENA), EIA; Smith/RNP (ENA) Antibody, IgG; Smith (ENA) Antibody, IgG; SSA 52 and 60 (Ro) (ENA) Antibodies, IgG; SSB (La) (ENA) Antibody, IgG; and Double-Stranded DNA (dsDNA) Antibody, IgG by ELISA; if Double-Stranded DNA (dsDNA) Antibody, IgG by ELISA result is Detected, then Double-Stranded DNA (dsDNA) Antibody, IgG by IFA (using *Crithidia luciliae*) is added. Additional charges apply.

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add component 3002774, Cytoplasm Pattern to reflexive orderable 3000478

3001301	***MDM2* Gene Amplification by FISH**	**MDM2_FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002946, Total Cell Count
Remove component 3000702, Total Cell Count

3001313	***MET* Gene Amplification by FISH**	**MET_FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002947, Total Cell Count
Remove component 3000702, Total Cell Count

0049302	**Mismatch Repair by Immunohistochemistry**	**MSI**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002969, MSI Tissue Source

2002327	**Mismatch Repair by Immunohistochemistry with Reflex to *BRAF* Codon 600 Mutation and *MLH1* Promoter Methylation**	**MSI REFLEX**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002969, MSI Tissue Source

2005270	**Mismatch Repair by Immunohistochemistry with Reflex to *MLH1* Promoter Methylation**	**MSI MLH1**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002969, MSI Tissue Source

2007967	**Motor and Sensory Neuropathy Evaluation with Immunofixation Electrophoresis and Reflex to Titer and Neuronal Immunoblot**	**MSNCR**

Reference Interval:

Test Number	Components	Reference Interval
	Albumin	3.75-5.01 g/dL
	Alpha-1 Globulins	0.19-0.46 g/dL
	Alpha-2 Globulins	0.48-1.05 g/dL
	Beta Globulins	0.48-1.10 g/dL
	Gamma	0.62-1.51 g/dL
0050340	Immunoglobulin A	Effective February 16, 2016

Age	Reference Interval
0-30 days	1-7 mg/dL
1 month	1-53 mg/dL
2 months	3-47 mg/dL
3 months	5-46 mg/dL
4 months	4-72 mg/dL
5 months	8-83 mg/dL
6 months	8-67 mg/dL
7-8 months	11-89 mg/dL
9-11 months	16-83 mg/dL
1 year	14-105 mg/dL
2 years	14-122 mg/dL
3 years	22-157 mg/dL
4 years	25-152 mg/dL
5-7 years	33-200 mg/dL
8-9 years	45-234 mg/dL
10 years and older	68-408 mg/dL

0050350	Immunoglobulin G	

Age	Reference Interval
0- 30 days	611-1542 mg/dL
1 month	241-870 mg/dL
2 months	198-577 mg/dL
3 months	169-558 mg/dL
4 months	188-536 mg/dL
5 months	165-781 mg/dL
6 months	206-676 mg/dL
7-8 months	208-868 mg/dL
9-11 months	282-1026 mg/dL
1 year	331-1164 mg/dL
2 years	407-1009 mg/dL
3 years	423-1090 mg/dL
4 years	444-1187 mg/dL
5-7 years	608-1229 mg/dL
8-9 years	584-1509 mg/dL
10 years and older	768-1632 mg/dL

0050355	Immunoglobulin M	Effective February 16, 2016

Age	Reference Interval
0-30 days	0-24 mg/dL
1 month	19-83 mg/dL
2 months	16-100 mg/dL
3 months	23-85 mg/dL
4 months	26-96 mg/dL
5 months	31-103 mg/dL
6 months	33-97 mg/dL
7-8 months	32-120 mg/dL
9-11 months	39-142 mg/dL
1 year	41-164 mg/dL
2 years	46-160 mg/dL
3 years	45-190 mg/dL
4 years	41-186 mg/dL

		5-7 years	46-197 mg/dL
		8-9 years	49-230 mg/dL
		10 years and older	35-263 mg/dL
	Total Protein, Serum	August 19,2019 Refer to Report	
	Asialo-GM1 Antibodies, IgG/IgM		
		29 IV or less	Negative
		30-50 IV	Equivocal
		51-100 IV	Positive
		101 IV or greater	Strong Positive
	GM1 Antibodies, IgG/IgM		
		29 IV or less	Negative
		30-50 IV	Equivocal
		51-100 IV	Positive
		101 IV or greater	Strong Positive
	GD1a Antibodies, IgG/IgM		
		29 IV or less	Negative
		30-50 IV	Equivocal
		51-100 IV	Positive
		101 IV or greater	Strong Positive
	GD1b Antibodies, IgG/IgM		
		29 IV or less	Negative
		30-50 IV	Equivocal
		51-100 IV	Positive
		101 IV or greater	Strong Positive
	GQ1b Antibodies, IgG/IgM		
		29 IV or less	Negative
		30-50 IV	Equivocal
		51-100 IV	Positive
		101 IV or greater	Strong Positive
0051284	Sulfate-3-Glucuronyl Paragloboside (SGPG) Antibody, IgM	Less than 1.00 IV	
0051285	Myelin Associated Glycoprotein (MAG) Antibody, IgM	Less than 1000 TU	
2007961	Paraneoplastic Antibodies (PCCA/ANNA) by IFA with Reflex to Titer and Immunoblot	Effective August 17, 2020	

Test Number	Components	Reference Interval	
	Purkinje Cell/Neuronal Nuclear IgG Scrn	None Detected	
	Neuronal Nuclear Antibody (ANNA) IFA Titer, IgG	Less than 1:10	
	Purkinje Cell Antibody, Titer	Less than 1:10	
	Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum	**Component**	**Reference Interval**
		Neuronal Nuclear Ab (Hu) IgG, IB, Serum	Negative
		Neuronal Nuclear Ab (Ri) IgG, IB, Serum	Negative

				Neuronal Nuclear Ab (Yo) IgG, IB, Serum	Negative
				Neuronal Nuclear Ab (Tr/DNER) IgG, IB	Negative

Note: Purkinje Cell (PCCA) antibody and Neuronal Nuclear (ANNA) antibody IgG are screened by IFA. If the IFA screen is indeterminate, then a Neuronal Nuclear Antibodies (Hu, Ri, Yo, and Tr/DNER) IgG by Immunoblot will be added. If the IFA screen is positive at 1:10 or greater, then a PCCA/ANNA antibodies titer and Neuronal Nuclear Antibodies (Hu, Ri, Yo, and Tr/DNER) IgG by Immunoblot will be added. Additional charges apply.

CPT Code(s): 83516 x7; 82784 x3; 84155; 84165; 86334; 86255 if reflexed add 84182 x4 and/or 86256

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add reflex to 3002917, Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum
Remove reflex from 2007963, Neuronal Nuclear Antibodies (Hu, Ri, Yo) IgG by Immunoblot

2007966 **Motor and Sensory Neuropathy Evaluation with Reflex to Titer and Neuronal Immunoblot** **MSNER**

Reference Interval:

Test Number	Components	Reference Interval	
	Asialo-GM1 Antibodies, IgG/IgM		
		29 IV or less	Negative
		30-50 IV	Equivocal
		51-100 IV	Positive
		101 IV or greater	Strong Positive
	GM1 Antibodies, IgG/IgM		
		29 IV or less	Negative
		30-50 IV	Equivocal
		51-100 IV	Positive
		101 IV or greater	Strong Positive
	GD1a Antibodies, IgG/IgM		
		29 IV or less	Negative
		30-50 IV	Equivocal
		51-100 IV	Positive
		101 IV or greater	Strong Positive
	GD1b Antibodies, IgG/IgM		
		29 IV or less	Negative
		30-50 IV	Equivocal
		51-100 IV	Positive
		101 IV or greater	Strong Positive
	GQ1b Antibodies, IgG/IgM		
		29 IV or less	Negative
		30-50 IV	Equivocal
		51-100 IV	Positive
		101 IV or greater	Strong Positive
0051284	Sulfate-3-Glucuronyl Paragloboside (SGPG) Antibody, IgM	Less than 1.00 IV	
0051285	Myelin Associated Glycoprotein (MAG) Antibody, IgM	Less than 1000 TU	
2007961	Paraneoplastic Antibodies (PCCA/ANNA) by IFA with Reflex to Titer and Immunoblot	Effective August 17, 2020	

Test Number	Components	Reference Interval	
	Purkinje Cell/Neuronal Nuclear IgG Scrn	None Detected	
	Neuronal Nuclear Antibody (ANNA) IFA Titer, IgG	Less than 1:10	
	Purkinje Cell Antibody, Titer	Less than 1:10	
	Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum		
		Component	**Reference Range**
		Neuronal Nuclear Ab (Hu) IgG, IB, Serum	Negative
		Neuronal Nuclear Ab (Ri) IgG, IB, Serum	Negative
		Neuronal Nuclear Ab (Yo) IgG, IB, Serum	Negative
		Neuronal Nuclear Ab (Tr/DNER) IgG, IB	Negative

Note: Purkinje Cell (PCCA) antibody and Neuronal Nuclear (ANNA) antibody IgG are screened by IFA. If the IFA screen is indeterminate, then a Neuronal Nuclear Antibodies (Hu, Ri, Yo, and Tr/DNER) IgG by Immunoblot will be added. If the IFA screen is positive at 1:10 or greater, then a PCCA/ANNA antibodies titer and Neuronal Nuclear Antibodies (Hu, Ri, Yo, and Tr/DNER) IgG by Immunoblot will be added. Additional charges apply.

CPT Code(s): 83516 x7; 86255; if reflexed add 84182 x4 and/or 86256

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add reflex to 3002917, Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum
Remove reflex from 2007963, Neuronal Nuclear Antibodies (Hu, Ri, Yo) IgG by Immunoblot

3001300 ***MYC* (8q24) Gene Rearrangement by FISH** **MYC FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002948, Total Cell Count
Remove component 3000702, Total Cell Count

3001307 ***MYCN* (*N-MYC*) Gene Amplification by FISH** **NMYC_FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002949, Total Cell Count
Remove component 3000702, Total Cell Count

2003294 ***Mycoplasma hominis* Culture, Urogenital Source** **MC MYCO**

Performed: Sun-Sat
Reported: Negative at 8 days
Positives as soon as detected

2013805 Natural Killer Cell and Natural Killer T-Cell Panel NK/NKT

Specimen Required: Collect: Lavender (EDTA), or Pink (K_2EDTA).
Specimen Preparation: Transport 4 mL whole blood. (Min: 1 mL)
Storage/Transport Temperature: CRITICAL ROOM TEMPERATURE
Remarks: Specimens must be analyzed within 48 hours of collection.
New York State Clients: Specimens must be analyzed within 30 hours of collection.
Unacceptable Conditions: Clotted or hemolyzed specimens
Stability (collection to initiation of testing): Room temperature: 48 hours; Refrigerated: Unacceptable; Frozen: Unacceptable
New York State Clients: Room Temperature: 30 hours; Refrigerated: Unacceptable; Frozen: Unacceptable

Reference Interval:
Effective August 17, 2020

Available Separately	Component	Reference Interval
No	Pct CD3-CD16-/+CD56br/dim(total NKcells)	5.0 – 32.5 %
No	Abs CD3-CD16-/+CD56br/dim(total NKcells)	91 - 593 cells/µL
No	Pct CD3-CD16+CD56dim(cytotoxic NK-cells)	47.0 – 94.5 %
No	Abs CD3-CD16+CD56dim(cytotoxic NK-cells)	51 - 482 cells/µL
No	Pct CD3-CD16-CD56br (cyto secreting NK)	0.7 – 6.3 %
No	Abs CD3-CD16-CD56br (cyto secreting NK)	2 - 16 cells/µL
No	Pct CD3+CD56+ (CD56 NKT-cells)	0.9 – 14.4 %
No	Abs CD3+CD56+ (CD56 NKT-cells)	20-349 cells/µL
No	Pct CD45+CD3+ (T-cells)	59.0 – 86.9 %
No	Abs CD45+CD3+ (T-cells)	654 - 2634 cells/µL
No	Pct CD45+CD3-(Non T-cells)	15.7 – 43.6 %
No	Abs CD45+CD3-(Non T-cells)	196 - 897 cells/µL
No	Natural Killer T-cell Panel Interp	See Note

Interpretive Data:
Natural killer (NK) cells are identified by the absence of CD3 and the expression of CD16 and/or CD56. NK cells are divided according to the expression of CD16 and CD56 into cytotoxic NK cells (CD3-CD16+CD56dim) that represents approximately 90 percent of NK cells, and cytokine-secreting or regulatory NK cells (CD3-CD16-CD56bright) that represents approximately 10 percent of NK cells. NK cells act against virally-infected cells and tumor cells and may be increased or decreased in various immunologic abnormalities. NK cells also have a role in the adaptive immune response through cytokine production. NK-like T-cells have properties of both T-cells and NK-cells, expressing both CD3 and NK-associated antigens.

The cytotoxic NK cells (CD3-CD16+CD56dim) and cytokine-secreting or regulatory NK cells (CD3-CD16-CD56bright) are reported as a percentage of the total NK cells. All other populations are reported as a percentage of the total lymphocytes.

Test developed and characteristics determined by ARUP Laboratories. See Compliance Statement A: aruplab.com/CS

CPT Code(s): 86356 x3; 86357; 86359

HOTLINE NOTE: There is a component change associated with this test.
Remove component 2013812, Pct CD3-CD57+ (CD57 NK-cells)
Remove component 2013813, Abs CD3-CD57+ (CD57 NK-cells)
Remove component 2013816, Pct CD3+CD57+ (CD57 NKT-cells)
Remove component 2013817, Abs CD3+CD57+ (CD57 NKT-cells)
There is a numeric map change associated with this test.
Change the numeric map for component 2013807, Abs CD3-CD16-/+CD56br/dim(total NKcells) from XXXXX.X to XXXXX.
Change the numeric map for component 2013809, Abs CD3-CD16+CD56dim(cytotoxic NK-cells) from XXXXX.X to XXXXX.
Change the numeric map for component 2013811, Abs CD3-CD16-CD56br (cyto secreting NK) from XXXXX.X to XXXXX.
Change the numeric map for component 2013815, Abs CD3+CD56+ (CD56 NKT-cells) from XXXXX.X to XXXXX.
Change the numeric map for component 2013819, Abs CD45+CD3+ (T-cells) from XXXXX.X to XXXXX.
Change the numeric map for component 2013821, Abs CD45+CD3- (Non T-cells) from XXXXX.X to XXXXX.

New Test **3002917** **Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum** **NRNL IB S**

Click for Pricing

Methodology: Qualitative Immunoblot
Performed: Mon, Thu, Sat
Reported: 1-4 days

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: 0.30 mL)
Storage/Transport Temperature: Refrigerated
Unacceptable Conditions: Plasma. Contaminated, heat-inactivated, grossly hemolyzed, or lipemic specimens
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval:

Component	Reference Range
Neuronal Nuclear Ab (Hu) IgG, IB, Serum	Negative
Neuronal Nuclear Ab (Ri) IgG, IB, Serum	Negative
Neuronal Nuclear Ab (Yo) IgG, IB, Serum	Negative
Neuronal Nuclear Ab (Tr/DNER) IgG, IB	Negative

Interpretive Data:
This test detects IgG antineuronal antibodies to Hu, Ri, Yo and Tr (DNER) antigens.

Antineuronal antibodies serve as markers that aid in discriminating between a true paraneoplastic neurological disorder (PND) and other inflammatory disorders of the nervous system. Anti-Hu (antineuronal nuclear antibody, type I) is associated with small cell lung cancer. Anti-Ri (antineuronal nuclear antibody, type II) is associated with neuroblastoma in children and with fallopian tube and breast cancer in adults. Anti-Yo (anti-Purkinje cell cytoplasmic antibody) is associated with ovarian and breast cancer. Anti-Tr(DNER) is associated with Hodgkin's lymphoma.

The presence of one or more of these antineuronal antibodies supports a clinical diagnosis of PND and should lead to a focused search for the underlying neoplasm.
See Compliance Statement D: www.aruplab.com/CS

CPT Code(s): 84182 x4

New York DOH approval pending. Call for status update.

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

0060093 ***Nocardia* Culture and Gram Stain** **MC NOC**

Performed: Sun-Sat
Reported: Negative at 15 days
Positives as soon as detected

New Test **3002780** **Nuclear Protein in Testis by Immunohistochemistry** **NUT IHC**
Available Now
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Methodology: Immunohistochemistry
Performed: Mon-Fri
Reported: 1-3 days

Specimen Required: Collect: Tissue.
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 (recommended but not required), (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.
Unacceptable Conditions: Specimens submitted with nonrepresentative tissue type. Depleted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Interpretive Data:

See Compliance Statement B: www.aruplab.com/CS

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.

0060720 **Organism Identification by 16S rDNA Sequencing** **MC BACSEQ**

Performed: Sun-Sat
Reported: Varies

3001309 **1p/19q Deletion by FISH** **1P19Q_FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002933, 1P Total Cell Count
Add component 3002934, 19Q Total Cell Count
Remove component 3000702, Total Cell Count

0092628 **P/Q-Type Voltage-Gated Calcium Channel (VGCC) Antibody** **VGCC AB**

Specimen Required: Collect: Plain Red or 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: 0.2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma. CSF. Hemolyzed or grossly lipemic specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 72 hours; Refrigerated: 2 weeks; Frozen: 1 month

New Test **3002858** **Pancreatic Elastase, Fecal by Immunoassay** **ELASTASE**
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Methodology: Quantitative Chemiluminescent Immunoassay
Performed: Sun-Sat
Reported: 1-3 days

Specimen Required: Collect: Stool.
Specimen Preparation: Transfer 5 g stool to an unpreserved stool transport vial (ARUP supply #40910). Available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787. (Min: 1 g)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Stool in media or preservative. Swabs.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 2 weeks; Frozen: 30 days.

Reference Interval:

Greater or equal to 200 µg/g	Normal
100 to <200 µg/g	Moderate to mild exocrine pancreatic insufficiency
Less than 100 µg/g	Severe exocrine pancreatic insufficiency

Interpretive Data:
Reference range does not apply for infants less than one month old.

Note: Enzyme substitution therapy does not influence the determination of Pancreatic Elastase-1.

CPT Code(s): 83520

New York DOH Approved.

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

2007961 **Paraneoplastic Antibodies (PCCA/ANNA) by IFA with Reflex to Titer and Immunoblot** **PCCA/ANNA**

Reference Interval:
Effective August 17, 2020

Test Number	Components	Reference Interval	
	Purkinje Cell/Neuronal Nuclear IgG Scrn	None Detected	
	Neuronal Nuclear Antibody (ANNA) IFA Titer, IgG	Less than 1:10	
	Purkinje Cell Antibody, Titer	Less than 1:10	
	Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum		
		Component	**Reference Range**
		Neuronal Nuclear Ab (Hu) IgG, IB, Serum	Negative
		Neuronal Nuclear Ab (Ri) IgG, IB, Serum	Negative
		Neuronal Nuclear Ab (Yo) IgG, IB, Serum	Negative
		Neuronal Nuclear Ab (Tr/DNER) IgG, IB	Negative

Note: Purkinje Cell (PCCA) antibody and Neuronal Nuclear (ANNA) antibody IgG are screened by IFA. If the IFA screen is indeterminate, then a Neuronal Nuclear Antibodies (Hu, Ri, Yo, and Tr/DNER) IgG by Immunoblot will be added. If the IFA screen is positive at 1:10 or greater, then a PCCA/ANNA antibodies titer and Neuronal Nuclear Antibodies (Hu, Ri, Yo, and Tr/DNER) IgG by Immunoblot will be added. Additional charges apply.

CPT Code(s): 86255; if reflexed add 84182 x4 and/or 86256

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add reflex to 3002917, Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum
Remove reflex from 2007963, Neuronal Nuclear Antibodies (Hu, Ri, Yo) IgG by Immunoblot

2010841 Paraneoplastic Antibodies (PCCA/ANNA) by IFA with Reflex to Titer and Immunoblot, CSF — PCCAANNA C

Reference Interval:
Effective August 17, 2020

Test Number	Components	Reference Interval	
	Paraneoplastic Abs (PCCA/ANNA) IgG, CSF	None Detected	
	Neuronal Nuclear Ab Titer, IgG CSF	Less than 1:1	
	Purkinje Cell Antibody Titer IgG, CSF	Less than 1:1	
2010847	Neuronal Nuclear Abs IgG ImmunoBlot, CSF	**Components**	**Reference Interval**
		Neuronal Nuclear Ab (Hu) IgG, IB, CSF	Negative
		Neuronal Nuclear Ab (Ri) IgG, IB, CSF	Negative
		Neuronal Nuclear Ab (Yo) IgG, IB, CSF	Negative

CPT Code(s): 86255; if reflexed add 84182 x3 and/or 86256

New Test **3002929** **Paraneoplastic Reflexive Panel** **PNS PAN2**
Click for Pricing

Methodology: Semi-Quantitative Indirect Fluorescent Antibody/Qualitative Immunoblot
Performed: Wed
Reported: 1-9 days

Specimen Required: Collect: Serum Separator Tube (SST)
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 3 mL serum aliquot to an ARUP Standard Transport Tube. (Min: 1.0 mL)
Storage/Transport Temperature: Refrigerated
Unacceptable Conditions: Contaminated, heat-inactivated, hemolyzed, or lipemic specimens
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval:

Test Number	Components	Reference Interval
2013956	CV2.1 Screen by IFA with Reflex to Titer	Less than 1:10
2007961	Paraneoplastic Antibodies (PCCA/ANNA) by IFA with Reflex to Titer and Immunoblot	

Test Number	Components	Reference Interval
	Purkinje Cell/Neuronal Nuclear IgG Scrn	None Detected
	Neuronal Nuclear Antibody (ANNA) IFA Titer, IgG	Less than 1:10
	Purkinje Cell Antibody, Titer	Less than 1:10
	Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot	

Component	Reference Interval
Neuronal Nuclear Ab (Hu) IgG, IB, Serum	Negative
Neuronal Nuclear Ab (Ri) IgG, IB, Serum	Negative
Neuronal Nuclear Ab (Yo) IgG, IB, Serum	Negative
Neuronal Nuclear Ab (Tr/DNER) IgG, IB	Negative

2008893	Amphiphysin Antibody, IgG	Negative
3002885	SOX1 Antibody, IgG by Immunoblot, Serum	Negative

Interpretive Data:
Refer to report
See Compliance Statement D: www.aruplab.com/CS

Note: Purkinje Cell (PCCA) antibody and Neuronal Nuclear (ANNA) antibody IgG are screened by IFA. If the IFA screen is indeterminate, then a Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot will be added. If the IFA screen is positive at 1:10 or greater, then a PCCA/ANNA antibodies titer and Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot will be added. Additional charges apply. If CV2.1 Antibody IgG Screen by IFA is positive, then CV2.1 Antibody IgG Titer by IFA will be added. Additional charges apply.

CPT Code(s): 86255 x2; 84182 x2; if reflexed add 86256 and/or 84182 x4; if reflexed add 86256

New York DOH approval pending. Call for status update.

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

3000134 **Prostate Health Index** **PROST INDX**

Performed: Mon
Reported: 1-7 days

3001053 Red Blood Cell Antigen Genotyping RBC GENO

Performed: Sun-Sat
Reported: 3-10 days

Specimen Required: Collect: **Genotyping:** Lavender (K_2EDTA), Pink (K_2EDTA) OR
Fetal Genotyping: Amniotic fluid OR two T-25 flasks at 80 percent confluency of cultured amniocytes. If the client is unable to culture amniocytes, this can be arranged by contacting ARUP Client Services at (800) 522-2787.
WITH Maternal Cell Contamination Specimen (see Remarks): Lavender (K_2EDTA), Pink (K_2EDTA), or Yellow (ACD Solution A or B).
Specimen Preparation: **Genotyping:** Transport 3 mL whole blood. (Min: 1 mL)
Amniotic Fluid: Transport 10 mL unspun fluid. (Min: 5 mL)
Cultured Amniocytes: Fill flasks with culture media. Transport two T-25 flasks at 80 percent confluency of cultured amniocytes filled with culture media. Backup cultures must be retained at the client's institution until testing is complete.
Maternal Cell Contamination Specimen: Transport 3 mL whole blood (Min: 1 mL)
Storage/Transport Temperature: **Whole Blood or Maternal Cell Contamination Specimen:** Refrigerated.
Amniotic fluid: Room temperature.
Cultured Amniocytes: CRITICAL ROOM TEMPERATURE. Must be received within 48 hours of shipment due to liability of cells.
Remarks: Maternal specimen is recommended for proper test interpretation if contamination of the fetal specimen from the mother is suspected. Order Maternal Cell Contamination.
Unacceptable Conditions: Plasma or serum; collection of specimen in sodium heparin tubes.
Stability (collection to initiation of testing):
Whole Blood or Maternal Cell Contamination Specimen: Ambient: 72 hours; Refrigerated: 1 week; Frozen: 1 month
Fetal Specimen: Ambient: 48 hours; Refrigerated: Unacceptable; Frozen: Unacceptable

Interpretive Data:
Background Information for Red Blood Cell Antigen Genotyping:
Characteristics: Erythrocyte alloimmunization may result in hemolytic transfusion reactions or hemolytic disease of the fetus and newborn (HDFN). Clinical presentation is variable and dependent on the specific antibody and recipient factors.
Incidence: Erythrocyte alloimmunization occurs in up to 58 percent of sickle cell patients, up to 35 percent in other transfusion-dependent patients, and in approximately 0.8 percent of all pregnant women.
Inheritance: Typically co-dominant for red blood cell (RBC) antigens, autosomal recessive for hemoglobin S (HbS).
Cause: Antigen-antibody mediated red-cell hemolysis between donor/recipient or transferred maternal antibodies.
Variants Tested: See the "Additional Technical Information" document.
Clinical Sensitivity: >99 percent for c (RH4), C (RH2), e (RH5), E (RH3), k (KEL2), K (KEL1), Jka (JK1), Jkb (JK2), Fya (FY1), Fyb (FY2), M (MNS1), N (MNS2), S (MNS3), s (MNS4). Unknown for Kpa (KEL3), Kpb (KEL4), Jsa (KEL6), Jsb (KEL7), Lua (LU1), Lub (LU2), Dia (DI1), Dib (DI2), Coa (CO1), Cob (CO2), Doa (DO1), Dob (DO2), Joa (DO5), Hy (DO4), LWa (LW5), LWb (LW7), Sc1 (SC1), Sc2 (SC2), U (MNS5), V (RH10), VS (RH20), Hemoglobin S (HbS).
Methodology: Immucor PreciseType™ HEA Molecular BeadChip which is FDA-approved for clinical testing. Predicted phenotypes are reported for each antigen and HbS based on the variants tested.
Analytical Sensitivity and Specificity: >99 percent for c (RH4), C (RH2), e (RH5), E (RH3), k (KEL2), K (KEL1), Jka (JK1), Jkb (JK2), Fya (FY1), Fyb (FY2), M (MNS1), N (MNS2), S (MNS3), s (MNS4). Unknown for Kpa (KEL3), Kpb (KEL4), Jsa (KEL6), Jsb (KEL7), Lua (LU1), Lub (LU2), Dia (DI1), Dib (DI2), Coa (CO1), Cob (CO2), Doa (DO1), Dob (DO2), Joa (DO5), Hy (DO4), LWa (LW5), LWb (LW7), Sc1 (SC1), Sc2 (SC2), U (MNS5), V (RH10), VS (RH20), Hemoglobin S (HbS).
Limitations: Only the targeted variants will be interrogated. Rare nucleotide changes leading to altered or partial antigen expression and null phenotypes may not be detected by this assay. This assay does not assess for RhD nor is it designed to diagnose sickle cell disease. Patients who have had hematopoietic stem cell transplants may have inconclusive results on this test. Abnormal signal intensities may result in indeterminate genotyping results for all tested antigens/HbS.

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.

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

3001312 *RET* Gene Rearrangements by FISH RET_FISH

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002950, Total Cell Count
Remove component 3000702, Total Cell Count

3001308 ***ROS1* by FISH** **ROS1_FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002951, Total Cell Count
Remove component 3000702, Total Cell Count

2007965 **Sensory Neuropathy Antibody Panel with Reflex to Titer and Neuronal Immunoblot** **SNAP R**

Reference Interval:

Test Number	Components	Reference Interval
	Purkinje Cell/Neuronal Nuclear IgG Scrn	None Detected
	Neuronal Nuclear Antibody (ANNA) IFA Titer, IgG	Less than 1:10
	Purkinje Cell Antibody, Titer	Less than 1:10
	Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum	Effective August 17, 2020 **Component** / **Reference Range** Neuronal Nuclear Ab (Hu) IgG, IB, Serum: Negative Neuronal Nuclear Ab (Ri) IgG, IB, Serum: Negative Neuronal Nuclear Ab (Yo) IgG, IB, Serum: Negative Neuronal Nuclear Ab (Tr/DNER) IgG, IB: Negative
	Myelin Associated Glycoprotein (MAG) Antibody, IgM	Less than 1000 TU
	Sulfate-3-Glucuronyl Paragloboside (SGPG) Antibody, IgM	Less than 1.00 IV

Note: Purkinje Cell (PCCA) antibody and Neuronal Nuclear (ANNA) antibody IgG are screened by IFA. If the IFA screen is indeterminate, then a Neuronal Nuclear Antibodies (Hu, Ri, Yo, and Tr/DNER) IgG by Immunoblot will be added. If the IFA screen is positive at 1:10 or greater, then a PCCA/ANNA antibodies titer and Neuronal Nuclear Antibodies (Hu, Ri, Yo, and Tr/DNER) IgG by Immunoblot will be added. Additional charges apply.

CPT Code(s): 83516 x2; 86255; if reflexed add 84182 x4 and/or 86256

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add reflex to 3002917, Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum
Remove reflex from 2007963, Neuronal Nuclear Antibodies (Hu, Ri, Yo) IgG by Immunoblot

New Test **3002886** **SOX1 Antibody, IgG by Immunoblot, CSF** **SOX1 CSF**
Click for Pricing

Methodology: Qualitative Immunoblot
Performed: Mon, Thu, Sat
Reported: 1-4 days

Specimen Required: Collect: CSF
Specimen Preparation: Transfer 1 mL CSF to an ARUP Standard Transport Tube. (Min: 0.60 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Contaminated, heat-inactivated, hemolyzed, or lipemic specimens.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval: Negative

Interpretive Data:
SOX1 antibody is detected in patients with Lambert-Eaton myasthenic syndrome (LEMS) and in patients with paraneoplastic cerebellar degeneration (PCD), paraneoplastic and nonparaneoplastic neuropathy. SOX1 antibody is associated with small cell lung cancer. A negative test result does not rule out a diagnosis of LEMS or other cases of paraneoplastic neurological syndrome. See Compliance Statement D: www.aruplab.com/CS

CPT Code(s): 84182

New York DOH approval pending. Call for status update.

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

New Test **3002885** **SOX1 Antibody, IgG by Immunoblot, Serum** **SOX1 SER**

Click for Pricing

Methodology: Qualitative Immunoblot
Performed: Mon, Thu, Sat
Reported: 1-4 days

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: 0.30 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma. Contaminated, heat-inactivated, hemolyzed, or lipemic specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval: Negative

Interpretive Data:
SOX1 antibody is detected in patients with Lambert-Eaton myasthenic syndrome (LEMS) and in patients with paraneoplastic cerebellar degeneration (PCD), paraneoplastic and nonparaneoplastic neuropathy. SOX1 antibody is associated with small cell lung cancer. A negative test result does not rule out a diagnosis of LEMS or other cases of paraneoplastic neurological syndrome. See Compliance Statement D: www.aruplab.com/CS

CPT Code(s): 84182

New York DOH approval pending. Call for status update.

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

3001303 ***SS18* (*SYT*) (18q11) Gene Rearrangement by FISH** **SYT_FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002952, Total Cell Count
Remove component 3000702, Total Cell Count

3002633 ***TFE3* Gene Rearrangement by FISH** **TFE3_FISH**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3002953, Total Cell Count
Remove component 3000702, Total Cell Count

New Test **3002570** **Trofile (DNA) Co-Receptor Tropism** **TROFI DNA**

Methodology: Cell Culture for Phenotypic Recombinant-virus Co-receptor Tropism
Performed: Varies
Reported: 14-19 days

Specimen Required: Collect: Lavender (K_2 or K_3 EDTA).
Specimen Preparation: Transfer 4 mL whole blood to an ARUP Standard Transport Tube and freeze immediately. (Min: 4 mL)
Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Storage/Transport Temperature: **CRITICAL FROZEN**.
Unacceptable Conditions: Thawed specimens.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 2 weeks

Reference Interval: By report

Note: Recommended for patients with undetectable viral loads.

CPT Code(s): 87999

New York DOH Approved.

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

0060714 **Unusual Organism Culture** **MC UORG**

Performed: Sun-Sat
Reported: Varies

3002479 **Autoimmune Liver Disease Reflexive Panel** **LIVER PAN**

Note: If F-Actin, IgG by ELISA is 20 Units or greater, then Smooth Muscle Antibody (SMA), IgG by IFA titer will be added. Additional charges apply. ANA identified by indirect fluorescence assay (IFA) using HEp-2 substrate and IgG-specific conjugate at a screening dilution of 1:80. Positive nuclear patterns reported include homogeneous, speckled, centromere, nucleolar, or nuclear dots. Positive cytoplasmic patterns reported include reticular/AMA, discrete/GW body-like, polar/golgi-like, rods and rings, or cytoplasmic speckled patterns. All positive results are reported with endpoint titers at no additional charge.

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add component 3002774, Cytoplasm Pattern to reflexive orderable 3000478

3002480 **Primary Biliary Cholangitis Panel** **BILIARY CH**

Note: ANA identified by indirect fluorescence assay (IFA) using HEp-2 substrate and IgG-specific conjugate at a screening dilution of 1:80. Positive nuclear patterns reported include homogeneous, speckled, centromere, nucleolar, or nuclear dots. Positive cytoplasmic patterns reported include reticular/AMA, discrete/GW body-like, polar/golgi-like, rods and rings, or cytoplasmic speckled patterns. All positive results are reported with endpoint titers at no additional charge.

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add component 3002774, Cytoplasm Pattern to reflexive orderable 3000478

HOTLINE: Effective August 17, 2020

The following will be discontinued from ARUP's test menu on August 17, 2020.
Replacement test options are supplied if applicable.

Test Number	Test Name	Refer To Replacement
0093514	Allergen, Food, Sage IgE	
2006438	Allergen, Fungi and Molds, *Pityrosporum orbiculare*/Malassezia IgE	
0020140	Calcium, Ionized, Whole Blood	
0092303	Calprotectin, Fecal	Calprotectin, Fecal by Immunoassay (3002859)
0080469	Chromogranin A	Chromogranin A, Serum (3002867)
2006366	Chronic Granulomatous Disease (NCF1) Exon 2 GT Deletion	
3000544	Chronic Granulomatous Disease Panel (CYBB Sequencing and NCF1 Exon 2 GT Deletion)	
3000541	Chronic Granulomatous Disease, X-Linked (CYBB) Sequencing	
2005350	*Francisella tularensis* Antibodies, IgG and IgM	*Francisella tularensis* Antibodies, IgG and IgM with Reflex to Agglutination (3002912)
2005353	*Francisella tularensis* Antibody, IgG	*Francisella tularensis* Antibody, IgG with Reflex to Agglutination (3002913)
2005354	*Francisella tularensis* Antibody, IgM	*Francisella tularensis* Antibody, IgM with Reflex to Agglutination (3002914)
0050613	Hemoglobin (Hb) A2 and F by Column	Hemoglobin (Hb) A2 and F by Column with Reflex to Electrophoresis (3002644)
0081348	Hemoglobin F	Hemoglobin F with Reflex to Electrophoresis (3002645)
2010647	Hepatitis C Virus (HCV) NS3/4A Protease Inhibitor Resistance, GenoSure	Hepatitis C Virus (HCV) GenoSure NS3 and NS4A (3001234)
2008438	Human Immunodeficiency Virus Type 1 (HIV-1) Drug Resistance (GenoSURE PRIme)	Human Immunodeficiency Virus Type 1 (HIV-1) GenoSure PRIme (3001238)
0051367	Hypochondroplasia (FGFR3) 2 Mutations	Skeletal Dysplasia Panel, Sequencing and Deletion/Duplication (2012015)
0040105	Kleihauer-Betke Stain for Fetal Hemoglobin	Fetal Hemoglobin Determination for Fetomaternal Hemorrhage (2001743)
2007963	Neuronal Nuclear Antibodies (Hu, Ri, Yo) IgG by Immunoblot	Neuronal Nuclear Antibodies (Hu, Ri, Yo, Tr/DNER) IgG by Immunoblot, Serum (3002917)
0080526	Pancreatic Elastase, Fecal by ELISA	Pancreatic Elastase, Fecal by Immunoassay (3002858)
2013955	Paraneoplastic Reflexive Panel	Paraneoplastic Reflexive Panel (3002929)
0093370	Trofile Co-Receptor Tropism	Human Immunodeficiency Virus Type 1 (HIV-1) Trofile Co-Receptor Tropism (3001246)