HOTLINE: Effective November 16, 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	3002982	Adenosine Deaminase in CSF											x	
6	3002984	Adenosine Deaminase in Pericardial Fluid											x	
7	3002980	Adenosine Deaminase in Peritoneal Fluid											x	
7	3002978	Adenosine Deaminase in Pleural Fluid											x	
33	2006098	Adenosine Deaminase, CSF												x
33	2009357	Adenosine Deaminase, Pericardial Fluid												x
33	2006101	Adenosine Deaminase, Peritoneal Fluid												x
33	2006096	Adenosine Deaminase, Pleural Fluid												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	3002976	Adenosine Deaminase, Serum or Plasma											x	
8	2011431	ALK (D5F3) by Immunohistochemistry with Reflex to *ALK* Gene Rearrangements by FISH									x			
8	2007324	ALK (D5F3) with Interpretation by Immunohistochemistry									x			
9	2014735	Allergen, Inhalants, IHC Western Allergy Panel											x	
33	2007872	ATP7A-Related Copper Transport Disorders (ATP7A), Sequencing												x
10	3003058	Autoimmune Neurologic Disease Reflexive Panel, Serum											x	
33	2013944	Autoimmune Neurologic Disease Reflexive Panel, Serum												x
33	2005640	Autoimmune Neuromuscular Junction Reflexive Panel												x
13	3003017	Autoimmune Neuromuscular Junction Reflexive Panel											x	
15	3001947	Blood Smear with Interpretation								x				
15	3001855	*BRCA1* and *BRCA2*-Associated HBOC Syndrome Panel, Sequencing and Deletion/Duplication											x	
33	2011954	Breast and Ovarian Hereditary Cancer Syndrome (*BRCA1* and *BRCA2*) Sequencing												x
33	2011949	Breast and Ovarian Hereditary Cancer Syndrome (*BRCA1* and *BRCA2*) Sequencing and Deletion/Duplication												x
16	3003034	Bupropion and Metabolite, Serum or Plasma											x	
33	2010357	Bupropion, Serum or Plasma												x
17	0081110	Carnitine Panel					x					x		
33	0080065	Carnitine, Free												x
17	0080068	Carnitine, Free & Total (Includes Carnitine, Esterified)										x		
33	0081309	Carnitine, Free, Urine												x
33	0080067	Carnitine, Total												x
33	0081307	Carnitine, Total, Urine												x
17	0080055	Carotene, Serum Total			x									
33	2004931	CDKL5-Related Disorders (CDKL5) Sequencing												x
33	2004935	CDKL5-Related Disorders (CDKL5) Sequencing and Deletion/Duplication												x
17	3002286	Cerebral Cavernous Malformation Panel, Sequencing and Deletion/Duplication											x	
33	0090870	Chlorpromazine												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
19	3003036	Chlorpromazine, Serum or Plasma											x	
19	3001858	Chronic Lymphocytic Leukemia Mutation Panel by Next Generation Sequencing				x								
33	2006261	Citrin Deficiency (SLC25A13) Sequencing												x
20	3002996	Coccidioides Ab by CF & ID, CSF											x	
21	3002995	Coccidioides Ab by CF & ID, Serum											x	
21	3001982	Coccidioides Antibody Reflexive Panel				x						x		
33	0050183	Coccidioides immitis Antibodies by Immunodiffusion												x
33	3000058	Coccidioides immitis by Immunodiffusion, CSF												x
22	3001981	Comprehensive Heart Biopsy Workup				x								
22	0060360	*Corynebacterium diphtheriae* Culture				x								
33	2008615	Creatine Transporter Deficiency (SLC6A8) Sequencing												x
33	2008610	Creatine Transporter Deficiency (SLC6A8) Sequencing and Deletion/Duplication												x
33	0090060	Cyanide												x
22	3003039	Cyanide, Whole Blood											x	
22	3001783	Dermatomyositis and Polymyositis Panel								x				
23	3001782	Dermatomyositis Autoantibody Panel								x				
23	2007479	Drug Profile, Targeted by Tandem Mass Spectrometry and Enzyme Immunoassay, Urine	x	x		x		x				x		
24	2009288	Drug Profile, Targeted with Interpretation by Tandem Mass Spectrometry and Enzyme Immunoassay, Urine	x	x		x		x				x		
24	0092420	Drug Screen 9 Panel, Serum or Plasma - Immunoassay Screen with Reflex to Mass Spectrometry Confirmation/Quantitation				x								
25	3003016	Epstein-Barr Virus (EBV) by in situ Hybridization on Paraffin											x	
25	3003035	Epstein-Barr Virus (EBV) by In Situ Hybridization Stain Only											x	
33	2002902	Epstein-Barr Virus (EBV) by in situ Hybridization, Paraffin												x
33	2013592	Epstein-Barr Virus (EBV) by In Situ Hybridization, Stain Only												x
26	2014680	Expanded Carrier Screen by Next Generation Sequencing				x								
26	2014677	Expanded Carrier Screen by Next Generation Sequencing with Fragile X				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
26	3001781	Extended Myositis Panel								x				
26	3003086	Fatty Acids Profile, Essential in Red Blood Cells											x	
27	0082024	Fetal Fibronectin				x	x	x						
27	3003020	Ganglionic Acetylcholine Receptor Antibody											x	
33	2011470	GLI3-Related Disorders (GLI3) Sequencing												x
33	2011465	GLI3-Related Disorders (GLI3) Sequencing and Deletion/Duplication												x
28	0020222	Hemosiderin, Urine		x	x	x	x	x	x					
33	3000871	Human Immunodeficiency Virus 1 (HIV-1) by Quantitative NAAT with Reflex to HIV PhenoSense GT												x
28	3002134	IDH1 R132H Point Mutation by Immunohistochemistry with Reflex to IDH1 and IDH2 Mutation Analysis, Exon 4									x			
28	2007357	IDH1 R132H Point Mutation with Interpretation by Immunohistochemistry									x			
28	3001784	Interstitial Lung Disease Autoantibody Panel								x				
33	0051510	Juvenile Polyposis (SMAD4) Sequencing												x
33	2004988	Juvenile Polyposis Syndrome (BMPR1A) Sequencing												x
33	2009306	Kabuki Syndrome (KMT2D) Sequencing												x
29	3002956	*KIT* (D816V) Mutation by ddPCR, Quantitative											x	
33	3000440	KIT (D816V) Mutation by PCR												x
33	2002945	Legius Syndrome (SPRED1) Sequencing												x
29	2010711	Liver Cytosolic Antigen Type 1 (LC-1) Antibody, IgG								x				
33	2004539	LMNA-Related Disorders (LMNA) Deletion/Duplication												x
29	0080515	Myelin Basic Protein		x										
30	2011117	Myeloid Malignancies Mutation Panel by Next Generation Sequencing				x			x					
30	2012182	Myeloid Malignancies Somatic Mutation and Copy Number Analysis Panel				x			x					
33	2004901	Ornithine Transcarbamylase Deficiency (OTC) Sequencing												x
30	3002135	1p19q Deletion by FISH and IDH1 R132H Point Mutation by Immunohistochemistry with Reflex to IDH1 and IDH2 Mutation Analysis, Exon 4									x			
30	2001491	Parathyroid Hormone, Fine Needle Aspiration (FNA)				x								

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31	0070346	Parathyroid Hormone, Intact				x								
31	0070172	Parathyroid Hormone, Intact with Calcium				x								
33	2008394	Peutz-Jeghers Syndrome (STK11) Sequencing												x
31	0020518	pH, Fecal			x	x								
33	2003410	Pulmonary Arterial Hypertension (BMPR2) Sequencing												x
33	2003405	Pulmonary Arterial Hypertension (BMPR2) Sequencing and Deletion/Duplication												x
33	2002730	RASA1-Related Disorders (RASA1) Sequencing												x
31	2008414	ROS1 with Interpretation by Immunohistochemistry with Reflex to FISH if Equivocal or Positive									x			
33	3001399	SHOX-Related Disorders, Sequencing												x
33	2007569	TACI-Associated Common Variable Immunodeficiency (TNFRSF13B) Sequencing												x
32	3003041	Thiocyanate Quantitative, Serum or Plasma											x	
33	2011575	Thiocyanate, Serum or Plasma												x
32	0051589	Toll-Like Receptor Function						x	x	x				
32	2005413	Urticaria-Inducing Activity			x									
32	2005415	Urticaria-Inducing Activity with Thyroid Antibodies and Stimulating Hormone			x									

New Test **3002982** **Adenosine Deaminase in CSF** **ADACSF**
Click for Pricing

Methodology: Quantitative Spectrophotometry
Performed: Sun, Tue, Thu
Reported: 1-4 days

Specimen Required: Patient Prep: Collect specimens in leak-proof container.
Collect: Cerebrospinal Fluid.
Specimen Preparation: Centrifuge specimen at room temperature. Transfer 0.5 mL fluid to an ARUP Standard Transport Tube and freeze. (Min: 02 mL)
Storage/Transport Temperature: Frozen. Specimen must remain frozen until received in lab.
Remarks: Indicate source on requisition.
Unacceptable Conditions: Whole blood. Bronchoalveolar lavage (BAL) specimens. Turbid specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: 1 month

Reference Interval: 0-9U/L

Interpretive Data:

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

CPT Code(s): 84311

New York DOH Approved.

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

New Test **3002984** **Adenosine Deaminase in Pericardial Fluid** **ADAPERCAR**
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Methodology: Quantitative Spectrophotometry
Performed: Sun, Tue, Thu
Reported: 1-4 days

Specimen Required: Collect: Pericardial Fluid
Specimen Preparation: Centrifuge specimen at room temperature. Transfer 0.5 mL fluid to an ARUP Standard Transport Tube and freeze. (Min: 0.2 mL)
Storage/Transport Temperature: Frozen. Specimen must remain frozen until received in lab.
Remarks: Indicate source on requisition.
Unacceptable Conditions: Whole blood or Bronchoalveolar Lavage (BAL) specimens. Turbid specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: 30 days

Reference Interval: 0-40 U/L

Interpretive Data:

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

CPT Code(s): 84311

New York DOH Approved.

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

New Test **3002980** **Adenosine Deaminase in Peritoneal Fluid** **ADAPERIT**
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Methodology: Quantitative Spectrophotometry
Performed: Sun, Tue, Thu
Reported: 1-4 days

Specimen Required: Patient Prep: Collect specimens in leak proof container.
Collect: Peritoneal Fluid.
Specimen Preparation: Centrifuge specimen at room temperature. Transfer 0.5mL fluid to an ARUP Standard Transport Tube and freeze. (Min: 0.2 mL)
Storage/Transport Temperature: Frozen. Specimen must remain frozen until received in lab.
Remarks: Indicate source on requisition.
Unacceptable Conditions: Whole blood. Bronchoalveolar Lavage (BAL) specimens. Turbid specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: 1 month

Reference Interval: 0-30 U/L

Interpretive Data:

See Compliance Statement B www.aruplab.com/CS

CPT Code(s): 84311

New York DOH Approved.

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

New Test **3002978** **Adenosine Deaminase in Pleural Fluid** **ADAPLEURA**
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Methodology: Quantitative Spectrophotometry
Performed: Sun, Tue, Thu
Reported: 1-4 days

Specimen Required: Patient Prep: Collect specimens in leak-proof container.
Collect: Pleural Fluid.
Specimen Preparation: Centrifuge specimen at room temperature. Transfer 0.5 mL fluid to an ARUP Standard Transport Tube and freeze. (Min: 0.2 mL)
Storage/Transport Temperature: Frozen. Specimen must remain frozen until received in lab.
Remarks: Indicate source on requisition.
Unacceptable Conditions: Whole blood. Bronchoalveolar lavage (BAL) specimens. Turbid specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: 1 month

Reference Interval: 0-30 U/L

Interpretive Data:

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

CPT Code(s): 84311

New York DOH Approved.

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

New Test **3002976** **Adenosine Deaminase, Serum or Plasma** **ADASP**

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Methodology: Quantitative Spectrophotometry
Performed: Sun, Tue, Thu
Reported: 1-4 days

Specimen Required: Collect: Plain red, SST, or Green Heparin Plasma (Lithium or Sodium)
Specimen Preparation: Allow serum tube to clot completely at room temperature. Separate serum or plasma from cells within 4 hours of collection. Transfer 0.5 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.2 mL)
Storage/Transport Temperature: Frozen. Specimen must remain frozen until received in lab.
Remarks: Indicate source on requisition. Conditions: EDTA, citrate or oxalate.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: 1 month

Reference Interval: 0-15 U/L

Interpretive Data:

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

CPT Code(s): 84311

New York DOH approval pending. Call for status update.

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

2011431 **ALK (D5F3) by Immunohistochemistry with Reflex to *ALK* Gene Rearrangements by FISH** **ALK REFLEX**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3003119, ALK Tissue Source

2007324 **ALK (D5F3) with Interpretation by Immunohistochemistry** **ALKD5F3 IP**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3003119, ALK Tissue Source

New Test **2014735** **Allergen, Inhalants, IHC Western Allergy Panel** **WEST PRO**

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Methodology: Quantitative ImmunoCAP Fluorescent Enzyme Immunoassay
Performed: Sun-Sat
Reported: 1-2 days

Specimen Required: Patient Prep: Multiple patient encounters should be avoided.
Collect: Serum Separator Tube (SST). Multiple specimen tubes should be avoided.
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 4 mL serum to an ARUP Standard Transport Tube. (Min: 1.8 mL)
Storage/Transport Temperature: Refrigerated.
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

Reference Interval: Panel includes: Trees: Box Elder, Birch, Mountain Cedar, Oak, White Ash, Cottonwood, Elm, Willow, Sycamore, Walnut, Mesquite, White Mulberry. Grasses and Shrubs: Timothy, Johnson, Bermuda, Cocklebur, Lambs Quarters, Pigweed, Sheep Sorrel, Sagebrush, English Plantain. Western Ragweed, Marsh Elder, Scale, Kochia/Firebush, Russian Thistle, Alfalfa.
Mites: *Dermatophagoides farina* (DF), *D. pteronissimus* (DPTER).
Molds: *Alternaria* alt, Hormodendrum, *Aspergillus fumigatus*, *Penicillium chrysogenum* (aka *P. notatum*).
Animals: Cat Dander, Dog Dander, Horse Hair/Dander, Feather Mix

Reporting Range (reported in kU/L)	Probability of IgE Mediated Clinical Reaction	Class Scoring
Less than 0.10	No significant level detected	0
0.10 - 0.34	Clinical relevance undetermined	0/1
0.35 - 0.70	Low	1
0.71 - 3.50	Moderate	2
3.51 - 17.50	High	3
17.51 - 50.00	Very high	4
50.01 - 100.00	Very high	5
Greater than 100.00	Very high	6

Test Number	Components	Reference Interval	
0050345	Immunoglobulin E	Effective November 17, 2014	
		Age	**Reference Interval**
		0-5 months	13 kU/L or less
		6-12 months	34 kU/L or less
		1-2 years	97 kU/L or less
		3 years	199 kU/L or less
		4-6 years	307 kU/L or less
		7-8 years	403 kU/L or less
		9-12 years	696 kU/L or less
		13-15 years	629 kU/L or less
		16-17 years	537 kU/L or less
		18 years and older	214 kU/L or less

Interpretive Data:
Allergen results of 0.10-0.34 kU/L are intended for specialist use as the clinical relevance is undetermined. Even though increasing ranges are reflective of increasing concentrations of allergen-specific IgE, these concentrations may not correlate with the degree of clinical response or skin testing results when challenged with a specific allergen. The correlation of allergy laboratory results with clinical history and in vivo reactivity to specific allergens is essential. A negative test may not rule out clinical allergy or even anaphylaxis**.**

CPT Code(s): 86003 x36; 86005; 82785

New York DOH Approved.

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

New Test **3003058** **Autoimmune Neurologic Disease Reflexive Panel, Serum** **NEURO R2**

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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: Serum Separator Tube (SST)
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer three 1 mL serum aliquots to ARUP Standard Transport Tubes. (Min: 0.5 mL/aliquot)
Storage/Transport Temperature: Frozen
Unacceptable Conditions: Amniotic fluid, ocular fluid, peritoneal fluid, synovial fluid, CSF, or plasma. Contaminated, hemolyzed, icteric, or lipemic specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 24 hours; Refrigerated: 1 week; Frozen: 1 month (avoid repeated freeze/thaw cycles)

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: Refer to report
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	
3002885	SOX1 Antibody, IgG by Immunoblot, Serum	Negative	
3003020	Ganglionic Acetylcholine Receptor Antibody		
		Negative	0.0 - 8.4 pmol/L
		Indeterminate	8.5 – 11.6 pmol/L
		Positive	11.7 pmol/L or greater

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

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 x5; 83516 x2; 84182 x2; 86255 x9; 86341; if reflexed, additional CPT codes may apply: 83516; 86255; 86256; 84182 x4

New York DOH approval pending. Call for status update.

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

New Test **3003017** **Autoimmune Neuromuscular Junction Reflexive Panel** **MUWA R2**

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Additional Technical Information

Supplemental Resources

Methodology: Quantitative Radioimmunoassay/Qualitative Radiobinding Assay/Semi-Quantitative Flow Cytometry/Semi-Quantitative Indirect Fluorescent Antibody
Performed: Refer to individual components
Reported: 2-8 days

Specimen Required: Collect: Serum separator tube (SST).
Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transport 2 mL serum. (Min: 1 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma. Contaminated, hemolyzed, or severely lipemic specimens.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year

Reference Interval:

Test Number	Components	Reference Interval	
0080009	Acetylcholine Receptor Binding Antibody		
		Negative	0.0-0.4 nmol/L
		Positive	0.5 nmol/L or greater
0099580	Acetylcholine Receptor Blocking Antibody		
		Negative:	0-26 percent blocking
		Indeterminate:	27-41 percent blocking
		Positive:	42 percent or greater blocking
0099521	Acetylcholine Receptor Modulating Antibody		
		Negative	0-45 percent modulating
		Positive	46 percent or greater modulating
0092628	P/Q-Type Voltage-Gated Calcium Channel (VGCC) Antibody		
		Negative	0.0 to 24.5 pmol/L
		Indeterminate	24.6 to 45.6 pmol/L
		Positive	45.7 pmol/L or greater
	N-Type Voltage-Gated Calcium Channel (VGKC) Antibody		
		Negative	0.0 to 69.9 pmol/L
		Indeterminate	70.0 to 110.0 pmol/L
		Positive	110.1 pmol/L or greater
3003020	Ganglionic Acetylcholine Receptor Antibody		
		Negative	pmol/L or less
		Indeterminate	pmol/L
		Positive	pmol/L 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
2005636	Titin Antibody		
		Negative	0.00-0.45 IV
		Indeterminate	0.46-0.71 IV
		Positive	0.72 IV or greater
0050746	Striated Muscle Antibodies, IgG with Reflex to Titer	Less than 1:40	
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	

Interpretive Data:
Refer to report.

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

Note: If Acetylcholine Receptor Binding Antibody result is greater than 0.4 nmol/L or Acetylcholine Receptor Blocking Antibody result is greater than 26 percent, then Acetylcholine Receptor Modulating Antibody will be added. If Striated Muscle Ab is detected, then a titer will be added. If VGKC is Indeterminate or Positive, LGI1 Antibody IgG and CASPR2 Antibody IgG will be added. If LGI1 antibody IgG is positive, then LGI1 antibody IgG titer will be added. If CASPR2 antibody IgG is positive, then CASPR2 antibody IgG titer will be added. Additional charges apply.

CPT Code(s): 83519 x5; 83516 x2; 86255; if reflexed, add 83516 and/or 86256 and/or 86255x2, if further reflexed add 86256 per titer

New York DOH approval pending. Call for status update.

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

3001947	**Blood Smear with Interpretation**	**SMR INTRP**

CPT Code(s): 85060, 85007

New Test	3001855	***BRCA1* and *BRCA2*-Associated HBOC Syndrome Panel, Sequencing and Deletion/Duplication**	**BRCA NGS**

Click for Pricing

Methodology: Massively Parallel Sequencing/Multiplex Ligation-dependent Probe Amplification
Performed: Varies
Reported: 15-17 days

Specimen Required: Collect: Lavender (EDTA) or Yellow (ACD Solution A or B).
Specimen Preparation: Transport 3 mL whole blood. (Min: 2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Serum or plasma; grossly hemolyzed or frozen specimens
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval: By report

Interpretive Data:
Refer to report.

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

Note: Genes tested: *BRCA1* (NM_007294), *BRCA2* (NM_000059)

CPT Code(s): 81162

New York DOH approval pending. Call for status update.

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

New Test **3003034** **Bupropion and Metabolite, Serum or Plasma** **BUPRO SP**
Click for Pricing

Methodology: Quantitative Liquid Chromatography-Tandem Mass Spectrometry
Performed: Monday
Reported: 8 days

Specimen Required: Patient Prep: Timing of specimen collection: Predose (trough) draw - At steady state concentration.
Collect: Plain red. Also acceptable: Lavender (K_2 or K_3EDTA), pink (K_2EDTA), green (Heparin) or gray (Potassium oxalate or Sodium Fluoride).
Specimen Preparation: Separate serum or plasma from cells ASAP or within 2 hours of collection. Transfer 2 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered
Unacceptable Conditions: Whole blood. Gel separator tubes, light blue (citrate), or yellow (SPS or ACD solution).
Stability (collection to initiation of testing): After separation from cells: Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 14 days

Reference Interval:

	Bupropion	Hydroxybupropion
Therapeutic Range	10-100 ng/mL	850-1500 ng/mL
Toxic Level	Greater than or equal to 400 ng/mL	Greater than or equal to 2000 ng/mL

Interpretive Data:
Bupropion is an antidepressant drug indicated for the treatment of major depressive disorder. The drug is also used as treatment for smoking cessation. The therapeutic range is based on serum predose (trough) draw at steady-state concentration. Bupropion is primarily metabolized to hydroxybupropion, which has about 50 percent of the activity of the parent drug. The pharmacokinetics of bupropion and metabolite are influenced by drug-drug interactions that affect CYP2B6 metabolism. Patients with renal or hepatic impairment may require a dose reduction. Adverse effects may include seizures, hypertension, nausea, vomiting, neuropsychiatric and cardiac abnormalities.

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

CPT Code(s): 80338 (Alt code: G0480)

New York DOH Approved.

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

0081110 Carnitine Panel — CARNPAN

Reference Interval: Reports include age appropriate reference interval and interpretation.

Effective November 16, 2020

Test Number	Components	Reference Interval
0080068	Carnitine, Free & Total (Includes Carnitine, Esterified)	

Age	Free Carnitine	Total Carnitine	Esterified Carnitine	Ratio Esterified: Free
1 - 31 days	15 - 55 µmol/L	21 - 83 µmol/L	4 - 29 µmol/L	0.2 - 0.8
32 days-12 months	29 - 61 µmol/L	38 - 73 µmol/L	7 - 24 µmol/L	0.1 - 0.8
13 months - 6 years	25 - 55 µmol/L	35 - 90 µmol/L	4 - 36 µmol/L	0.1 - 0.8
7 years -20 years	22 - 63 µmol/L	31 - 78 µmol/L	3 - 38 µmol/L	0.1 - 0.9
21 years or older	25 - 60 µmol/L	34 - 86 µmol/L	5 - 29 µmol/L	0.1 - 1.0

0040033	Acylcarnitine Quantitative Profile, Plasma	Reports include age appropriate reference intervals and interpretation.

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 0081291, Carnitine, Esterified from Carnitine, Esterified to Carnitine, Esterified, Serum/Plasma.
Change the charting name for component 0080066, Carnitine, Free from Carnitine, Free to Carnitine, Free, Serum/Plasma.
Change the charting name for component 0081108, Carnitine, Total from Carnitine, Total to Carnitine, Total, Serum/Plasma.
Change the charting name for component 0081292, Carnitine Esterified/Free (Ratio) from Carnitine Esterified/Free (Ratio) to Carnitine E/F Ratio, Serum/Plasma.

0080068 Carnitine, Free & Total (Includes Carnitine, Esterified) — CARN F&T

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 0080064, Carnitine, Esterified from Carnitine, Esterified to Carnitine, Esterified, Serum/Plasma.
Change the charting name for component 0080066, Carnitine, Free from Carnitine, Free to Carnitine, Free, Serum/Plasma.
Change the charting name for component 0080067, Carnitine, Total from Carnitine, Total to Carnitine, Total, Serum/Plasma.
Change the charting name for component 0081148, Carnitine Esterified/Free (Ratio) from Carnitine Esterified/Free (Ratio) to Carnitine E/F Ratio, Serum/Plasma.

0080055 Carotene, Serum Total — CARO

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

New Test 3002286 Cerebral Cavernous Malformation Panel, Sequencing and Deletion/Duplication — CCM NGS

Available Now
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Additional Technical Information

Patient History for Cerebral Cavernous Malformation Panel, Sequencing and Deletion/Duplication

Methodology: Massively Parallel Sequencing/Genomic Microarray (Oligo-based Array)
Performed: Varies
Reported: 3-6 weeks

Specimen Required: Collect: Lavender (EDTA) or Yellow (ACD Solution A or B).
Specimen Preparation: Transport 3 mL whole blood. (Min: 1.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Serum or plasma; grossly hemolyzed or frozen specimens
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval: By report

Interpretive Data:
Refer to report.

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

Note: Genes tested: *CCM2, KRIT1, PDCD10*

CPT Code(s): 81479

New York DOH approval pending. Call for status update.

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

New Test **3003036** **Chlorpromazine, Serum or Plasma** **CHLORP SP**
Click for Pricing

Methodology: Quantitative Liquid Chromatography-Tandem Mass Spectrometry
Performed: Mon
Reported: 8 days

Specimen Required: Patient Prep: Timing of specimen collection: Predose (trough) draw - At steady state concentration.
Collect: Plain red. Also acceptable: Lavender (K_2 or K_3EDTA), pink (K_2EDTA), green (Heparin) or gray (Potassium oxalate or Sodium fluoride).
Specimen Preparation: Separate serum or plasma from cells within 2 hours of collection. Transfer 2 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Frozen.
Unacceptable Conditions: Whole blood. Hemolyzed specimens. Gel separator tubes, light blue (citrate) or yellow (SPS or ACD solution).
Stability (collection to initiation of testing): After separation from cells: Ambient: Unacceptable; Refrigerated: 14 days; Frozen: 14 days

Reference Interval:

Therapeutic Range	30-300 ng/mL
Toxic Level	Greater than or equal to 600 ng/mL

Interpretive Data:
Chlorpromazine is a neuroleptic drug indicated for the treatment of schizophrenia, psychotic disorders and intractable hiccup. Chlorpromazine should not be used in patients who have epilepsy, Parkinson's disease, hypoparathyroidism, myasthenia gravis, and prostatic hypertrophy. Adverse effects may include drowsiness, hypotension, agranulocytosis, cardiac abnormalities, seizures and rare life-threatening effects, such as phenothiazine sudden death syndrome, and neuroleptic malignant syndrome. See Compliance Statement B: www.aruplab.com/CS

CPT Code(s): 80342 (Alt code: G0480)

New York DOH Approved.

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

3001858 **Chronic Lymphocytic Leukemia Mutation Panel by Next Generation Sequencing** **CLL NGS**

Specimen Required: Collect: Lavender (EDTA), Green (sodium heparin), Bone Marrow (EDTA), or Bone Marrow (sodium heparin). Fresh-frozen tissue.
Specimen Preparation: **Whole Blood and Bone Marrow:** Transport 3 mL. (Min: 1.5 mL)
Fresh-frozen Tissue: Transport 5 mg fresh-frozen tissue. (Min: 5 mg)
Separate specimens must be submitted when multiple tests are ordered
Storage/Transport Temperature: **Whole Blood or Bone Marrow:** Refrigerated.
Fresh-frozen Tissue: Frozen.
Unacceptable Conditions: Serum, plasma, grossly hemolyzed specimens, buccal brush or swab, FFPE tissue.
Stability (collection to initiation of testing): **Whole Blood or Bone Marrow:** Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable
Fresh-frozen Tissue: Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 1 month

New Test **3002996** **Coccidioides Ab by CF & ID, CSF** **COCC.CFIDC**
Click for Pricing

Methodology: Semi-Quantitative Complement Fixation/Qualitative Immunodiffusion
Performed: Sun-Sat
Reported: 2-6 days

Specimen Required: Collect: CSF.
Specimen Preparation: Transfer 2.5 mL CSF to an ARUP Standard Transport Tube. (Min: 1 mL) Parallel testing is preferred and convalescent specimens **must** be received within 30 days from receipt of the acute specimens.
Storage/Transport Temperature: Refrigerated.
Remarks: **Mark specimens plainly as "acute" or "convalescent."**
Unacceptable Conditions: Other body fluids. Contaminated, hemolyzed, xanthochromic, or severely lipemic specimens.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

Reference Interval:

Test Number	Components	Reference Interval
	Coccidioides by Immunodiffusion, CSF	None detected.
3000059	*Coccidioides* Antibody by CF, CSF	Less than 1:2

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

Note: For *Coccidioides*, immunodiffusion (ID) measures IgM antibody, while complement fixation (CF) measures both IgG and IgM. ELISA tests can be used to detect both coccidioidal IgG and IgM antibodies. While elevated single antibody titers may be diagnostic, paired specimens are preferred. Acute and convalescent specimens (drawn at least 21 days apart) showing a fourfold or greater rise in titer are diagnostic.

Negative fungal serology does not rule out the possibility of current infection.

CPT Code(s): 86635 x2

New York DOH Approved.

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

New Test **3002995** **Coccidioides Ab by CF & ID, Serum** **COCC.CFIDS**
Click for Pricing

Methodology: Semi-Quantitative Complement Fixation/Qualitative Immunodiffusion
Performed: Sun-Sat
Reported: 2-6 days

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

Reference Interval: Effective November 18, 2013

Test Number	Components	Reference Interval
0050170	*Coccidioides* Antibody by CF	Less than 1:2
	Coccidioides immitis Antibodies by Immunodiffusion	None detected.

Interpretive Data:
Refer to report.

Note: For *Coccidioides*, immunodiffusion (ID) measures IgM antibody, while complement fixation (CF) measures both IgG and IgM. ELISA tests can be used to detect both coccidioidal IgG and IgM antibodies. While elevated single antibody titers may be diagnostic, paired specimens are preferred. Acute and convalescent specimens (drawn at least 21 days apart) showing a fourfold or greater rise in titer are diagnostic.

Negative fungal serology does not rule out the possibility of current infection.

CPT Code(s): 86635 x2

New York DOH Approved.

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

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

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

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Add reflex to 3003002, Coccidioides Antibodies by Immunodiffusion (Reflex for 3001982 COCCI R only – Not Orderable by Clients)
Remove reflex from 0050183, Coccidioides immitis Antibodies by Immunodiffusion

3001981 Comprehensive Heart Biopsy Workup — HRT REQ

Specimen Required: Collect: Four transplant heart biopsies OR five native heart biopsies. Obtain Renal/Heart Biopsy Collection Kit prior to collection procedure (ARUP supply #40460) available online through eSupply using ARUP Connect™ or contact Client Services at (800) 522-2787.
Specimen Preparation: Special fixatives are required; collection instructions are provided with the kit. Transplant has three biopsies placed in 10 percent formalin and one biopsy placed in Zeus fixative. Native has three biopsies placed in 10 percent formalin, one placed in Zeus fixative, and one placed in glutaraldehyde.
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: Submit electronic request. If you do not have electronic ordering capability, use an ARUP Anatomic Pathology Form (#32960) with an ARUP client number. For additional technical details, contact ARUP Client Services at (800) 522-2787. Submit clinical history.
Unacceptable Conditions: Specimens submitted with nonrepresentative tissue type.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 48 hours; Frozen: Unacceptable

0060360 *Corynebacterium diphtheriae* Culture — MC DIPH

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.
Unacceptable Conditions: Media: UTM or other viral transport media.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: Unacceptable; Frozen: Unacceptable

New Test 3003039 Cyanide, Whole Blood — CYANI WB

Click for Pricing

Methodology: Quantitative High Performance Liquid Chromatography-Tandem Mass Spectrometry
Performed: Varies
Reported: 8 – 11 days

Specimen Required: Collect: Gray top tube (Sodium Fluoride / Potassium Oxalate)
Specimen Preparation: 1 mL whole blood. (Min: 0.4 mL)
Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Storage/Transport Temperature: **CRITICAL FROZEN.**
Stability (collection to initiation of testing): Ambient: Undetermined; Refrigerated: 24 hours; Frozen: 3 months

Reference Interval: By report

Note: Studies have shown that cyanide has variable instability in biological specimens and is particularly unstable in some postmortem specimens. The loss of cyanide can be minimized by shipping the sample to the laboratory for analysis as soon as possible, preferably using refrigerated or frozen transportation and preservation using sodium fluoride/potassium oxalate (grey-top tube). The potential for increases in cyanide concentrations, although rare, have also been demonstrated and may be due to microbial action. Preservation with sodium fluoride may reduce this possibility.

CPT Code(s): 82600

New York DOH Approved.

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

3001783 Dermatomyositis and Polymyositis Panel — COMBI PAN

CPT Code(s): 83516 x7; 84182 x4; 86235

3001782 **Dermatomyositis Autoantibody Panel** **DERM PAN**

CPT Code(s): 83516 x2; 84182 x4

2007479 **Drug Profile, Targeted by Tandem Mass Spectrometry and Enzyme Immunoassay, Urine** **PAIN HYB U**

Methodology: Qualitative Liquid Chromatography-Tandem Mass Spectrometry/Enzyme Immunoassay/Quantitative Spectrophotometry

Specimen Required: Collect: Random urine.
Specimen Preparation: Transfer 4 mL each into **two** (2) ARUP Standard Transport Tubes urine with no additives or preservatives. (Min: 2 mL each)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Specimens exposed to repeated freeze/thaw cycles.
Stability (collection to initiation of testing): Ambient: 1 week (Clonazepam may be unstable at ambient condition beyond three days); Refrigerated: 1 month; Frozen: 1 month

Interpretive Data:
Methodology: Qualitative Enzyme Immunoassay and Qualitative Liquid Chromatography-Tandem Mass Spectrometry, Quantitative Spectrophotometry

The absence of expected drug(s) and/or drug metabolite(s) may indicate noncompliance, inappropriate timing of specimen collection relative to drug administration, poor drug absorption, diluted/adulterated urine, or limitations of testing. The concentration must be greater than or equal to the cutoff concentration to be reported as present. If specific drug concentrations are required, contact the laboratory within two weeks of specimen collection to request confirmation and quantification by a second analytical technique. Interpretive questions should be directed to the laboratory.

Results based on immunoassay detection that do not match clinical expectations should be interpreted with caution. Confirmatory testing by mass spectrometry for immunoassay-based results is available, if ordered within two weeks of specimen collection. Additional charges apply.

For medical purposes only; not valid for forensic use.

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 2007691, Pain Management Drug Panel from Pain Management Drug Panel to Targeted drug profile panel.
Change the charting name for component 2008312, EER Pain Mgt Drug Pan, Mass Spec/EMITU from EER Pain Mgt Drug Pan, Mass Spec/EMITU to EER Tgt drug prof, MS/EMIT, UR.

2009288 Drug Profile, Targeted with Interpretation by Tandem Mass Spectrometry and Enzyme Immunoassay, Urine — PAIN HYB 2

Methodology: Qualitative Liquid Chromatography-Tandem Mass Spectrometry/Enzyme Immunoassay/Quantitative Spectrophotometry

Specimen Required: Patient Prep: Information on the patient's current medications must be submitted with the order. Include trade name, generic name, dosing frequency and date of last dose, if known. Alternatively, please indicate if no prescription medication or drugs are being taken.
Collect: Random urine.
Specimen Preparation: Transfer 4 mL each into **two** (2) ARUP Standard Transport Tubes urine with no additives or preservatives. (Min: 2 mL each)
Storage/Transport Temperature: Refrigerated
Unacceptable Conditions: Specimens exposed to repeated freeze/thaw cycles.
Stability (collection to initiation of testing): Ambient: 1 week (Clonazepam may be unstable at ambient condition beyond three days); Refrigerated: 1 month; Frozen: 1 month

Interpretive Data:
Methodology: Qualitative Enzyme Immunoassay and Qualitative Liquid Chromatography-Tandem Mass Spectrometry, Quantitative Spectrophotometry

The absence of expected drug(s) and/or drug metabolite(s) may indicate non-compliance, inappropriate timing of specimen collection relative to drug administration, poor drug absorption, diluted/adulterated urine, or limitations of testing. The concentration must be greater than or equal to the cutoff concentration to be reported as present. If specific drug concentrations are required, contact the laboratory within two weeks of specimen collection to request confirmation and quantification by a second analytical technique. Interpretive questions should be directed to the laboratory.

Results based on immunoassay detection that do not match clinical expectations should be interpreted with caution. Confirmatory testing by mass spectrometry for immunoassay-based results is available if ordered within two weeks of specimen collection. Additional charges apply.

For medical purposes only; not valid for forensic use.

HOTLINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name for component 2007691, Pain Management Drug Panel from Pain Management Drug Panel to Targeted drug profile panel.
Change the charting name for component 2009289, EER Pain Mgt Pan, Mass Spec/EMIT Interp from EER Pain Mgt Pan, Mass Spec/EMIT Interp to EER Tgt drug prof, MS/EMIT, UR, Interp.
Change the charting name for component 2009291, Pain Management Drug Panel Interp from Pain Management Drug Panel Interp to Targeted drug profile Interp.

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

Specimen Required: Collect: Gray (sodium fluoride/potassium oxalate). Also acceptable: Plain red, green (sodium heparin), lavender (EDTA), or pink (K_2EDTA).
Specimen Preparation: Remove plasma from cells ASAP or within 2 hours of collection. Transfer 4 mL plasma to an ARUP Standard Transport Tube. (Min: 3 mL) Also acceptable: Serum.
Storage/Transport Temperature: Refrigerated.
Remarks: Cocaine and cocaethylene are more stable in fluoride-preserved plasma than serum.
Unacceptable Conditions: Specimens exposed to repeated freeze/thaw cycles. Separator tubes. Plasma or whole blood collected in lt. blue (sodium citrate). Hemolyzed specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 1 week; Refrigerated: 2 weeks; Frozen: 3 years

New Test **3003016** **Epstein-Barr Virus (EBV) by in situ Hybridization on Paraffin** **EBVP ISH**
Click for Pricing

Methodology: In situ hybridization (ISH)
Performed: Mon-Fri
Reported: 2-5 days

Specimen Required: Collect: Tissue.
Specimen Preparation: Formalin fix (10% neutral buffered formalin) and paraffin-embed tissue. Transport tissue block or 5 unstained 5 micron slides. (Min: 4 slides) Protect paraffin block and/or slides from excessive heat.
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer®) or heavy metal fixatives (B-4 or B-5).
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: Negative

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

CPT Code(s): 88365

New York DOH Approved.

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

New Test **3003035** **Epstein-Barr Virus (EBV) by In Situ Hybridization Stain Only** **SO EBVP ISH**
Click for Pricing

Methodology: In situ hybridization (ISH)
Performed: Mon-Fri
Reported: 2-5 days

Specimen Required: Collect: Tissue or cells.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed specimen (cells must be prepared into a cellblock). Protect paraffin block and/or slides from excessive heat. Transport tissue block or 6 unstained (3- to 5-micron thick sections), positively charged slides in a tissue transport kit (ARUP supply #47808). Available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787. (Min: 3 slides). If sending precut slides, do not oven bake.
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: **IMMUNOHISTOCHEMISTRY ORDERING AND SUBMISSION DETAILS:** Submit electronic request.
If you do not have electronic ordering capability, use an ARUP Immunohistochemistry Stain Form (#32978) with an ARUP client number. For additional technical details, contact ARUP Client Services at (800) 522-2787.
Unacceptable Conditions: Specimens submitted with non-representative tissue type. Depleted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: Negative

Interpretive Data:

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

CPT Code(s): 88365

New York DOH Approved.

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

2014680 **Expanded Carrier Screen by Next Generation Sequencing** **ECS SEQ**

Specimen Required: Collect: Lavender (EDTA).
Specimen Preparation: Transport 4 mL whole blood. (Min: 1 mL)
Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Storage/Transport Temperature: Refrigerated.
Remarks: Patient History form required.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: Unacceptable

2014677 **Expanded Carrier Screen by Next Generation Sequencing with Fragile X** **ECS SEQ FX**

Specimen Required: Collect: Lavender (EDTA).
Specimen Preparation: Transport 4 mL whole blood. (Min: 1 mL)
Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Storage/Transport Temperature: Refrigerated.
Remarks: Patient History form required.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: Unacceptable

3001781 **Extended Myositis Panel** **MYOS EXT**

CPT Code(s): 83516 x8; 86235 x6; 84182 x4

New Test **3003086** **Fatty Acids Profile, Essential in Red Blood Cells** **FA PRO RBC**
Click for Pricing

Methodology: Quantitative Gas Chromatography/Mass Spectrometry/Stable Isotope Dilution
Performed: Varies
Reported: 7-10 days

Specimen Required: Collect: Green (Sodium Heparin), Lavender (K_2EDTA), Yellow (ACD Solution A), or Protease Inhibitor tube (PPACK; Phe-Pro-Arg-chloromethylketone) (ARUP supply #49662), available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787. A winged collection set must be used..
Specimen Preparation: **DO NOT FREEZE.** Transport 6 mL whole blood. (Min: 2 mL)
Storage/Transport Temperature: Refrigerated.
Remarks: Patient age is required on the test request form. Include information regarding treatment, family history, and tentative diagnosis.
Unacceptable Conditions: Gross hemolysis, frozen whole blood.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 7 days; Frozen: Unacceptable

Reference Interval: By Report

Interpretive Data:
This test does not screen for disorders of peroxisomal biogenesis/function.
See Compliance Statement B: www.aruplab.com/CS

CPT Code(s): 82542

New York DOH approval pending. Call for status update.

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

0082024 Fetal Fibronectin FFN

Specimen Required: Patient Prep: Collect specimen prior to any activities or procedures that might disrupt the cervix, eg, coitus, digital cervical examination, vaginal ultrasound, collection of culture specimens, or pap smear.
Testing should not be performed if the patient has had sexual intercourse within 24 hours prior to the sampling time because semen present may increase the possibility of a false-positive result. Contamination with lubricants, soaps, or disinfectants may cause invalid test results.
Collect: Insert the polyester-tipped swab provided in the specimen collection kit into the vagina and lightly rotate across the posterior fornix for approximately 10 seconds to absorb cervicovaginal secretions. Carefully remove the swab and place into the tube of buffer provided in the kit. Use only one specimen collection device per patient.
Specimen Preparation: Specimens that are not tested within eight hours of collection must be stored, refrigerated, and tested within 72 hours of collection. Avoid extreme temperatures. Transport swab in Fetal Fibronectin Specimen Collection Kit (ARUP supply #32748). Available online through eSupply using ARUP Connect (TM) or contact Client Services at (800) 522-2787. **Required Information:** Specimen must be labeled with gestational age and list patient condition as either "symptomatic" or "asymptomatic."
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Specimens collected in or by any specimen device other than Fetal Fibronectin Specimen Collection Kit, visible evidence of moderate or gross vaginal bleeding. Specimens from symptomatic patients who are less than 24 weeks or greater than or equal to 35 weeks gestation. Specimens from asymptomatic patients who are less than 22 weeks or greater than or equal to 35 weeks gestation.
Stability (collection to initiation of testing): Ambient: 8 hours; Refrigerated: 3 days; Frozen: 2 weeks Only one freeze/thaw cycle acceptable.

Interpretive Data:
Among symptomatic women, a positive result obtained between 24 weeks, 0 days and 34 weeks, 6 days indicates increased risk of delivery in less than or equal to 7-14 days from sample collection.

Among asymptomatic women, a positive result between 22 weeks, 0 days and 30 weeks, 6 days indicates increased risk of delivery in less than or equal to 34 weeks, 6 days of gestation.

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

New Test 3003020 **Ganglionic Acetylcholine Receptor Antibody** **GANG ACHR**
Click for Pricing

Methodology: Quantitative Radioimmunoassay
Performed: Tue
Reported: 2-9 days

Specimen Required: Collect: Plain Red or Serum Separator Tube (SST).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 2 mL to an ARUP Standard Transport Tube. (Min.: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma. Grossly lipemic, icteric, or hemolyzed specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month (avoid multiple freeze/thaw cycles)

Reference Interval:

Negative	0.0 - 8.4 pmol/L
Indeterminate	8.5 – 11.6 pmol/L
Positive	11.7 pmol/L or greater

Interpretive Data:

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

CPT Code(s): 83519

New York DOH approval pending. Call for status update.

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

0020222 **Hemosiderin, Urine** **UHEMSID**

Methodology: Qualitative Microscopy
Performed: Sun-Sat
Reported: 1-3 days

Specimen Required: Patient Prep: First-morning collection is preferred.
Collect: Random urine.
Specimen Preparation: Mix specimen well. Transfer 4 mL to an ARUP Standard Transport Tube. (Min: 1 mL).
Storage/Transport Temperature: Frozen.
Unacceptable Conditions: Specimens in preservatives.
Stability (collection to initiation of testing): Ambient: 1 hour; Refrigerated: 1 week; Frozen: 1 week

Reference Interval:
Effective November 16, 2020
Absent

Interpretive Data:
As of Nov 16, 2020, reporting has switched from semi-quantitative to qualitative (absent versus present).

Note:
Absent = Negative
Present = 1+ to 4+

3002134 **IDH1 R132H Point Mutation by Immunohistochemistry with Reflex to IDH1 and IDH2 Mutation Analysis, Exon 4** **IDH1 RFLX**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3003120, IDH1 Tissue Source

2007357 **IDH1 R132H Point Mutation with Interpretation by Immunohistochemistry** **IDH1 IP**

HOTLINE NOTE: There is a component change associated with this test.
Add component 3003120, IDH1 Tissue Source

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

CPT Code(s): 83516 x5; 86235 x5; 84182 x4; 86200; 86431; 86039

New Test **3002956** ***KIT* (D816V) Mutation by ddPCR, Quantitative** **KITD816V Q**

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Additional Technical Information

Methodology: Droplet Digital Polymerase Chain Reaction
Performed: **DNA isolation:** Sun-Sat
Assay: Varies
Reported: 2-7 days

Specimen Required: Collect: Whole blood or bone marrow: Lavender (EDTA), preferred. Also acceptable: Green (sodium heparin)
Specimen Preparation: **Whole Blood:** Do not freeze. Transport 5 mL whole blood. (Min: 1 mL)
Bone Marrow: Do not freeze. Transport 3 mL bone marrow. (Min: 1 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma, serum, FFPE tissue blocks/slides, or fresh or frozen tissue, DNA extracted by a non-CLIA certified lab. Specimens collected in anticoagulants other than EDTA or sodium heparin. Clotted or grossly hemolyzed specimens.
Stability (collection to initiation of testing): Refrigerated: 7 days; Frozen: Unacceptable

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

CPT Code(s): 81273

New York DOH approval pending. Call for status update.

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

2010711 **Liver Cytosolic Antigen Type 1 (LC-1) Antibody, IgG** **LC-1**

CPT Code(s): 84182

0080515 **Myelin Basic Protein** **MBP**

Methodology: Quantitative Enzyme-Linked Immunosorbent Assay

2011117 Myeloid Malignancies Mutation Panel by Next Generation Sequencing MYE NGS

Specimen Required: Collect: Lavender (EDTA), Green (sodium heparin), Bone Marrow (EDTA), or Bone Marrow (sodium heparin). Fresh-frozen tissue.
Specimen Preparation: **Whole Blood and Bone Marrow:** Transport 3 mL. (Min: 1.5 mL)
Fresh-frozen Tissue: Transport 5 mg fresh-frozen tissue. (Min: 5 mg)
Separate specimens must be submitted when multiple tests are ordered
Storage/Transport Temperature: **Whole Blood or Bone Marrow:** Refrigerated.
Fresh-frozen Tissue: Frozen.
Unacceptable Conditions: Serum, plasma, grossly hemolyzed specimens, buccal brush or swab, FFPE tissue.
Stability (collection to initiation of testing): **Whole Blood or Bone Marrow:** Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable
Fresh-frozen Tissue: Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 1 month

Note: Genes tested: *ANKRD26*, *ASXL1*, *ASXL2*, *BCOR*, *BCORL1*, *BRAF*, *CALR*, *CBL*, *CBLB*, *CEBPA*, *CSF3R*, *CUX1**, *DDX41*, *DNMT1**, *DNMT3A*, *ELANE*, *ETNK1*, *ETV6*, *EZH2*, *FBXW7*, *FLT3*, *GATA1*, *GATA2*, *GNAS*, *HNRNPK*, *IDH1*, *IDH2*, *IL7R*, *JAK1*, *JAK2*, *JAK3*, *KDM6A**, *KIT*, *KMT2A*, *KRAS*, *LUC7L2*, *MPL*, *NOTCH1*, *NPM1**, *NRAS*, *NSD1*, *PHF6*, *PIGA*, *PRPF40B*, *PRPF8*, *PTPN11*, *RAD21*, *RUNX1*, *SETBP1*, *SF3B1*, *SH2B3*, *SMC1A*, *SMC3*, *SRSF2*, *STAG2*, *STAT3*, *STAT5B**, *SUZ12**, *TET2*, *TP53*, *U2AF1*, *U2AF2*, *WT1*, *ZRSR2*

*One or more exons are not covered by sequencing for the indicated gene; see Additional Technical Information

2012182 Myeloid Malignancies Somatic Mutation and Copy Number Analysis Panel MYE CMANGS

Specimen Required: Collect: Lavender (EDTA), Green (sodium heparin), Bone Marrow (EDTA), or Bone Marrow (sodium heparin). Fresh-frozen tissue.
Specimen Preparation: **Whole Blood and Bone Marrow:** Transport 3 mL. (Min: 1.5 mL)
Fresh-frozen Tissue: Transport 5 mg fresh-frozen tissue. (Min: 5 mg)
Separate specimens must be submitted when multiple tests are ordered
Storage/Transport Temperature: **Whole Blood or Bone Marrow:** Refrigerated.
Fresh-frozen Tissue: Frozen.
Unacceptable Conditions: Serum, plasma, grossly hemolyzed specimens, buccal brush or swab, FFPE tissue.
Stability (collection to initiation of testing): **Whole Blood or Bone Marrow:** Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable
Fresh-frozen Tissue: Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 1 month

Note: Genes tested: *ANKRD26*, *ASXL1*, *ASXL2*, *BCOR*, *BCORL1*, *BRAF*, *CALR*, *CBL*, *CBLB*, *CEBPA*, *CSF3R*, *CUX1**, *DDX41*, *DNMT1**, *DNMT3A*, *ELANE*, *ETNK1*, *ETV6*, *EZH2*, *FBXW7*, *FLT3*, *GATA1*, *GATA2*, *GNAS*, *HNRNPK*, *IDH1*, *IDH2*, *IL7R*, *JAK1*, *JAK2*, *JAK3*, *KDM6A**, *KIT*, *KMT2A*, *KRAS*, *LUC7L2*, *MPL*, *NOTCH1*, *NPM1**, *NRAS*, *NSD1*, *PHF6*, *PIGA*, *PRPF40B*, *PRPF8*, *PTPN11*, *RAD21*, *RUNX1*, *SETBP1*, *SF3B1*, *SH2B3*, *SMC1A*, *SMC3*, *SRSF2*, *STAG2*, *STAT3*, *STAT5B**, *SUZ12**, *TET2*, *TP53*, *U2AF1*, *U2AF2*, *WT1*, *ZRSR2*.

*One or more exons are not covered by sequencing for the indicated gene; see Additional Technical Information.

3002135 1p19q Deletion by FISH and IDH1 R132H Point Mutation by Immunohistochemistry with Reflex to IDH1 and IDH2 Mutation Analysis, Exon 4 OLIGO PAN

HOTLINE NOTE: There is a component change associated with this test.
Add component 3003120, IDH1 Tissue Source

2001491 Parathyroid Hormone, Fine Needle Aspiration (FNA) PTH FNA

Specimen Required: Collect: Fine needle aspiration in saline. Also acceptable: Specimens collected in green (sodium or lithium heparin) or lavender (EDTA).
Specimen Preparation: Specimen must be nonviscous, nonhemolyzed, and free of particulate matter. Centrifuge to remove cellular material and visible hemolysis. Transfer 0.5 mL saline needle rinse to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Frozen.
Remarks: Indicate source on test request form.
Unacceptable Conditions: Specimen types other than those listed. Specimens too viscous to be aspirated by the instrument. Grossly hemolyzed samples. Grossly lipemic samples.
Stability (collection to initiation of testing): Ambient: 8 hours; Refrigerated: 24 hours; Frozen: 6 months

0070346 Parathyroid Hormone, Intact — PTH-INT

Specimen Required: Collect: Lavender (EDTA) or pink (K_2EDTA). Also acceptable: Green (sodium or lithium heparin) plain red or serum separator tube.
Specimen Preparation: **Allow serum specimen to clot fully at room temperature.** Transfer 2 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Frozen. Separate specimens must be submitted when multiple tests are ordered.
Remarks: If requesting Ionized Calcium with PTH, submit two separate specimens. Refer to Calcium, Ionized, Serum (ARUP test code 0020135) for requirements.
Unacceptable Conditions: Body Fluid (refer to Parathyroid Hormone, FNA, ARUP test code 2001491); Urine. Rapid Serum Tubes (RST). Hemolyzed samples. Grossly lipemic samples.
Stability (collection to initiation of testing): After separation from cells: Ambient: 8 hours; Refrigerated: 48 hours; Frozen: 6 months

0070172 Parathyroid Hormone, Intact with Calcium — PTHI

Specimen Required: Collect: Plain red or serum separator tube. Also acceptable: Green (sodium or lithium heparin).
Specimen Preparation: **Allow serum specimen to clot fully at room temperature before centrifuging.** Transfer 2 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Frozen. Separate specimens must be submitted when multiple tests are ordered.
Remarks: If requesting Ionized Calcium with PTH, submit two separate specimens. Refer to Calcium, Ionized, Serum (ARUP test code 0020135) for requirements.
Unacceptable Conditions: Body Fluid (refer to Parathyroid Hormone, FNA, ARUP test code 2001491). Specimens collected in EDTA. Rapid Serum Tubes (RST). Hemolyzed samples. Grossly lipemic samples.
Stability (collection to initiation of testing): After separation from cells: Ambient: 8 hours; Refrigerated: 48 hours; Frozen: 6 months

0020518 pH, Fecal — FEC-PH

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) and freeze immediately. Available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787. (Min: 1 g)
Storage/Transport Temperature: Frozen.
Unacceptable Conditions: Diapers. Specimens containing barium. Specimens in media or preservatives. Grossly bloody specimens.
Stability (collection to initiation of testing): Ambient: 1 hour; Refrigerated:2 weeks; Frozen: 2 weeks

2008414 ROS1 with Interpretation by Immunohistochemistry with Reflex to FISH if Equivocal or Positive — ROS1 IP

HOTLINE NOTE: There is a component change associated with this test.
Add component 3003121, ROS1 Tissue Source

New Test **3003041** **Thiocyanate Quantitative, Serum or Plasma** **THIOCY SP**
Click for Pricing

Methodology: Quantitative High Performance Liquid Chromatography-Tandem Mass Spectrometry
Performed: Varies
Reported: 8-11 days

Specimen Required: Collect: Plain Red, Lavender (K_2 or K_3 EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.3 mL)
Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Storage/Transport Temperature: Refrigerated. Also acceptable: Room Temperature or Frozen.
Unacceptable Conditions: Separator tubes.
Stability (collection to initiation of testing): Ambient: 1 month; Refrigerated: 1 month; Frozen: 1 month

Reference Interval: By report

CPT Code(s): 84430

New York DOH Approved.

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

0051589 **Toll-Like Receptor Function** **TLR**

Interpretive Data:
Toll-like receptors (TLR) are tested independently by stimulation with TLR-specific ligands in a peripheral blood mononuclear cell (PBMC) culture. PBMC production of IL-1 beta, IL-6, and TNF alpha is determined by multiplex bead assay for TLR 1,2,4-8.

TLR-specific ligands include Pam3CSK4, a synthetic bacterial lipoprotein (TLR2-TLR1 ligand); zymosan cell wall particles from *Saccharomyces cerevisiae* (TLR6-TLR2 ligand); lipopolysaccharide (LPS) ultra-pure *S. minnesota* LPS (TLR4 ligand); flagellin purified from *S. typhimurium* (TLR5 ligand); and CL097 imidazoquinoline compound (TLR7-TLR8 ligand).
See Compliance Statement B: www.aruplab.com/CS

Note: Results for TNF alpha, IL-1 beta, and IL-6 are reported as pg/mL. Interpretation comparing the patient results to the simultaneously collected client normal control and the laboratory normal control will be provided by an ARUP medical director.

Limitation: Defects in IRAK-4 and MyD88 result in compromised TLR signaling. Exception is endosomal TLR4, which is IRAK-4 and MyD88 independent.

CPT Code(s): 86353 x5; 83520 x3

2005413 **Urticaria-Inducing Activity** **UIA**

Performed: Mon, Fri
Reported: 11-14 days

2005415 **Urticaria-Inducing Activity with Thyroid Antibodies and Stimulating Hormone** **UIAT**

Performed: Mon, Fri
Reported: 11-14 days

ARUP LABORATORIES

HOTLINE: Effective November 16, 2020

The following will be discontinued from ARUP's test menu on November 16, 2020.
Replacement test options are supplied if applicable.

Test Number	Test Name	Refer To Replacement
2006098	Adenosine Deaminase, CSF	Adenosine Deaminase in CSF (3002982)
2009357	Adenosine Deaminase, Pericardial Fluid	Adenosine Deaminase in Pericardial Fluid (3002984)
2006101	Adenosine Deaminase, Peritoneal Fluid	Adenosine Deaminase in Peritoneal Fluid (3002980)
2006096	Adenosine Deaminase, Pleural Fluid	Adenosine Deaminase in Pleural Fluid (3002978)
2007872	ATP7A-Related Copper Transport Disorders (ATP7A), Sequencing	
2013944	Autoimmune Neurologic Disease Reflexive Panel, Serum	Autoimmune Neurologic Disease Reflexive Panel, Serum (3003058)
2005640	Autoimmune Neuromuscular Junction Reflexive Panel	Autoimmune Neuromuscular Junction Reflexive Panel (3003017)
2011954	Breast and Ovarian Hereditary Cancer Syndrome (*BRCA1* and *BRCA2*) Sequencing	BRCA1 and BRCA2-Associated HBOC Syndrome Panel, Sequencing and Deletion/Duplication (3001855)
2011949	Breast and Ovarian Hereditary Cancer Syndrome (*BRCA1* and *BRCA2*) Sequencing and Deletion/Duplication	BRCA1 and BRCA2-Associated HBOC Syndrome Panel, Sequencing and Deletion/Duplication (3001855)
2010357	Bupropion, Serum or Plasma	Bupropion and Metabolite, Serum or Plasma (3003034)
0080065	Carnitine, Free	Carnitine, Free & Total (Includes Carnitine, Esterified) (0080068)
0081309	Carnitine, Free, Urine	Carnitine, Free and Total, Urine (0081308)
0080067	Carnitine, Total	Carnitine, Free & Total (Includes Carnitine, Esterified) (0080068)
0081307	Carnitine, Total, Urine	Carnitine, Free and Total, Urine (0081308)
2004931	CDKL5-Related Disorders (CDKL5) Sequencing	
2004935	CDKL5-Related Disorders (CDKL5) Sequencing and Deletion/Duplication	
0090870	Chlorpromazine	Chlorpromazine, Serum or Plasma (3003036)
2006261	Citrin Deficiency (SLC25A13) Sequencing	
0050183	Coccidioides immitis Antibodies by Immunodiffusion	Coccidioides Antibody Reflexive Panel (3001982)
3000058	Coccidioides immitis by Immunodiffusion, CSF	Coccidioides Antibodies Panel, CSF by CF, ID, ELISA (3000061)
2008615	Creatine Transporter Deficiency (SLC6A8) Sequencing	
2008610	Creatine Transporter Deficiency (SLC6A8) Sequencing and Deletion/Duplication	
0090060	Cyanide	Cyanide, Whole Blood (3003039)
2002902	Epstein-Barr Virus (EBV) by in situ Hybridization, Paraffin	Epstein-Barr Virus (EBV) by in situ Hybridization on Paraffin (3003016)
2013592	Epstein-Barr Virus (EBV) by In Situ Hybridization, Stain Only	Epstein-Barr Virus (EBV) by In Situ Hybridization Stain Only (3003035)
2011470	GLI3-Related Disorders (GLI3) Sequencing	
2011465	GLI3-Related Disorders (GLI3) Sequencing and Deletion/Duplication	
3000871	Human Immunodeficiency Virus 1 (HIV-1) by Quantitative NAAT with Reflex to HIV PhenoSense GT	Human Immunodeficiency Virus 1 (HIV-1) by Quantitative NAAT, Plasma (3000867)
0051510	Juvenile Polyposis (SMAD4) Sequencing	
2004988	Juvenile Polyposis Syndrome (BMPR1A) Sequencing	
2009306	Kabuki Syndrome (KMT2D) Sequencing	
3000440	KIT (D816V) Mutation by PCR	KIT (D816V) Mutation by ddPCR, Quantitative (3002956)
2002945	Legius Syndrome (SPRED1) Sequencing	
2004539	LMNA-Related Disorders (LMNA) Deletion/Duplication	
2004901	Ornithine Transcarbamylase Deficiency (OTC) Sequencing	
2008394	Peutz-Jeghers Syndrome (STK11) Sequencing	
2003410	Pulmonary Arterial Hypertension (BMPR2) Sequencing	
2003405	Pulmonary Arterial Hypertension (BMPR2) Sequencing and Deletion/Duplication	
2002730	RASA1-Related Disorders (RASA1) Sequencing	
3001399	SHOX-Related Disorders, Sequencing	
2007569	TACI-Associated Common Variable Immunodeficiency (TNFRSF13B) Sequencing	
2011575	Thiocyanate, Serum or Plasma	Thiocyanate Quantitative, Serum or Plasma (3003041)