Quarterly HOT LINE: Effective May 16, 2016

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.

Hot Line 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	0060152	Acid-Fast Bacillus (AFB) Culture and AFB Stain				x			x					
6	0020008	Alanine Aminotransferase, Serum or Plasma										x		
6	2005736	Alkaline Phosphatase Isoenzymes, CSF			x									
6	0021020	Alkaline Phosphatase Isoenzymes, Serum or Plasma				x								
7	0060217	Antimicrobial Susceptibility, AFB/Mycobacteria					x							
48	0055566	Apolipoprotein E (*APOE*) 2 Mutations, Cardiovascular Risk												x
10	2013341	Apolipoprotein E (*APOE*) Genotyping, Alzheimer Disease Risk											x	
11	2013337	Apolipoprotein E (*APOE*) Genotyping, Cardiovascular Risk											x	

Hot Line 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
12	2013327	Aquaporin-4 Receptor Antibody by ELISA with Reflex to Aquaporin-4 Receptor Antibody, IgG by IFA											x	
13	2013320	Aquaporin-4 Receptor Antibody, IgG by IFA with Reflex to Titer, Serum											x	
13	0095227	Arylsulfatase A, 24-Hour Urine		x	x						x			
13	0020007	Aspartate Aminotransferase, Serum or Plasma										x		
14	2008901	B-Cell Memory and Naive Panel					x	x	x	x	x			
15	2008420	*BCR-ABL1* Mutation Analysis for Tyrosine Kinase Inhibitor Resistance by Next Generation Sequencing							x					
15	2005017	*BCR-ABL1*, Major (p210), Quantitative									x			
15	2005010	*BCR-ABL1*, Qualitative with Reflex to *BCR-ABL1* Quantitative									x			
48	0055691	BIRC2-MALT1 (*API2-MALT1*) Translocation, t(11;18) by RT-PCR												x
48	0051434	Bloom Syndrome (*BLM*) 1 Mutation, Fetal												x
48	0051454	Canavan Disease (*ASPA*) 4 Mutations, Fetal												x
15	2011450	Carisoprodol and Meprobamate, Serum or Plasma, Quantitative					x					x		
48	0021021	Carotenes, Fractionated, Plasma or Serum												x
16	0040002	CBC with Platelet Count				x	x				x			
17	0040003	CBC with Platelet Count and Automated Differential				x	x				x			
18	2012717	CHARGE Syndrome (*CHD7*) Sequencing, Fetal				x								
18	0060850	*Chlamydia trachomatis* Culture			x	x			x					
18	0080469	Chromogranin A						x						
19	0060851	*Clostridium difficile* Cytotoxin Cell Assay			x									
19	2013259	Comprehensive Kidney Biopsy Workup											x	
19	0020408	Comprehensive Metabolic Panel										x		
20	2013260	Comprehensive Muscle Biopsy Workup											x	
21	2013261	Comprehensive Nerve Biopsy Workup											x	
22	2013257	Consultation, Head and Neck											x	
22	2013262	Consultation, Neuropathology											x	
23	2013263	Consultation, Surgical Pathology											x	
23	0060360	*Corynebacterium diphtheriae* Culture				x								
23	0020414	Creatine Kinase Isoenzymes					x							
24	2001613	Crohn Disease Prognostic Panel						x			x			
48	0055283	Cysticercosis Antibody, IgG by Western Blot												x

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48	0055282	Cysticercosis Antibody, IgG by Western Blot (CSF)												x
48	2008920	Cytochrome P450 Pain Management Panel, *CYP2D6*, *CYP2C9*, *CYP2C19* - Common Variants												x
48	0091589	Darvocet, Urine												x
24	2013294	Dengue Virus (1-4) Subtype by PCR											x	
24	2002247	Disaccharidase, Tissue			x		x							
25	2006621	Drug Detection Panel, Umbilical Cord Tissue, Qualitative		x			x	x			x	x		
48	0051464	Dysautonomia, Familial (*IKBKAP*) 2 Mutations, Fetal												x
27	2008603	*ERBB2* (*HER2*/neu) Gene Amplification by FISH, Tissue				x								
27	2013277	Esterase, Non-Specific Cytochemical Stain Only											x	
27	2012695	Ethyl Glucuronide Screen Only, Urine					x							
48	0051469	Fanconi Anemia, Group C (*FANCC)* 2 Mutations, Fetal												x
48	0030140	Fibrin/Fibrinogen Degradation Split Products												x
48	0091509	Formic Acid, Urine												x
48	0051439	Gaucher Disease (*GBA*) 8 Mutations, Fetal												x
48	0091353	Glyburide Quantitative, Serum or Plasma												x
28	0040080	Hematocrit				x	x							
28	0040085	Hemoglobin				x	x							
28	0020416	Hepatic Function Panel										x		
28	0092522	*Histoplasma* Antigen by EIA, Serum				x								
29	2013333	Human Immunodeficiency Virus (HIV) Combo Antigen/Antibody (HIV-1/O/2) by ELISA, with Reflex to HIV-1/HIV-2 Antibody Differentiation, Supplemental											x	
29	2002899	Human Papillomavirus (HPV), High Risk by in situ Hybridization, Paraffin									x			
30	0050980	Humoral Immunity Panel I										x		
30	0050981	Humoral Immunity Panel II										x		
31	2013270	Inflammatory Bowel Disease Differentiation Panel											x	
48	0050567	Inflammatory Bowel Disease Differentiation Profile												x
48	0091530	Inhalants Panel, Solvents, Serum or Plasma												x
31	0049110	Iron Stain				x								
31	0080200	Lecithin-Sphingomyelin Ratio				x								

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31	2005661	Liver Fibrosis, Chronic Viral Hepatitis (Echosens FibroMeter)										x		
32	0040005	Manual Differential					x							
33	0081293	Maternal Screening, Sequential, Specimen #1				x								
33	0081150	Maternal Serum Screen, First Trimester				x								
33	0081062	Maternal Serum Screening, Integrated, Specimen #1				x								
33	2013305	Meningitis/Encephalitis Panel by PCR											x	
34	2011521	Meprobamate, Serum or Plasma, Quantitative					x					x		
48	0051449	Mucolipidosis, Type IV (*MCOLN1*) 2 Mutations, Fetal												x
34	2013273	Myeloperoxidase, Cytochemical Stain Only											x	
48	2012535	Nerve Fiber Density Analysis, Intraepidermal												x
48	0051459	Niemann-Pick, Type A (*SMPD1*) 4 Mutations, Fetal												x
48	2008868	Nonalcoholic steatohepatitis (NASH) FibroSURE												x
34	2008767	Opioid Receptor, mu *OPRM1* Genotype, 1 Variant		x	x	x		x						
35	2007479	Pain Management Drug Panel by High-Resolution Time-of-Flight Mass Spectrometry and Enzyme Immunoassay, Urine									x			
35	2009288	Pain Management Drug Screen with Interpretation by High-Resolution Time-of-Flight Mass Spectrometry and Enzyme Immunoassay, Urine									x			
35	2012603	*PAX8-PPARG* Translocations Detection by PCR			x									
35	0091260	Phenol Exposure Quantitative, Urine			x									
35	2010481	Phenytoin, Free					x							
35	0090141	Phenytoin, Free and Total					x							
35	0040235	Platelets					x							
35	2003040	PM/Scl-100 Antibody, IgG by Immunoblot with Reflex to ANA IFA (Pricing Change Only)												
35	2002871	*PML-RARA* Translocation, t(15;17) by RT-PCR, Quantitative						x						
36	0095044	Prenatal Reflexive Panel		x										
36	2008509	Progesterone Quantitative by HPLC-MS/MS, Serum or Plasma					x							
37	2013352	Pyridoxine-Dependent Epilepsy Panel, Serum or Plasma											x	
38	2013355	Pyridoxine-Dependent Epilepsy Panel, Urine											x	
38	0040270	Red Blood Cell Count				x	x							
39	0040263	Reticulocyte, Hemoglobin Panel	x			x	x				x			

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40	0040022	Reticulocytes, Percent and Number	x			x	x							
40	2013358	S100B, CSF											x	
48	2006462	Scleroderma Antibodies Panel												x
41	2013251	STAT6 by Immunohistochemistry											x	
42	0050725	*Streptococcus pneumoniae* Antibodies, IgG (14 Serotypes)						x	x			x		
43	2005779	*Streptococcus pneumoniae* Antibodies, IgG (23 Serotypes)					x	x	x			x		
44	2008919	*Streptococcus pneumoniae* Antibodies, IgG (9 Serotypes)					x	x	x			x		
45	2013325	Systemic Scleroderma Comprehensive Panel											x	
46	2013275	Tartrate-Resistant Acid Phosphatase, Cytochemical Stain Only											x	
48	0051429	Tay-Sachs Disease (*HEXA*) 7 Mutations, Fetal												x
46	2013335	Thrombopoietin (TPO), Serum											x	
47	2013290	*Tropheryma whipplei* PCR											x	
48	2011025	*Tropheryma whipplei* Detection by PCR, Blood												x
48	2008116	Urine Culture, Invasive Collection												x
47	2005413	Urticaria-Inducing Activity				x								
48	2004175	Vascular Endothelial Growth Factor C (VEGF-C) by Immunohistochemistry												x
47	0080380	Vitamin C (Ascorbic Acid), Plasma				x								
47	0040320	White Blood Cell Count				x	x							
48	2011127	Zolpidem and Metabolites Quantitative, Urine												x

0060152 Acid-Fast Bacillus (AFB) Culture and AFB Stain — MC AFB

Specimen Required: Remarks: Specimen source required.
Unacceptable Conditions: Dry material or material collected and transported on a swab.
Acid Fast Stain: Stool, blood, bone marrow, and grossly bloody specimens, CSF if less than 5 mL, or urine specimens if less than 40 mL.

Note: Positive cultures are reported as soon as detected. AFB stain, AFB identification of positives, and susceptibility tests are billed separately from culture. Identification of positive culture is billed by individual DNA probes and tests performed. *Mycobacterium tuberculosis* Complex Detection and Rifampin Resistance by PCR (ARUP test code 2010775) is available for respiratory, CSF or body fluid specimens.

The laboratory should be notified when the presence of *Mycobacterium genavense* is suspected as this organism will not grow on media routinely used for *Mycobacterium* isolation.

Susceptibility will be performed on organisms isolated from a sterile source and isolates of *Mycobacterium chelonae, M. abscesses, M. fortuitum complex, M. immunogenum, M. mucogenicum.* Susceptibility testing will be performed by request only on *M. kansaii* and *M. marinum.*Susceptibility testing of *M. gordonae* is inappropriate.

For AFB susceptibility information, refer to Antimicrobial Susceptibility - AFB Mycobacteria (ARUP test code 0060217).

For AFB culture on blood and bone marrow refer to Culture, Acid-Fast Bacillus, Blood (ARUP test code 0060060).

0020008 Alanine Aminotransferase, Serum or Plasma — ALT

HOT LINE NOTE: There is a unit of measure change associated with this test.
Change unit of measure for component 0020008, Alanine Aminotransferase from IU/L to U/L.

2005736 Alkaline Phosphatase Isoenzymes, CSF — CSF ALKP I

Performed: Sun-Sat
Reported: 1-3 days

0021020 Alkaline Phosphatase Isoenzymes, Serum or Plasma — ALKP-ISO

Specimen Required: Stability (collection to initiation of testing): After separation from cells: Ambient: 1 week; Refrigerated: 1 week ; Frozen: 2 months

0060217 Antimicrobial Susceptibility, AFB/Mycobacteria MA AFB

Reference Interval:

Available Separately	Test Name	Methodology	Reference Interval/Drugs Tested	CPT Code
Yes (0060347)	Antimicrobial Susceptibility - AFB/Mycobacterium tuberculosis Primary Panel	MGIT960	The interpretation provided is based on results for the following drugs at the stated concentrations: **Drugs tested:** Ethambutol: 5.0 µg/mL; Isoniazid: 0.1 µg/mL (0.4 µg/mL if resistant to 0.1 µg/mL); Pyrazinamide: 100 µg/mL; Rifampin: 1.0 µg/mL. This procedure screens isolates of *M. tuberculosis* complex for drug resistance. The procedure does not use serial dilutions to provide quantitative MIC values. Single critical concentrations for each antimycobacterial agent used have been defined by the United States Public Health Service.	87188 x4
No	Antimicrobial Susceptibility - AFB/*Mycobacterium tuberculosis* Secondary Panel	Agar proportion and Broth dilution	Effective February 21, 2012 **Note:** If *M. tuberculosis* isolate is resistant to rifampin or any two primary drugs, a secondary panel will be performed as a send-out test. The interpretation provided is based on testing for the following drugs at the stated concentrations: **Drugs tested:** Amikacin: 6 µg/mL; capreomycin: 10 µg/mL; cycloserine: 60 µg/mL; ethionamide: 10 µg/mL; kanamycin: 6 µg/mL; PAS: 8 µg/mL; streptomycin at a low level (2.0 µg/mL) and a high level (4.0 µg/mL). Levofloxacin and moxifloxacin are tested at 2, 4 and 8 µg/mL	87190 x6, 87188 x3
No	Antimicrobial Susceptibility - AFB/*Mycobacteria*	Broth Microdilution	See organism-specific panels below.	87186

No	*Mycobacterium avium-intracellulare* Complex	Broth Microdilution	Effective May 16, 2016 **Drugs tested:** Amikacin, ciprofloxacin, clarithromycin, doxycycline, ethambutol, ethionamide, isoniazide, linezolid, moxifloxacin, rifabutin, rifampin streptomycin and trimethoprim/sulfamethoxazole (TMP/SXT). Selective reporting by organism. Clarithromycin, moxifloxacin and linezolid are the only drugs for which CLSI provides interpretive guidelines. Clarithromycin results predict azithromycin. For Amikacin and Ciprofloxacin only MIC is reported. Because MIC results do not predict clinical response and may be misleading, rifampin, rifabutin, and ethambutol MICs are not routinely reported and must be specifically requested.	87186
No	Rapid Growing *Mycobacteria*	Broth Microdilution	Effective August 17, 2015 Drugs tested: Amikacin, cefoxitin, ciprofloxacin, clarithromycin, doxycycline, imipenem, linezolid, minocycline, moxifloxacin, tigecycline, tobramycin (M. chelonae only), and trimethoprim/sulfamethoxazole (TMP/SXT). Selective reporting by organism.	87186

No	Other Slowly-Growing Nontuberculosus *Mycobacteria* (NTM)	Broth Microdilution	Effective May 20, 2013 **Drugs tested:** Amikacin, ciprofloxacin, clarithromycin, doxycycline, ethambutol, ethionamide, isoniazide, linezolid, moxifloxacin, rifabutin, rifampin, streptomycin and trimethoprim/sulfamethoxazole (TMP/SXT). Selective reporting by organism. CLSI recommends that isolates of *M. kansasii* be tested against rifampin and clarithromycin only. Rifampin-susceptible isolates are also susceptible to rifabutin. If the isolate is rifampin-resistant, the following secondary drugs will also be reported: Amikacin, ciprofloxacin, ethambutol, linezolid, moxifloxacin, rifabutin, streptomycin and trimethoprim-sulfamethoxazole. *M. marinum* isolates are tested against amikacin, ciprofloxacin, clarithromycin, doxycycline, ethambutol, moxifloxacin, rifabutin, rifampin, and trimethoprim-sulfamethoxazole. Interpretation is based on CLSI guidelines. Slowly-growing NTM other than *M. kansasii* and *M. marinum* are tested against amikacin, ciprofloxacin, clarithromycin, ethambutol, linezolid, moxifloxacin, rifabutin, rifampin, streptomycin, and trimethoprim-sulfamethoxazole. Interpretive criteria are based on CLSI guidelines for *M. kansasii.*	87186

New Test **2013341** **Apolipoprotein E (*APOE*) Genotyping, Alzheimer Disease Risk** **APOE AZ**
Available July 5, 2016

Methodology: Polymerase Chain Reaction/Fluorescence Monitoring
Performed: Mon, Thu
Reported: 2-7 days

Specimen Required: Patient Prep:
Collect: Lavender (EDTA), Pink (K_2EDTA), or Yellow (ACD Solution A or B).
Specimen Preparation: Transport 3 mL whole blood. (Min: 1 mL)
Storage/Transport Temperature: Refrigerated.
Remarks: Testing of fetal specimens or specimens from patients under the age of 18 years is not offered.
Unacceptable Conditions: Plasma or serum. Heparinized specimens.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 2 weeks; Frozen: 1 month.

Reference Interval: Homozygous apo e3 (e3/e3): This genotype is the most common (normal) genotype.

Interpretive Data:
Background Information for Apolipoprotein E (*APOE*) Genotyping, Alzheimer Disease Risk
Characteristics: Alzheimer disease (AD), the most common cause of dementia, is characterized by progressive cognitive decline including memory, problem-solving skills, multi-step tasks, planning, and changes in personality. A clinical diagnosis of probable AD can be made based on clinical signs and neuroimaging, and the diagnosis is confirmed postmortem based on neuropathologic findings. The e4 allele of the *APOE* gene has been widely demonstrated to be associated with increased risk of AD. In individuals with a clinical diagnosis of AD, the presence of the e4 allele increases the likelihood that the diagnosis is correct, but is not diagnostic alone. *APOE* genotyping is not recommended for predicting AD risk in asymptomatic individuals.
Prevalence of *APOE* e4: Heterozygosity and homozygosity for the e4 allele is present in approximately 25 percent and 1-2 percent of the general population, respectively.
Inheritance of *APOE* e4: Semi-dominant.
Penetrance of *APOE* e4: Incomplete and influenced by age, gender, ethnicity, family history and environmental factors. The e4 allele is neither necessary nor sufficient for diagnosing AD; therefore, not all individuals with AD have the e4 allele and not all individuals with the e4 allele will develop AD.
Cause: Multi-factorial.
Variants Tested: Two single nucleotide polymorphisms in the *APOE* gene at codons 130 (rs429358) and 176 (rs7412). The e3 allele (Cysteine at 130 and Arginine at 176) is the most common in the general population. The e4 allele (Arginine at 130 and 176) is associated with increased AD risk. The e2 allele (Cysteine at codons 130 and 176) may be associated with a lower risk for AD but homozygosity has been associated with increased risk for type III hyperlipoproteinemia.
Clinical Sensitivity: Approximately 30-60 percent of individuals diagnosed with AD carry at least one e4 allele. The e4/e4 genotype is found in approximately 13 percent of the AD population and 20 percent of the familial AD population.
Methodology: Polymerase chain reaction (PCR) and fluorescence monitoring using hybridization probes.
Analytical Sensitivity and Specificity: 99 percent.
Limitations: Only the *APOE* alleles e2, e3 and e4 will be detected; rare alleles are not detected by this test. Diagnostic errors can occur due to rare sequence variations.

This test is performed pursuant to an agreement with Roche Molecular Systems, Inc.
See Compliance Statement C: www.aruplab.com/CS

CPT Code(s): 81401

New York DOH approval pending. Call for status update.

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

New Test **2013337** **Apolipoprotein E (*APOE*) Genotyping, Cardiovascular Risk** **APOE CR**
Available July 5, 2016

Methodology: Polymerase Chain Reaction/Fluorescence Monitoring
Performed: Mon, Thu
Reported: 2-7 days

Specimen Required: Patient Prep:
Collect: Lavender (EDTA), Pink (K_2EDTA), or Yellow (ACD Solution A or B).
Specimen Preparation: Transport 3 mL whole blood. (Min: 1 mL)
Storage/Transport Temperature: Refrigerated.
Remarks: This test is not recommended for nonsymptomatic patients under 18 years of age.
Unacceptable Conditions: Plasma or serum. Heparinized specimens.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval: Homozygous APOE e3 (e3/e3): This genotype is the most common (normal) genotype.

Interpretive Data:
Background Information for Apolipoprotein E (*APOE*) Genotyping, Cardiovascular Risk
Characteristics: Hyperlipoproteinemia III (HPL III) is characterized by increased cholesterol and triglyceride levels, presence of B-VLDL, xanthomas, and premature vascular disease including coronary heart disease (CHD) and peripheral artery disease.
Incidence of HPL III: Approximately 1 in 5,000.
Inheritance of HPL III: Multifactorial; greater than 90 percent of affected individuals are homozygous for the e2 allele but other factors such as diabetes and hypothyroidism also play a large role in development of disease.
Penetrance: 1 to 5 percent of individuals homozygous for the e2 will develop HPL III.
Cause: 2 copies of the e2 allele provides supporting evidence for a diagnosis of HPL III in a symptomatic individual but e2 homozygosity is neither necessary nor sufficient for HPL III.
Variants Tested: *APOE* gene alleles**,** e2 (c.388T, p.130Cys and c.526C>T, p.Arg176Cys), e3 (c.388T, p.130Cys and c.526C, p.176Arg), e4 (c.388T>C, p.Cys130Arg and c.526C, p.176Arg).
Clinical Sensitivity: 90 percent of individuals with HPL III are homozygous for the e2 variant.
Methodology: Polymerase chain reaction (PCR) and fluorescence monitoring using hybridization probes.
Analytical Sensitivity and Specificity: 99 percent.
Limitations: Only the e2, e3 and e4 variants will be detected. Rare isoforms of *APOE* will not be detected. If rare alleles are suspected, phenotyping by isoelectric focusing may be indicated. Diagnostic errors can occur due to rare sequence variations.

This test is performed pursuant to an agreement with Roche Molecular Systems, Inc.
See Compliance Statement C: www.aruplab.com/CS

CPT Code(s): 81401

New York DOH Approved.

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

New Test **2013327** **Aquaporin-4 Receptor Antibody by ELISA with Reflex to Aquaporin-4 Receptor Antibody, IgG by IFA** **AQP4 R**

Available April 18, 2016

Methodology: Semi-Quantitative Enzyme-Linked Immunosorbent Assay/ Semi-Quantitative Indirect Fluorescent Antibody
Performed: Tue, Thu
Reported: 1-6 days

Specimen Required: Collect: Serum Separator Tube (SST).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.3 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Amniotic fluid, CSF, pericardial fluid, ocular fluid, peritoneal fluid, synovial fluid, or plasma. Contaminated, hemolyzed, icteric, or lipemic specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 72 hours; Refrigerated: 2 weeks; Frozen: 1 month (avoid repeated freeze/thaw cycles)

Reference Interval:

Components	Reference Interval
Aquaporin-4 Receptor Antibody	Negative: 4 U/mL or less Indeterminate: 5 U/mL Positive: 6 U/mL or greater
Aaquaporin-4 Receptor Antibody, IgG by IFA, Serum with Reflex to Titer	Less than 1:10

Interpretive Data: Approximately 75 percent of patients with neuromyelitis optica (NMO) express antibodies to the aquaporin-4 (AQP4) receptor. Diagnosis of NMO requires the presence of longitudinally extensive acute myelitis (lesions extending over 3 or more vertebral segments) and optic neuritis. While absence of antibodies to the AQP4 receptor does not rule out the diagnosis of NMO, presence of this antibody is diagnostic for NMO.

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

NOTE: If AQP4 antibody IgG by ELISA is positive, then AQP4 antibody IgG by IFA will be added. If AQP4 antibody IgG by IFA is positive, then an AQP4 antibody IgG titer will be added. Additional charges apply.

CPT Code(s): 83516; if reflexed, add 86255; if reflexed, add 86256

New York DOH approval pending. Call for status update.

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

New Test **2013320** **Aquaporin-4 Receptor Antibody, IgG by IFA with Reflex to Titer, Serum** **AQP4 SER**

Available April 18, 2016

Methodology: Semi-Quantitative Indirect Fluorescent Antibody
Performed: Wed
Reported: 1-8 days

Specimen Required: Collect: Serum Separator Tube (SST) or Plain Red.
Specimen Preparation: Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.15 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Contaminated.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year

Reference Interval: Less than 1:10

Interpretive Data: Diagnosis of neuromyelitis optica (NMO) requires the presence of longitudinally extensive acute myelitis (lesions extending over 3 or more vertebral segments) and optic neuritis. Approximately 75 percent of patients with NMO express antibodies to the aquaporin-4 (AQP4) receptor. While the absence of AQP4 receptor antibodies does not rule out a diagnosis of NMO, presence of this antibody is diagnostic for NMO.

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

Note: If AQP4 antibody IgG is positive, then an AQP4 antibody IgG titer is reported. Additional charges apply.

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

New York DOH approval pending. Call for status update.

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

0095227 **Arylsulfatase A, 24-Hour Urine** **ARYLSULF A**

Methodology: Quantitative Colorimetry/Enzyme Immunoassay
Performed: Varies
Reported: 9-17 days

HOT LINE NOTE: There is a component change associated with this test.
Add component 2013301, Arylsulfatase A – Interpretation
Add component 2013302, Arylsulfatase A - Reviewed By

0020007 **Aspartate Aminotransferase, Serum or Plasma** **AST**

HOT LINE NOTE: There is a unit of measure change associated with this test.
Change unit of measure for component 0020007, Aspartate Aminotransferase from IU/L to U/L

2008901 **B-Cell Memory and Naive Panel** **CVID**

Reference Interval: Effective May 16, 2016

Available Separately	Components	Reference Interval							
		2-5 months	5-9 months	9-15 months	15-24 months	2-5 years	5-10 years	10-16 years	16 years and older
No	B-cells % CD19	18-38 %	16-34 %	14-28 %	16-34 %	14-29 %	10-24 %	9-23 %	5-26 %
No	B-cells Absolute CD19	700-2400 cells/µL	700-2800 cells/µL	400-2900 cells/µL	600-1900 cells/µL	400-1700 cells/µL	300-600 cells/µL	200-600 cells/µL	58-558 cells/µL
No	Naive B-cell % CD19+/CD27-/IgD+	82-95 %	86-93 %	77-95 %	68-89 %	54-88 %	47-77 %	51-83 %	29-93 %
No	Naive B-cell Absolute CD19+/CD27-/IgD+	620-2120 cells/µL	600-2590 cells/µL	360-2800 cells/µL	490-1560 cells/µL	280-1330 cells/µL	130-460 cells/µL	120-430 cells/µL	22-423 cells/µL
No	Class-switched Mem%CD19+/CD27+/IgD-/IgM-	0-9 %	2-7 %	1-12 %	4-14 %	5-21 %	11-30 %	9-26 %	3-23 %
No	Class-switched Abs CD19+/CD27+/IgD-/IgM-	10-170 cells/µL	20-140 cells/µL	10-100 cells/µL	30-180 cells/µL	20-220 cells/µL	40-140 cells/µL	30-110 cells/µL	4-62 cells/µL
No	Non-Switched Mem %CD19+/CD27+/IgD+/IgM+	3-9 %	3-7 %	3-11 %	4-14 %	3-20 %	5-20 %	5-18 %	2-25 %
No	Non-switched Abs CD19+/CD27+/IgD+/IgM+	20-200 cells/µL	30-120 cells/µL	20-140 cells/µL	30-170 cells/µL	20-180 cells/µL	20-100 cells/µL	20-70 cells/µL	4-66 cells/µL
No	Total Memory B-cell % CD19+/CD27+	3-12 %	5-12 %	4-21 %	10-27 %	8-37 %	19-47 %	13-48 %	7-48 %
No	Total Memory B-cell Absolute CD19+/CD27+	40-230 cells/µL	50-270 cells/µL	40-190 cells/µL	50-330 cells/µL	50-390 cells/µL	60-230 cells/µL	50-200 cells/µL	13-148 cells/µL
No	IgM Only Memory Pct CD19+CD27+1gD-IgM+	0.3-6.0 %	0.3-6.0 %	0.3-6.0 %	0.3-6.0 %	0.3-6.0 %	0.3-6.0 %	0.3-6.0 %	0.3-6.0 %
No	IgM Only Memory Abs CD19+CD27+IgD-IgM+	0.6-16.4 cells/µL	0.6-16.4 cells/µL	0.6-16.4 cells/µL	0.6-16.4 cells/µL	0.6-16.4 cells/µL	0.6-16.4 cells/µL	0.6-16.4 cells/µL	0.6-16.4 cells/µL

Interpretive Data: This panel is indicated for patients with suspected immune deficiencies, especially Common Variable Immune Deficiency (CVID), and to assess reconstitution of B-cell subsets after bone marrow or stem cell transplant. Subsets measured: B-cells (CD19+), total memory B-cells (CD19+ CD27+), class switched memory B-cells (CD19+ CD27+ IgD- IgM-), non-switched/marginal zone memory B-cells (CD19+ CD27+ IgD+ IgM+), IgM only memory B-cells (CD19+ CD27+ IgD-IgM+), and naive B-cells (CD19+ CD27-IgD+).

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

Note: Reference intervals for IgM-only memory B-cells have currently been established only for populations aged 16-years and older. For all other B-cell subsets, reference intervals for populations younger than 16-years are adopted from literature. Piątosa B, Wolska-Kuśnierz B, Pac M, Siewiera K, Gałkowska E, Bernatowska E. B cell subsets in healthy children: Reference values for evaluation of B cell maturation process in peripheral blood. Cytometry Part B 2010; 78B: 372–381.

CPT Code(s): 86355; 86356 x3

HOT LINE NOTE: There is a component change and a clinically significant name change associated with this test.
Change the charting name of component 2008904 from Class-switched Memory %CD19+/CD27+/IgD- to Class-switched Memory %CD19+/CD27+/IgD-/IgM-
Change the charting name of component 2008905 from Class-switched Absolute CD19+/CD27+/IgD- to Class-switched Absolute CD19+/CD27+/IgD-/IgM-
Change the charting name of component 2008906 from Non-Switched Memory %CD19+/CD27+/IgD+ to Non-Switched Memory %CD19+/CD27+/IgD+/IgM+
Change the charting name of component 2008907 from Non-switched Absolute CD19+/CD27+/IgD+ to Non-switched Absolute CD19+/CD27+/IgD+/IgM+
Add component 2013303, IgM Only Memory Abs CD19+CD27+IgD-IgM+
Add component 2013304, IgM Only Memory Pct CD19+CD27+IgD-IgM+

2008420 ***BCR-ABL1* Mutation Analysis for Tyrosine Kinase Inhibitor Resistance by Next Generation Sequencing** **BCRABL NGS**

Note: For specimens having no t(9;22) fusion, this test will be canceled and the ABL1 Amplification Confirmation test will be ordered.

2005017 ***BCR-ABL1*, Major (p210), Quantitative** **BCR MAJ**

HOT LINE NOTE: There is a component change associated with this test.
Remove component 2005271, BCR-ABL1 Maj Molecular Response achieved

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2005010 ***BCR-ABL1*, Qualitative with Reflex to *BCR-ABL1* Quantitative** **BCR RFLX**

HOT LINE NOTE: There is a component change associated with this test.
Reflex component 2005011, BCR-ABL1, Major, Quant has a component change. Remove component 2005271, BCR-ABL1 Maj Molecular Response achieved.

2011450 **Carisoprodol and Meprobamate, Serum or Plasma, Quantitative** **CARIS SP**

Reference Interval:

Test Number	Components	Reference Interval	
	Carisoprodol, Serum or Plasma	Less than 8.0 µg/mL Toxic: Greater than or equal to 8.0 µg/mL	
	Meprobamate, Serum or Plasma		
		Dose-Related Range	5.0-20.0 µg/mL
		Toxic	Greater than 40.0 µg/mL

HOT LINE NOTE: There is a numeric map change associated with this test that affects interface clients only.
Change the numeric map for component 2011455 from XXXX to XXXX.X
Change the numeric map for component 2011456 from XXXX to XXXX.X

0040002 CBC with Platelet Count — CBC

Specimen Required: Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 48 hours; Frozen: Unacceptable

Reference Interval: Effective May 16, 2016

Test Number	Components	Reference Interval												
0040080	Hematocrit	**Age**	**0 days**	**1-6 days**	**7-13 days**	**14-29 days**	**30-60 days**	**61-90 days**	**91-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**
		Male %	42-60	45-64.9	42-64.9	39-63	31-55	28-42	29-41	33-39	34-40	35-45	37-49	44.2-53
		Female %	42-60	45-64.9	42-64.9	39-63	31-55	28-42	29-41	33-39	34-40	35-45	36-46	36-49
0040085	Hemoglobin	**Age**	**0 days**	**1-6 days**	**7-13 days**	**14-29 days**	**30-60 days**	**61-90 days**	**91-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**
		Male (g/dL)	13.5-19.5	14.5-22.5	13.5-21.5	12.5-20.5	10.0-18.0	9.0-14.0	9.5-13.5	10.5-13.5	11.5-13.5	11.5-15.5	13.0-16.0	14.8-17.8
		Female (g/dL)	13.5-19.5	14.5-22.5	13.5-21.5	12.5-20.5	10.0-18.0	9.0-14.0	9.5-13.5	10.5-13.5	11.5-13.5	11.5-15.5	12.0-16.0	12.6-15.9
0040270	Red Blood Cell Count	**Age**	**0 days**	**1-6 days**	**7-13 days**	**14-29 days**	**30-60 days**	**61-90 days**	**91-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**
		Male (M/µL)	3.9-5.5	4.0-6.6	3.9-6.3	3.6-6.2	3.0-5.4	2.7-4.9	3.1-4.5	3.7-5.3	3.9-5.3	4.0-5.2	4.5-5.3	4.7-6.14
		Female (M/µL)	3.9-5.5	4.0-6.6	3.9-6.3	3.6-6.2	3.0-5.4	2.7-4.9	3.1-4.5	3.7-5.3	3.9-5.3	4.0-5.2	4.1-5.1	4.08-5.47
0040320	White Blood Cell Count	**Age**	**0 days**	**1-6 days**	**7-13 days**	**14-29 days**	**30-60 days**	**2-11 months**	**1-3 years**	**4-5 years**	**6-7 years**	**8-13 years**	**14-17 years**	**18 years and older**
		Male (K/µL)	9-30	9-34	5-21	5-20	5-19.5	5.5-17	6-17	5.5-15.5	5-14.5	4.5-13.5	4.5-13	4.3-11.3
		Female (K/µL)	9-30	9-34	5-21	5-20	5-19.5	5.5-17	6-17	5.5-15.5	5-14.5	4.5-13.5	4.5-13	4.3-11.3
	RDW	11.5-15.3 %												
	MPV	8.6-12.3 fL												
	MCV	**Age**	**0 days**	**1-6 days**	**7-13 days**	**14-29 days**	**30-60 days**	**61-90 days**	**91-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**
		Male (fL)	98-118	95-121	88-126	86-124	85-123	77-115	74-108	70-86	75-87	77-95	78-98	81.2-96.6
		Female (fL)	98-118	95-121	88-126	86-124	85-123	77-115	74-108	70-86	75-87	77-95	78-102	81.9-101
	MCH	**Age**	**0-6 days**	**7-29 days**	**30-60 days**	**61-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**			
		Male (pg)	31-37	28-40	26-34	25-35	23-31	24-30	25-33	25-35	25.8-33.1			
		Female (pg)	31-37	28-40	26-34	25-35	23-31	24-30	25-33	25-35	25.8-33.1			
	MCHC	**Male (g/dL)**	31.9-35.2											
		Female (g/dL)	31.2-34.5											
	NRBC	**Age**	**0-3 days**	**4 days and older**										
		% (/100 WBC)	0.1-8.3	0										
		K/µL	0-1.3	0										
0040235	Platelets	159-439 K/µL												
	IPF	**Age**	**0-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**						
		Male (%)	2.3-7.1	1.7-4.1	1.4-3.9	1.3-5.2	1.9-6.4	1-11.4						
		Female (%)	1.6-7.1	1.7-4.8	1.3-3.9	1.3-5.0	1.7-6.7	1-11.4						

HOT LINE NOTE: There is a component change associated with this test.
Add component 2013370, Nucleated Red Blood Cells %
Add component 2013369, Nucleated Red Blood Cells #
Add component 2013361, Immature Platelet Fraction

0040003 CBC with Platelet Count and Automated Differential CBCAD

Specimen Required: Stability (collection to initiation of testing): Ambient: 24 hours (without smears); Refrigerated: 48 hours; Frozen: Unacceptable

Reference Interval: Effective May 16, 2016

Test Number	Components	Reference Interval												
0040080	Hematocrit	**Age**	**0 days**	**1-6 days**	**7-13 days**	**14-29 days**	**30-60 days**	**61-90 days**	**91-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**
		Male %	42-60	45-64.9	42-64.9	39-63	31-55	28-42	29-41	33-39	34-40	35-45	37-49	44.2-53
		Female %	42-60	45-64.9	42-64.9	39-63	31-55	28-42	29-41	33-39	34-40	35-45	36-46	36-49
0040085	Hemoglobin	**Age**	**0 days**	**1-6 days**	**7-13 days**	**14-29 days**	**30-60 days**	**61-90 days**	**91-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**
		Male (g/dL)	13.5-19.5	14.5-22.5	13.5-21.5	12.5-20.5	10.0-18.0	9.0-14.0	9.5-13.5	10.5-13.5	11.5-13.5	11.5-15.5	13.0-16.0	14.8-17.8
		Female (g/dL)	13.5-19.5	14.5-22.5	13.5-21.5	12.5-20.5	10.0-18.0	9.0-14.0	9.5-13.5	10.5-13.5	11.5-13.5	11.5-15.5	12.0-16.0	12.6-15.9
0040270	Red Blood Cell Count	**Age**	**0 days**	**1-6 days**	**7-13 days**	**14-29 days**	**30-60 days**	**61-90 days**	**91-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**
		Male (M/µL)	3.9-5.5	4.0-6.6	3.9-6.3	3.6-6.2	3.0-5.4	2.7-4.9	3.1-4.5	3.7-5.3	3.9-5.3	4.0-5.2	4.5-5.3	4.7-6.14
		Female (M/µL)	3.9-5.5	4.0-6.6	3.9-6.3	3.6-6.2	3.0-5.4	2.7-4.9	3.1-4.5	3.7-5.3	3.9-5.3	4.0-5.2	4.1-5.1	4.08-5.47
0040320	White Blood Cell Count	**Age**	**0 days**	**1-6 days**	**7-13 days**	**14-29 days**	**30-60 days**	**2-11 months**	**1-3 years**	**4-5 years**	**6-7 years**	**8-13 years**	**14-17 years**	**18 years and older**
		Male (K/µL)	9-30	9-34	5-21	5-20	5-19.5	5.5-17	6-17	5.5-15.5	5-14.5	4.5-13.5	4.5-13	4.3-11.3
		Female (K/µL)	9-30	9-34	5-21	5-20	5-19.5	5.5-17	6-17	5.5-15.5	5-14.5	4.5-13.5	4.5-13	4.3-11.3
	RDW	11.5-15.3 %												
	MPV	8.6-12.3 fL												
	MCV	**Age**	**0 days**	**1-6 days**	**7-13 days**	**14-29 days**	**30-60 days**	**61-90 days**	**91-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**
		Male (fL)	98-118	95-121	88-126	86-124	85-123	77-115	74-108	70-86	75-87	77-95	78-98	81.2-96.6
		Female (fL)	98-118	95-121	88-126	86-124	85-123	77-115	74-108	70-86	75-87	77-95	78-102	81.9-101
	MCH	**Age**	**0-6 days**	**7-29 days**	**30-60 days**	**61-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**			
		Male (pg)	31-37	28-40	26-34	25-35	23-31	24-30	25-33	25-35	25.8-33.1			
		Female (pg)	31-37	28-40	26-34	25-35	23-31	24-30	25-33	25-35	25.8-33.1			
	MCHC	**Male (g/dL)**	31.9-35.2											
		Female (g/dL)	31.2-34.5											
	NRBC	**Age**	**0-3 days**	**4 days and older**										
		% (/100 WBC)	0.1-8.3	0										
		K/µL	0-1.3	0										
	Granulocytes Number	**Age**	**0-11 months**	**1-5 years**	**6-13 years**	**14-17 years**	**18 years and older**							
		K/µL	1.5-10.0	1.5-8.5	1.5-8.0	1.8-8.0	2.0-7.4							
	Granulocytes Percentage	**Age**	**0-13 days**	**14-29 days**	**30-90 days**	**91-180 days**	**6-9 months**	**10-11 months**	**12-23 months**	**2-3 years**	**4-5 years**	**6-7 years**	**8-9 years**	**10-11 years**
		%	19-49	14-44	15-25	14-24	13-23	12-22	13-33	15-35	23-45	32-54	34-56	31-61
		Age	**12-13 years**	**14-17 years**	**18 years and older**									
		%	32-62	33-63	39.4-72.5									
	Eosinophils Number	**Age**	**0-6 days**	**7 days - 11 months**	**1-13 years**	**14 years and older**								
		K/µL	0-1	0.1-1.1	0-0.7	0-0.5								
	Eosinophils Percentage	0.4-6.7%												
	Basophil Number	0-0.1 K/µL												
	Basophil Percentage	0.3-1.4%												
	Monocytes Number	**Age**	**0-6 days**	**7 days – 11 months**	**1-5 years**	**6-17 years**	**18 years and older**							
		K/µL	0.4-3.6	0.3-2.7	0-1.1	0-0.8	0.3-1.0							
	Monocytes Percentage	**Age**	**0-6 days**	**7-29 days**	**30-60 days**	**61-120 days**	**4 months and older**							
		%	0-9	0-12	0-10	0-9	4.1-12.4							
	Lymphocytes Number	**Age**	**0-6 days**	**7 days – 11 months**	**1-5 years**	**6-13 years**	**14-17 years**	**18 years and older**						
		K/µL	2-11.0	2-17.0	4-10.5	1.5-7.0	1.2-5.8	1.3-3.6						

	Lymphocytes Percentage	**Age**	**0-6 days**	**7-13 days**	**14-29 days**	**30-60 days**	**61-90 days**	**91-180 days**	**6-7 months**	**8-9 months**	**10-11 months**	**12-23 months**	**2-3 years**	**4-5 years**
		%	26-36	36-46	43-53	41-71	42-72	44-74	46-76	47-77	48-78	46-76	44-74	35-65
		Age	**6-7 years**	**8-9 years**	**10-13 years**	**14-15 years**	**16-17 years**	**18 years and older**						
		%	27-57	24-54	28-48	27-47	25-45	17.6-49.6						
	Immature Granulocyte Number	**Age**	**0-2 days**	**3-90 days**	**91-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**				
		K/µL	0.08-1.68	0.03-0.71	0.02-0.09	0.02-0.18	0.02-0.09	0.02-0.06	0.02-0.05	0.01-0.09				
	Immature Granulocyte percent	**Age**	**0-2 days**	**3-90 days**	**91-180 days**	**6-23 months**	**2-5 years**	**6-17 years**	**18 years and older**					
		%	0.7-7.8	0.4-5.3	0.1-0.7	0.1-1.2	0.1-1.1	0.1-0.5	0.2-0.9					
0040235	Platelets	159-439 K/µL												
	IPF	**Age**	**0-180 days**	**6-23 months**	**2-5 years**	**6-11 years**	**12-17 years**	**18 years and older**						
		Male (%)	2.3-7.1	1.7-4.1	1.4-3.9	1.3-5.2	1.9-6.4	1-11.4						
		Female (%)	1.6-7.1	1.7-4.8	1.3-3.9	1.3-5.0	1.7-6.7	1-11.4						

HOT LINE NOTE: There is a component change associated with this test.
Remove component 0040012, Lymphocyte #
Remove component 0040013, Lymphocyte %
Add component 2013370, Nucleated Red Blood Cells %
Add component 2013369, Nucleated Red Blood Cells #
Add component 2013434, Immature Granulocytes %
Add component 2013435, Immature Granulocyte #
Add component 2013361, Immature Platelet Fraction
Add component 0040125, Lymphocyte #
Add component 0040130, Lymphocyte %

2012717 CHARGE Syndrome (*CHD7*) Sequencing, Fetal — CHD7 FE

Specimen Required: Collect: **Cultured Amniocytes:** Four T-25 flasks at 80 percent confluent cultured amniocytes. **If the client is unable to culture amniocytes, this can be arranged by contacting Client Services at (800) 522-2787**.
Or Amniotic Fluid: Amniotic fluid submissions will require cultured amniocytes (Order Amniocyte Culture, Four Flask).
AND Maternal Whole Blood: Lavender (K_2EDTA), Lavender (K_3EDTA), Pink (K_2EDTA), or Yellow (ACD Solution A or B).
Specimen Preparation: **Cultured Amniocytes:** Fill flask with culture media. Transport four T-25 flasks at 80 percent confluent of culture amniocytes filled with culture media.
Amniotic Fluid: Transport 10 mL unspun fluid (Min: 5 mL)
Maternal Whole Blood: Transport 3 mL whole blood (Min: 1 mL)

0060850 *Chlamydia trachomatis* Culture — CHLAM

Performed: Sun-Sat
Reported: 2-5 days

Specimen Required: Specimen Preparation: Immediately place swab, fluid, or washing in 3 mL universal transport medium such as M4, M4RT, M5, M6, UniTranz-RT, or UTM (ARUP supply #12884). Available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787.
Unacceptable Conditions: Urine. Specimens in any transport media other than indicated. Calcium alginate, dry, or wood swabs.
Stability (collection to initiation of testing): Ambient: 1 hour; Refrigerated: 48 hours; Frozen at -20°C: Unacceptable; Frozen at -70°C: 1 month

Note: Nucleic acid amplification testing is recommended for detection of *Chlamydia trachomatis* from endocervical or urethral specimens. Refer to *Chlamydia trachomatis* by Transcription-Medicated Amplification (TMA) (ARUP test code 0060243). Specimen must be collected and transported with test-specific kit.

0080469 Chromogranin A — CGA SERUM

Interpretive Data: This test is performed using the Cisbio CGA-ELISA-US kit. Results obtained with different methods or kits cannot be used interchangeably.

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

0060851 ***Clostridium difficile* Cytotoxin Cell Assay** **CDIFTX**

Performed: Sun-Sat
Reported: 2-5 days

New Test **2013259** **Comprehensive Kidney Biopsy Workup** **KID REQ**
Available April 18, 2016

Anatomic Pathology Test Request Form Recommended (ARUP form #32960)

Time Sensitive

Methodology: Microscopy/Histochemistry/Immunofluorescence/Electron Microscopy
Performed: Sun-Sat
Reported: 1-5 days

Specimen Required: Collect: Three renal needle core biopsies.
Specimen Preparation: Obtain Renal 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. Special fixatives are required; collection instructions are provided with the kit.
One biopsy 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 non-representative tissue type. Renal tissue containing no glomeruli.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 24 hours; Frozen: Unacceptable

Interpretive Data: Refer to report.

Note: Detailed collection instructions are available in the Renal Biopsy Collection Kit (#40460) or can be requested by contacting ARUP Client Services at (800) 522-2787. Use of a different collection kit could result in suboptimal biopsy fixation and delays in diagnosis. All vials must be labeled with the patient's full name and unique identifier. Avoid drying of specimens; make sure the specimens are completely submerged into the fixative and not caught on vial sides or in the threads of the cap.

NOTE: Ancillary testing is ordered at the discretion of the ARUP pathologist, additional CPT codes and charges may apply.

CPT Code(s): 88305, 88313 x3, 88346, 88350 x6

New York DOH Approved.

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

0020408 **Comprehensive Metabolic Panel** **CMP**

HOT LINE NOTE: There is a unit of measure change associated with this test.
Change unit of measure for component 0020007, Aspartate Aminotransferase from IU/L to U/L
Change unit of measure for component 0020008, Alanine Aminotransferase from IU/L to U/L

New Test **2013260** **Comprehensive Muscle Biopsy Workup** **MUS REQ**
Available April 18, 2016

Anatomic Pathology Test Request Form Recommended (ARUP form #32960)

Time Sensitive

Methodology: Tissue Workup
Performed: Sun-Sat
Reported: 1-7 days

Specimen Required: Collect: Muscle biopsy.
Specimen Preparation: Obtain Muscle/Nerve Biopsy collection kit prior to collection procedure, (ARUP supply #40923) available online through eSupply using ARUP Connect™ or contact Client Services at (800)522-2787. Special fixatives are required; collection instructions are provided with the kit.
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 non-representative tissue type. Specimens that are not collected according to the collection instructions provided in the collection kit.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 24 hours; Frozen; Unacceptable

Interpretive Data: Refer to report.

Note: Detailed collection instructions are available in the Muscle Biopsy Collection Kit (#40923) or can be requested by contacting ARUP Client Services at (800) 522-2787. Use of a different collection kit could result in sub-optimal biopsy preparation or fixation and delays in diagnosis. All vials must be labeled with the patient's full name and unique identifier. Avoid drying of specimens; make sure the fresh specimens are completely moist with saline gauze and fixed specimen are submerged into the fixative and not caught on vial sides or in the threads of the cap. **Please acquire and use ARUP's Muscle Biopsy Collection Kit as the instructions and contents make the muscle collection procedure safer and easier.**

NOTE: Ancillary testing is ordered at the discretion of the ARUP pathologist, additional CPT codes and charges may apply.

CPT Code(s): 88305, 88313, 88314 x3, 88319 x8

New York DOH Approved.

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

New Test **2013261** **Comprehensive Nerve Biopsy Workup** **NER REQ**
Available April 18, 2016

Anatomic Pathology Test Request Form Recommended (ARUP form #32960)

Time Sensitive

Methodology: Microscopy/Cytochemistry
Performed: Sun-Sat
Reported: 1-7 days

Specimen Required: Collect: Nerve biopsy.
Specimen Preparation: Obtain Muscle/Nerve Biopsy collection kit prior to collection procedure, (ARUP supply #40923) available online through eSupply using ARUP Connect™ or contact Client Services at (800)522-2787. Special fixatives are required; collection instructions are provided with the kit.
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 non-representative tissue type. Specimens that are not collected according to the collection instructions provided in the collection kit.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 24 hours; Frozen; Unacceptable

Interpretive Data: Refer to report.

Note: Detailed collection instructions are available in the Muscle/Nerve Biopsy Collection Kit (#40923) or can be requested by contacting ARUP Client Services at (800) 522-2787. Use of a different collection kit could result in sub-optimal biopsy preparation or fixation and delays in diagnosis. All vials must be labeled with the patient's full name and unique identifier. **Please acquire and use ARUP's Muscle/Nerve Biopsy Collection Kit as the instructions and contents make the muscle/nerve collection procedure safer and easier.**

NOTE: Ancillary testing is ordered at the discretion of the ARUP pathologist, additional CPT codes and charges may apply.

CPT Code(s): 88305, 88313, 88348

New York DOH Approved.

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

New Test **2013257** **Consultation, Head and Neck** **HN CONSULT**
Available April 18, 2016

Methodology: Microscopy
Performed: Mon-Fri
Reported: Varies

Specimen Required: Collect: Tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin is preferred) and paraffin embed specimen. Protect paraffin block and/or slides from excessive heat. Transport all case material to include stained slides, paraffin blocks and surgical pathology report.
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.
Unacceptable Conditions: Specimens submitted with non-representative tissue type. Depleted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Interpretive Data: Refer to report.

Note: Appropriate stains and other ancillary testing may be performed and charged separately. Tests requested by the referring physician (eg, immunostains, molecular studies, etc.) may not be performed if they are deemed to be unnecessary by the reviewing ARUP pathologist. For all pathology consultations, ancillary testing is ordered at the discretion of the ARUP pathologist.

CPT Code(s): 88321 or 88323 or 88325, if ancillary testing is performed, additional CPT codes and charges may apply

New York DOH Approved.

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

New Test **2013262** **Consultation, Neuropathology** **NP CONSULT**
Available April 18, 2016

Methodology: Microscopy
Performed: Mon-Fri
Reported: Varies

Specimen Required: Collect: Tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin is preferred) and paraffin embed specimen. Protect paraffin block and/or slides from excessive heat. Transport all case material to include stained slides, paraffin blocks and surgical pathology report.
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.
Unacceptable Conditions: Specimens submitted with non-representative tissue type. Depleted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Interpretive Data: Refer to report.

Note: Appropriate stains and other ancillary testing may be performed and charged separately. Tests requested by the referring physician (eg immunostains, molecular studies, etc.) may not be performed if they are deemed to be unnecessary by the reviewing ARUP pathologist. For all pathology consultations, ancillary testing is ordered at the discretion of the ARUP pathologist.

CPT Code(s): 88321or 88323 or 88325, if ancillary testing is performed, additional CPT codes and charges may apply

New York DOH Approved.

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

New Test **2013263** **Consultation, Surgical Pathology** **SP CONSULT**
Available April 18, 2016

Methodology: Microscopy
Performed: Mon-Fri
Reported: Varies

Specimen Required: Collect: Tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin is preferred) and paraffin embed specimen. Protect paraffin block and/or slides from excessive heat. Transport all case material to include stained slides, paraffin blocks and surgical pathology report.
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.
Unacceptable Conditions: Specimens submitted with non-representative tissue type. Depleted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Interpretive Data: Refer to report.

Note: Appropriate stains and other ancillary testing may be performed and charged separately. Tests requested by the referring physician (eg immunostains, molecular studies, etc.) may not be performed if they are deemed to be unnecessary by the reviewing ARUP pathologist. For all pathology consultations, ancillary testing is ordered at the discretion of the ARUP pathologist.

CPT Code(s): 88321 or 88323 or 88325, if ancillary testing is performed, additional CPT codes and charges may apply

New York DOH Approved.

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

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.

0020414 **Creatine Kinase Isoenzymes** **CKISO**

Reference Interval:

Test Number	Components	Reference Interval		
	CK-MM	96-100%		
	CK-MB	0-4%		
	CK-BB	0%		
	CK-Macro Type I	0%		
	CK-Macro Type II	0%		
	Creatine Kinase, Total	Effective May 16, 2016		
		Age:	**Male:**	**Female:**
		0-30 days	108-564 U/L	108-564 U/L
		31 days-5 months	72-367 U/L	72-367 U/L
		6-35 months	50-272 U/L	38-261 U/L
		3-6 years	56-281 U/L	40-222 U/L
		7-17 years	60-393 U/L	46-250 U/L
		18 years and older:	20-200 U/L	20-180 U/L

2001613 Crohn Disease Prognostic Panel CROHN PAN

Interpretive Data: Anti-glycan serologic markers may serve as an aid in the diagnosis of Crohn disease (CD) and an indicator of disease prognosis. Anti-saccharomyces cerevaisae antibody (ASCA) has the highest diagnostic value and anti-chitobioside carbohydrate antibody (ACCA) has the highest association with more-aggressive disease. Both ACCA and ASCA are associated equally with the need for surgery. When found in combination, these markers have the best diagnostic potential. A combination of two or more of the four anti-glycan markers have a significant association with complications and the need for surgery than any single marker alone. A negative result does not rule out CD.

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

HOT LINE NOTE: There is a component change associated with this test.
Add component 2013334, Crohn Disease Prognostic Pan Interp.

New Test 2013294 Dengue Virus (1-4) Subtype by PCR DENGUEPCR

Available April 18, 2016

Methodology: Qualitative Polymerase Chain Reaction
Performed: Tue, Fri
Reported: 2-5 days

Specimen Required: Collect: Lavender (EDTA), Pink (K_2EDTA), or Serum Separator Tube (SST).
Specimen Preparation: Separate serum or plasma from cells. Transfer 1 mL serum or plasma to a sterile container. (Min: 0.5mL)
Storage/Transport Temperature: Frozen.
Remarks: Specimen source required.
Unacceptable Conditions: Heparinized specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 5 days; Frozen: 2 weeks

Interpretive Data: A negative result does not rule out the presence of PCR inhibitors in the patient specimen or of test-specific nucleic acid in concentrations below the level of detection by this test.

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

Note: This assay detects and differentiates Dengue subtypes 1-4.

CPT Code(s): 87798 x4

New York DOH approval pending. Call for status update.

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

2002247 Disaccharidase, Tissue DISAC

Performed: Mon, Wed, Fri
Reported: 1-6 days

Reference Interval: Effective May 16, 2016

Component	Reference Interval
Lactase	Greater than or equal to 10.0 µmol/min/g protein
Maltase	Greater than or equal to 100.0 µmol/min/g protein
Palatinase	Greater than or equal to 9.0 µmol/min/g protein
Sucrase	Greater than or equal to 25.0 µmol/min/g protein

2006621 Drug Detection Panel, Umbilical Cord Tissue, Qualitative TOF SCR CD

Methodology: Qualitative Liquid Chromatography/Tandem Mass Spectrometry/Enzyme-Linked Immunosorbent Assay

Reference Interval: Effective May 16, 2016

Drugs covered and range of cutoff concentrations.

Drugs/Drug Classes	Cutoff Concentrations (ng/g)
Buprenorphine	1
Norbuprenorphine	0.5
Buprenorphine-G	1
Codeine	0.5
Dihydrocodeine	1
Fentanyl	0.5
Hydrocodone	0.5
Norhydrocodone	1
Hydromorphone	0.5
Meperidine	2
Methadone	2
Methadone metabolite	1
6-Acetylmorphine	1
Morphine	0.5
Naloxone	1
Oxycodone	0.5
Noroxycodone	1
Oxymorphone	0.5
Noroxymorphone	0.5
Propoxyphene	1
Tapentadol	2
Tramadol	2
N-desmethyltramadol	2
O-desmethyltramadol	2
Amphetamine	5
Benzoylecgonine	0.5
m-OH-Benzoylecgonine	1
Cocaethylene	1
Cocaine	0.5
MDMA (Ecstasy)	5
Methamphetamine	5
Phentermine	8
Alprazolam	0.5
Alpha-OH-Alprazolam	0.5
Butalbital	25
Clonazepam	1
7-Aminoclonazepam	1
Diazepam	1
Lorazepam	5
Midazolam	1
Alpha-OH-Midazolam	2
Nordiazepam	1
Oxazepam	2
Phenobarbital	75
Temazepam	1
Zolpidem	0.5
Phencyclidine (PCP)	1
Marijuana Metabolite	1

Interpretive Data:
Methodology: Qualitative Liquid Chromatography/Tandem Mass Spectrometry/Enzyme-Linked Immunosorbent Assay

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

For medical purposes only; not valid for forensic use unless testing was performed within Chain of Custody process.
See Compliance Statement B: www.aruplab.com/CS

HOT LINE NOTE: There is a component change, unit of measure change and clinically significant charting name change associated with this test.
Remove component 2006623, OPIOIDS, UMBILICAL CORD
Remove component 2006624, STIMULANTS, UMBILICAL CORD
Remove component 2006625, SEDATIVES-HYPNOTICS, UMBILICAL CORD
Remove component 2006684, PHENCYCLIDINE, UMBILICAL CORD
Remove component 2008359, OTHER, IMMUNOASSAY, UMBILICAL CORD
Change the charting name of component 2006622 from Drug Detection Pan, TOF, Umbilical Cord to Drug Detection Panel, Umbilical Cord
Change the charting name of component 2006626 from Buprenorphine (cutoff 2 ng/g) to Buprenorphine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2013103 from Norbuprenorphine (cutoff 8 ng/g) to Norbuprenorphine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006627 from Buprenorphine-G (cutoff 8 ng/g) to Buprenorphine-G, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006628 from Codeine (cutoff 6 ng/g) to Codeine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006629 from Dihydrocodeine (cutoff 4 ng/g) to Dihydrocodeine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006630 from Fentanyl (cutoff 1 ng/g) to Fentanyl, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006631 from Hydrocodone (cutoff 6 ng/g) to Hydrocodone, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2013104 from Norhydrocodone (cutoff 6 ng/g) to Norhydrocodone, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006632 from Hydromorphone (cutoff 4 ng/g) to Hydromorphone, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006633 from Meperidine (cutoff 2 ng/g) to Meperidine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006634 from Methadone (cutoff 10 ng/g) to Methadone, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006635 from EDDP (cutoff 10 ng/g) to Methadone Metabolite, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006636 from 6-Acetylmorphine (cutoff 4 ng/g) to 6-Acetylmorphine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006637 from Morphine (cutoff 4 ng/g) to Morphine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006638 from Naloxone (cutoff 8 ng/g) to Naloxone, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006640 from Oxycodone (cutoff 4 ng/g) to Oxycodone, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2013105 from Noroxycodone (cutoff 4 ng/g) to Noroxycodone, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006641 from Oxymorphone (cutoff 4 ng/g) to Oxymorphone, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2013106 from Noroxymorphone (cutoff 4 ng/g) to Noroxymorphone, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006642 from Propoxyphene (cutoff 10 ng/g) to Propoxyphene, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006644 from Tapentadol (cutoff 2 ng/g) to Tapentadol, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006645 from Tramadol (cutoff 2 ng/g) to Tramadol, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006646 from N-desmethyltramadol (cutoff 2 ng/g) to N-desmethyltramadol, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006647 from O-desmethyltramadol (cutoff 2 ng/g) to O-desmethyltramadol, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006648 from Amphetamine (cutoff 8 ng/g) to Amphetamine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006649 from Benzoylecgonine (cutoff 8 ng/g) to Benzoylecgonine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006650 from m-OH-Benzoylecgonine (cutoff 8 ng/g) to m-OH-Benzoylecgonine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006652 from Cocaethylene (cutoff 8 ng/g) to Cocaethylene, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006653 from Cocaine (cutoff 8 ng/g) to Cocaine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006654 from MDMA- Ecstasy (cutoff 8 ng/g) to MDMA - Ecstasy, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006657 from Methamphetamine (cutoff 8 ng/g) to Methamphetamine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006658 from Phentermine (cutoff 8 ng/g) to Phentermine, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006659 from Alprazolam (cutoff 5 ng/g) to Alprazolam, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006660 from Alpha-OH-Alprazolam (cutoff 5 ng/g) to Alpha-OH-Alprazolam, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006662 from Butalbital (cutoff 75 ng/g) to Butalbital, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006663 from Clonazepam (cutoff 5 ng/g) to Clonazepam, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006664 from 7-Aminoclonazepam (cutoff 5 ng/g) to 7-Aminoclonazepam, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006665 from Diazepam (cutoff 5 ng/g) to Diazepam, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006671 from Lorazepam (cutoff 5 ng/g) to Lorazepam, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006672 from Midazolam (cutoff 5 ng/g) to Midazolam, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006673 from Alpha-OH-Midazolam (cutoff 5 ng/g) to Alpha-OH-Midazolam, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006675 from Nordiazepam (cutoff 5 ng/g) to Nordiazepam, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006676 from Oxazepam (cutoff 5 ng/g) to Oxazepam, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006677 from Phenobarbital (cutoff 75 ng/g) to Phenobarbital, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006679 from Temazepam (cutoff 5 ng/g) to Temazepam, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006682 from Zolpidem (cutoff 10 ng/g) to Zolpidem, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2006683 from Phencyclidine- PCP (cutoff 4 ng/g) to Phencyclidine - PCP, Cord, Qual and add unit of measure ng/g
Change the charting name of component 2008360 from Marijuana Metabolite (cutoff 1 ng/g) to Marijuana Metabolite, Cord, Qual and add unit of measure ng/g

2008603 ***ERBB2* (*HER2*/neu) Gene Amplification by FISH, Tissue** **ERBB2 FISH**

Specimen Required: Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin-embed tissue. Fixative duration: 6-72 hours. Protect paraffin block from excessive heat. Transport block or 5 unstained (4-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 (kit recommended but not necessary). (Min 2 slides)
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). Tissue fixed for less than 6 hours or greater than 72 hours. No tumor in tissue. Decalcified specimens.

New Test **2013277** **Esterase, Non-Specific Cytochemical Stain Only** **NSE SO**
Available May 16, 2016

Time Sensitive

Methodology: Cytochemical Stain
Performed: Mon-Fri
Reported: 2-5 days

Specimen Required: Collect: Lavender (EDTA), Green (Lithium Heparin), or Green (Sodium Heparin). Also acceptable: Heparinized Bone Marrow Aspirate.
Specimen Preparation: **Blood: Protect from light.** Transport 5 mL whole blood **AND** 6 unfixed, air-dried, and unstained push smears made from the blood submitted. (Min: 1 mL **AND** 6 unfixed smears).
OR Bone Marrow: Protect from light. Transport 1 mL heparinized aspirate **AND** 6 unfixed, air-dried, and unstained bone marrow aspirate smears. (Min: 0.5 mL **AND** 6 unfixed smears).
Storage/Transport Temperature: Room temperature. Specimens should be **received** within 24 hours of collection; testing must be **performed** within 48 hours of collection.
Unacceptable Conditions: Peripheral blood smears older than one year. Anticoagulated blood or bone marrow sent without well-prepared unfixed smears older than 48 hours.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: Unacceptable; Frozen: Unacceptable

Note: Further information on how to make an adequate slide, in the form of an instructional video, can be found at: https://www.youtube.com/watch?v=ca3NwrlpS40&feature=youtube

CPT Code(s): 88319

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

2012695 **Ethyl Glucuronide Screen Only, Urine** **ETG SCR UR**

Reference Interval: Screen cutoff concentration: 500 ng/mL

0040080 Hematocrit HCT

Time Sensitive

Specimen Required: Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 48 hours; Frozen: Unacceptable

Reference Interval: Effective May 16, 2016

Age	0 days	1-6 days	7-13 days	14-29 days	30-60 days	61-90 days	91-180 days	6-23 months	2-5 years	6-11 years	12-17 years	18 years and older
Male %	42-60%	45-64.9%	42-64.9%	39-63%	31-55%	28-42%	29-41%	33-39%	34-40%	35-45%	37-49%	44.2-53%
Female %	42-60%	45-64.9%	42-64.9%	39-63%	31-55%	28-42%	29-41%	33-39%	34-40%	35-45%	36-46%	36-49%

0040085 Hemoglobin HGB

Time Sensitive

Specimen Required:
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 48 hours; Frozen: Unacceptable

Reference Interval: Effective May 16, 2016

Age	0 days	1-6 days	7-13 days	14-29 days	30-60 days	61-90 days	91-180 days	6-23 months	2-5 years	6-11 years	12-17 years	18 years and older
Male (g/dL)	13.5-19.5	14.5-22.5	13.5-21.5	12.5-20.5	10.0-18.0	9.0-14.0	9.5-13.5	10.5-13.5	11.5-13.5	11.5-15.5	13.0-16.0	14.8-17.8
Female (g/dL)	13.5-19.5	14.5-22.5	13.5-21.5	12.5-20.5	10.0-18.0	9.0-14.0	9.5-13.5	10.5-13.5	11.5-13.5	11.5-15.5	12.0-16.0	12.6-15.9

0020416 Hepatic Function Panel HEPATIC

HOT LINE NOTE: There is a unit of measure change associated with this test.
Change unit of measure for component 0020007, Aspartate Aminotransferase from IU/L to U/L
Change unit of measure for component 0020008, Alanine Aminotransferase from IU/L to U/L

0092522 *Histoplasma* Antigen by EIA, Serum HISTOAG S

Specimen Required: Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 1 week; Frozen: 1 month (avoid repeated freeze/thaw cycles)

New Test **2013333** **Human Immunodeficiency Virus (HIV) Combo Antigen/Antibody (HIV-1/O/2) by ELISA, with Reflex to HIV-1/HIV-2 Antibody Differentiation, Supplemental** **HIVAGABGE**

Available April 18, 2016

Methodology: Qualitative Enzyme-Linked Immunosorbent Assay/Qualitative Immunoassay
Performed: Mon, Wed-Sat
Reported: 1-3 days

Specimen Required: Collect: Serum Separator Tube (SST). Also acceptable: Green (Sodium or Lithium Heparin), Lavender (EDTA), Pink (K_2EDTA), Red (Clot Activator), or Plasma Separator Tube (PST).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum into an ARUP Standard Transport Tube. (Min: 0.5 mL) Remove particulate material.
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Specimens containing particulate material. Severely hemolyzed or heat-inactivated specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: Unacceptable; Refrigerated: 1 week; Frozen: Indefinitely (avoid repeated freeze/thaw cycles)

Reference Interval:

Test Number	Components	Reference Interval		
	HIV 1,2 Combo Antigen/Antibody	Negative		
2013107	Human Immunodeficiency Virus Types 1 and 2 (HIV-1/2) Antibody Differentiation, Supplemental			
		Available Separately	**Components**	**Reference Interval**
		No	HIV-1 Antibody	Negative
		No	HIV-2 Antibody	Negative

Interpretive Data: This test should not be used for blood donor screening, associated re-entry protocols, or for screening Human Cell, Tissues and Cellular and Tissue-Based Products (HCT/P).

Note: The fourth-generation ELISA screen test is for the simultaneous qualitative detection of Human Immunodeficiency Virus Type 1 (HIV-1) p24 antigen and antibodies to HIV Type 1 (HIV-1 groups M and O) and HIV Type 2 (HIV-2). Results of the screen cannot be used to distinguish between the presence of HIV-1 p24 antigen, HIV-1 antibody, or HIV-2 antibody.

The reflexed HIV-1/ HIV-2 Antibody Differentiation test discriminates between HIV-1 and HIV-2 antibodies. Results for each type are reported.

If the HIV-1,2 Combo Antigen/Antibody screen is repeatedly reactive, then the HIV-1/ HIV-2 Antibody Differentiation test will be performed. Additional charges apply. A recommendation to order further testing on a separate specimen for HIV-1 Nucleic Acid will be made for certain results. This multi-test algorithm was proposed by the Centers for Disease Control and Prevention (CDC) and adopted by the Clinical Laboratory Standards Institute (CLSI) for the diagnosis of HIV.

CPT Code(s): 87389; if reflexed, add 86701 and 86702

New York DOH approved.

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

2002899 **Human Papillomavirus (HPV), High Risk by in situ Hybridization, Paraffin** **HPVHI ISH**

HOT LINE NOTE: There is a component change associated with this test.
Change component 2003001 H and E Slide Description from a Prompt test to a Resultable test.

0050980 **Humoral Immunity Panel I** **HUMPAN I**

HOT LINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name of component 0050706 from Pneumococcal Serotype 1 IgG to Pneumo serotype 1 IgG (P13,PNX)
Change the charting name of component 0050708 from Pneumococcal Serotype 4* IgG to Pneumo serotype 4 IgG (P7,P13,PNX)
Change the charting name of component 0050709 from Pneumococcal Serotype 5 IgG to Pneumo serotype 5 IgG (P13,PNX)
Change the charting name of component 0050713 from Pneumococcal Serotype 6B* IgG to Pneumo serotype 6B IgG (P7,P13,PNX)
Change the charting name of component 0050715 from Pneumococcal Serotype 3 IgG to Pneumo serotype 3 IgG (P13,PNX)
Change the charting name of component 0050716 from Pneumococcal Serotype 7F IgG to Pneumo serotype 7F IgG (P13,PNX)
Change the charting name of component 0050717 from Pneumococcal Serotype 9N IgG to Pneumo serotype 9N IgG (PNX)
Change the charting name of component 0050718 from Pneumococcal Serotype 14* IgG to Pneumo serotype 14 IgG (P7,P13,PNX)
Change the charting name of component 0050721 from Pneumococcal Serotype 8 IgG to Pneumo serotype 8 IgG (PNX)
Change the charting name of component 0050722 from Pneumococcal Serotype 9V*, IgG to Pneumo serotype 9V IgG (P7,P13,PNX)
Change the charting name of component 0050723 from Pneumococcal Serotype 12F IgG to Pneumo serotype 12F IgG (PNX)
Change the charting name of component 0050724 from Pneumococcal Serotype 18C* IgG to Pneumo serotype 18C IgG (P7,P13,PNX)
Change the charting name of component 0050726 from Pneumococcal Serotype 19F* IgG to Pneumo serotype 19F IgG (P7,P13,PNX)
Change the charting name of component 0050727 from Pneumococcal Serotype 23F* IgG to Pneumo serotype 23F IgG (P7,P13,PNX)

0050981 **Humoral Immunity Panel II** **HUMPAN II**

HOT LINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name of component 0050706 from Pneumococcal Serotype 1 IgG to Pneumo serotype 1 IgG (P13,PNX)
Change the charting name of component 0050708 from Pneumococcal Serotype 4* IgG to Pneumo serotype 4 IgG (P7,P13,PNX)
Change the charting name of component 0050709 from Pneumococcal Serotype 5 IgG to Pneumo serotype 5 IgG (P13,PNX)
Change the charting name of component 0050713 from Pneumococcal Serotype 6B* IgG to Pneumo serotype 6B IgG (P7,P13,PNX)
Change the charting name of component 0050715 from Pneumococcal Serotype 3 IgG to Pneumo serotype 3 IgG (P13,PNX)
Change the charting name of component 0050716 from Pneumococcal Serotype 7F IgG to Pneumo serotype 7F IgG (P13,PNX)
Change the charting name of component 0050717 from Pneumococcal Serotype 9N IgG to Pneumo serotype 9N IgG (PNX)
Change the charting name of component 0050718 from Pneumococcal Serotype 14* IgG to Pneumo serotype 14 IgG (P7,P13,PNX)
Change the charting name of component 0050721 from Pneumococcal Serotype 8 IgG to Pneumo serotype 8 IgG (PNX)
Change the charting name of component 0050722 from Pneumococcal Serotype 9V*, IgG to Pneumo serotype 9V IgG (P7,P13,PNX)
Change the charting name of component 0050723 from Pneumococcal Serotype 12F IgG to Pneumo serotype 12F IgG (PNX)
Change the charting name of component 0050724 from Pneumococcal Serotype 18C* IgG to Pneumo serotype 18C IgG (P7,P13,PNX)
Change the charting name of component 0050726 from Pneumococcal Serotype 19F* IgG to Pneumo serotype 19F IgG (P7,P13,PNX)
Change the charting name of component 0050727 from Pneumococcal Serotype 23F* IgG to Pneumo serotype 23F IgG (P7,P13,PNX)

New Test **2013270** **Inflammatory Bowel Disease Differentiation Panel** **IBD PAN**
Available July 5, 2016

Methodology: Semi-Quantitative Enzyme-Linked Immunosorbent Assay/Semi-Quantitative Indirect Fluorescent Antibody
Performed: Refer to individual components
Reported: 1-4 days

Specimen Required: Collect: Serum Separator Tube (SST).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1.5 mL serum to an ARUP Standard Transport Tube. (Min: 0.6 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Contaminated, heat-inactivated, hemolyzed, or severely lipemic specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

Reference Interval:

Test Number	Components	Reference Interval
	Saccharomyces cerevisiae Antibody, IgG	20.0 Units or less: Negative 20.1-24.9 Units: Equivocal 25.0 Units or greater: Positive
	Saccharomyces cerevisiae Antibody, IgA	20.0 Units or less: Negative 20.1-24.9 Units: Equivocal 25.0 Units or greater: Positive
0050811	Anti-Neutrophil Cytoplasmic Antibody, IgG	Less than 1:20: Not significant

Interpretive Data: Refer to report.

Note: This test may be a useful tool for distinguishing ulcerative colitis (UC) from Crohn disease (CD) in patients with suspected inflammatory bowel disease. If the ANCA screen detects antibodies at a 1:20 dilution or greater, then a titer to end point will be added. Additional charges apply. ANCA IFA is simultaneously tested on ethanol- and formalin-fixed slides to allow differentiation of C- and P-ANCA patterns.

CPT Code(s): 86671 x2; 86255; if reflexed, add 86256

New York DOH Approved.

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

0049110 **Iron Stain** **IRON STAIN**

Specimen Required: Collect: Lavender (EDTA) bone marrow aspirate.
Specimen Preparation: Transfer 4 unfixed, air-dried, unstained, non-anticoagulated bone marrow aspirate, EDTA smears, or core touch preps to a metal free container. (Min: 1 mL)
Unacceptable Conditions: Peripheral blood. Fixed smears.

0080200 **Lecithin-Sphingomyelin Ratio** **L-S**

Specimen Required: Unacceptable Conditions: Specimens grossly contaminated with blood, mucus, meconium, or urine, are unacceptable due to interference.

2005661 **Liver Fibrosis, Chronic Viral Hepatitis (Echosens FibroMeter)** **FIBRO V**

HOT LINE NOTE: There is a unit of measure change associated with this test.
Change unit of measure for component 2010928, Aspartate Aminotransferase, FibroMeter from IU/L to U/L
Change unit of measure for component 2010929, Alanine Aminotransferase, FibroMeter from IU/L to U/L

0040005 **Manual Differential** **DIFF**

Reference Interval: Effective May 16, 2016

Test Number	Components	Reference Interval
	PMNs	12 yrs & over 44 – 76%
	Bands	0-5%
	Lymphocytes	12 yrs & over 15 – 43%
	Monocytes	12 yrs & over 2 – 8%
	Eosinophil %	0-6%
	Basophil Percentage	12 yrs & over 0 – 2%
	Absolute Neutrophil Count	**Age** / **0-11 months** / **1-5 years** / **6-13 years** / **14-17 years** / **18 years and older** **K/µL** / 1.5-10.0 / 1.5-8.5 / 1.5-8.0 / 1.8-8.0 / 2.0-7.4
	Morphology	Normocytic/Normochromic
	Platelet (estimate)	Adequate

0081293 **Maternal Screening, Sequential, Specimen #1** **MS SEQ-1**

Specimen Required: Patient Prep: **This test requires a nuchal translucency (NT) measurement that has been performed by a certified ultrasonographer.** The ultrasonographer MUST be certified to perform NT measurements by one of the following agencies: Fetal Medicine Foundation (FMF) or Nuchal Translucency Quality Review (NTQR). To avoid possible test delays for an ultrasonographer that is new to our database, please contact the genetic counselor at 800-242-2787 extension 2141 prior to sending specimen.

If an NT is unobtainable, order Maternal Serum Screening, Integrated (ARUP test codes 0081062 and 0081064), which can be interpreted without an NT value.

Specimen must be drawn between 11 weeks, 0 days and 13 weeks, 6 days gestation (Crown-Rump length (CRL) must be 4.4-8.5 cm).

0081150 **Maternal Serum Screen, First Trimester** **MS FT**

Specimen Required: Patient Prep: **This test requires a nuchal translucency (NT) measurement that has been performed by a certified ultrasonographer.** The ultrasonographer MUST be certified to perform NT measurements by one of the following agencies: Fetal Medicine Foundation (FMF) or Nuchal Translucency Quality Review (NTQR). To avoid possible test delays for an ultrasonographer who is new to our database, please contact the genetic counselor at 800-242-2787 extension 2141 prior to sending specimen.

If an NT is unobtainable, order Maternal Serum Screening, Integrated (ARUP test codes 0081062 and 0081064), which can be interpreted without an NT value.

Specimen must be drawn in the first trimester between 11 weeks, 0 days and 13 weeks, 6 days. (Crown-Rump length (CRL) must be between 4.4-8.5 cm). Patient History information is required

0081062 **Maternal Serum Screening, Integrated, Specimen #1** **MS INT-1**

Specimen Required: Patient Prep: The nuchal translucency (NT) measurement is preferred; however, the Integrated Maternal Screen can be interpreted with or without a NT measurement. If performed, the NT measurement must be obtained between 10 weeks, 3 days and 13 weeks, 6 days gestation (Crown-Rump length (CRL) must be 3.9-8.5 cm). The NT measurement must also be performed by an ultrasonographer that is certified by one of the following agencies: Fetal Medicine Foundation (FMF) or Nuchal Translucency Quality Review (NTQR). To avoid possible test delays for an ultrasonographer that is new to our database, please contact the genetic counselor at (800) 242-2787 extension 2141 prior to sending specimen.

Serum-only specimens may be drawn between 10 weeks, 0 days and 13 weeks, 6 days gestation. CRL must be 3.4-8.5 cm. The specimen collection and ultrasound date may be different.

New Test **2013305** **Meningitis/Encephalitis Panel by PCR** **MEFAP**
Available April 18, 2016

Methodology: Qualitative Polymerase Chain Reaction
Performed: Sun-Sat
Reported: Within 24 hours

Specimen Required: Collect: CSF.
Specimen Preparation: Transfer 0.5 mL CSF to a sterile ARUP Standard Transport Tube (ARUP supply #43115) available online through eSupply using ARUP Connect or contact ARUP Client Services at (800) 522-2787. (Min: 0.25 mL) Do not centrifuge.
Storage/Transport Temperature: Refrigerated.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval: Not Detected

Interpretive Data: The meningitis/encephalitis panel is NOT a replacement for CSF bacterial and/or fungal culture and Cryptococcal antigen testing for at-risk patients. Non-K1 *E. coli* serotypes and non-encapsulated strains of *Neisseria meningitidis* are NOT detected. The panel does NOT differentiate active from latent herpes virus infections. Test results should be interpreted in the context of host factors and other laboratory information.

Note: This panel includes *Cryptococcus neoformans/gattii*, Cytomegalovirus (CMV), Enterovirus, *Escherichia coli* K1, *Haemophilus influenzae*, Herpes simplex virus 1(HSV-1), Herpes simplex virus 2(HSV-2), Human herpesvirus 6 (HHV-6), Human parechovirus, *Listeria monocytogenes*, *Neisseria meningitidis*, *Streptococcus agalactiae*, *Streptococcus pneumoniae*, Varicella-zoster virus (VZV).

CPT Code(s): 87496; 87498; 87529 x2; 87532; 87653; 87798 x8

New York DOH Approved.

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

2011521 Meprobamate, Serum or Plasma, Quantitative MEPRO SP

Reference Interval: Effective May 16, 2016

Dose-Related Range	5.0-20.0 µg/mL
Toxic	Greater than 40.0 µg/mL

HOT LINE NOTE: There is a numeric map change associated with this test.
Change the numeric map for component 2011456, Meprobamate, Serum or Plasma from XXXX to XXXX.X

New Test 2013273 Myeloperoxidase, Cytochemical Stain Only MPO SO

Available May 16, 2016

Methodology: Cytochemical Stain
Performed: Mon-Fri
Reported: 2-5 days

Specimen Required: Collect: Lavender (EDTA), Green (Lithium Heparin), or Green (Sodium Heparin). Also acceptable: Heparinized Bone Marrow Aspirate.
Specimen Preparation: Transport 6 unfixed, air-dried, and unstained push smears **AND** 5 mL whole blood (smears should be made from the blood submitted). **OR** 6 unfixed, air-dried, and unstained bone marrow aspirate smears.
Storage/Transport Temperature: Room temperature. Blood specimens must be **received** within 24 hours of collection**;** testing must be **performed** within 48 hours of collection.
Unacceptable Conditions: Peripheral blood smears older than one week. Anticoagulated blood or bone marrow sent without well-prepared unfixed smears if greater than 48 hours old.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: Unacceptable; Frozen: Unacceptable

Note: Further information on how to make an adequate slide, in the form of an instructional video, can be found at: https://www.youtube.com/watch?v=ca3NwrlpS40&feature=youtube

CPT Code(s): 88319

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

2008767 Opioid Receptor, mu *OPRM1* Genotype, 1 Variant OPRM1

Methodology: Polymerase Chain Reaction/Fluorescence Monitoring
Performed: Mon, Thu
Reported: 5-10 days

Specimen Required: Collect: Lavender (EDTA), Pink (K_2EDTA), or Yellow (ACD Solution A or B).
Unacceptable Conditions: Plasma or serum. Heparinized specimens.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 2 weeks; Frozen: 1 month

Interpretive Data:
Background Information for Opioid Receptor, Mu *OPRM1* Genotype, 1 Variant:
Characteristics: The mu opioid receptor is involved in mediating the clinical response to opioids (agonists and antagonists). *OPRM1* c.118A>G has been associated with lower sensitivity to opioid receptor agonists prescribed for pain control (eg., morphine) and higher sensitivity to opioid receptor antagonists used in the treatment of alcohol and drug dependency (eg., naltrexone). Risk of side effects to opioids is also associated with this genetic variant.
Inheritance: Autosomal co-dominant.
Cause: SNP rs1799971; *OPRM1* c.118A>G (p.Asn40Asp); also known as G allele alters response to opioids.
G allele frequency: African Americans 4 percent, Caucasians 14 percent, Hispanics 24 percent.
Clinical Sensitivity: Drug dependent.
Methodology: Polymerase Chain Reaction (PCR) and Fluorescence Monitoring
Analytical Sensitivity and Specificity: Greater than 99 percent.
Limitations: Only the targeted *OPRM1* mutation, c.118A>G, will be detected. Diagnostic errors can occur due to rare sequence variations. Risk of therapeutic failure or adverse reactions with opioids may be affected by genetic and non-genetic factors that are not detected by this test. This result does not replace the need for therapeutic or clinical monitoring.

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

2007479 **Pain Management Drug Panel by High-Resolution Time-of-Flight Mass Spectrometry and Enzyme Immunoassay, Urine** **PAIN HYB U**

HOT LINE NOTE: There is a component change associated with this test.
Remove component 2007667, Ritalinic Acid (cutoff 400 ng/mL)
Add component 2013281, Methylphenidate (cutoff 100 ng/mL)

2009288 **Pain Management Drug Screen with Interpretation by High-Resolution Time-of-Flight Mass Spectrometry and Enzyme Immunoassay, Urine** **PAIN HYB 2**

HOT LINE NOTE: There is a component change associated with this test.
Remove component 2007667, Ritalinic Acid (cutoff 400 ng/mL)
Add component 2013281, Methylphenidate (cutoff 100 ng/mL)

2012603 ***PAX8-PPARG* Translocations Detection by PCR** **PAX8-PPARG**

Performed: **RNA isolation**: Sun-Sat
Assay: Mon, Thu
Reported: 10-12 days

0091260 **Phenol Exposure Quantitative, Urine** **PHENOL U**

Performed: Varies
Reported: 4-11 days

2010481 **Phenytoin, Free** **DIL FR**

Reference Interval: Effective May 16, 2016

Therapeutic:	1.0-2.5 µg/mL
Toxic:	Greater than 2.5µg/mL

0090141 **Phenytoin, Free and Total** **FDIL**

Reference Interval: Effective May 16, 2016

Available Separately	Components	Therapeutic Range
No	Phenytoin - Total	Therapeutic: 10.0-20.0 Toxic: > 30.0
No	Phenytoin - Free Level	Therapeutic: 1.0-2.5 Toxic: > 2.5
No	Phenytoin - Percent Free	8.0-14.0%

0040235 **Platelets** **PLT**

Reference Interval: Effective May 16, 2016

Age Range				Sex	Normal Low	Normal High	Units
0	Days	150	Years	Male/Female	159	439	k/uL

2003040 **PM/Scl-100 Antibody, IgG by Immunoblot with Reflex to ANA IFA** **PM/SCL**

HOT LINE NOTE: There is a price change associated with this test. Please contact ARUP Client Services at (800) 522-2787 for additional information.

2002871 ***PML-RARA* Translocation, t(15;17) by RT-PCR, Quantitative** **PML QNT**

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

0095044 **Prenatal Reflexive Panel** **PRENATAL A**

Methodology: Automated Cell Count/Differential/Semi-Quantitative Charcoal Agglutination/Qualitative Chemiluminescent Immunoassay/Semi-Quantitative Chemiluminescent Immunoassay/Hemagglutination/Solid Phase

2008509 **Progesterone Quantitative by HPLC-MS/MS, Serum or Plasma** **PGSN**

Reference Interval: Effective May 16, 2016

Age	Males
Less than 1 year	Not Established
1-16 years	Less than or equal to 0.15 ng/mL
17 years and older	Less than or equal to 0.11 ng/mL

Age	Females
Less than 1 year	Not Established
1-10 years	Less than or equal to 0.26 ng/mL
11 years	Less than or equal to 2.55 ng/mL
12 years	Less than or equal to 8.56 ng/mL
13 years	Less than or equal to 6.93 ng/mL
14 years	Less than or equal to 12.04 ng/mL
15 years	Less than or equal to 10.76 ng/mL
16 years	Less than or equal to 12.94 ng/mL
17 years and older	Based on Cycle Days
1-6 days	Less than or equal to 0.17 ng/mL
7-12 days	Less than or equal to 1.35 ng/mL
13-15 days	Less than or equal to 15.63 ng/mL
16-28 days	Less than or equal to 25.55 ng/mL
Post-Menopausal	Less than or equal to 0.10 ng/mL
Pregnancy, First Trimester	6.25 – 45.46 ng/mL
Pregnancy, Second Trimester	15.40 – 52.10 ng/mL
Pregnancy, Third Trimester	24.99 – 99.92 ng/mL

New Test **2013352** **Pyridoxine-Dependent Epilepsy Panel, Serum or Plasma** **P-DEP SP**
Available May 16, 2016

Patient History For Biochemical Genetics

Methodology: Quantitative Liquid Chromatography-Tandem Mass Spectrometry
Performed: Fri
Reported: 4-12 days

Specimen Required: Patient Prep: Adults: Fasting specimen preferred.
Infants and Children: Draw specimen prior to feeding or 2-3 hours after a meal preferred
Collect: Green (Sodium or Lithium Heparin), Lavender (EDTA), Plain Red, or Serum Separator Tube (SST).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 0.5 mL serum or plasma to an ARUP Standard Transport Tube and freeze immediately**.** (Min: 0.2 mL)
Storage/Transport Temperature: CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.
Remarks: Clinical information is needed for appropriate interpretation. Submit age, gender, diet (eg., TPN therapy), drug therapy, and family history on a Biochemical Genetics Patient History Form available at www.aruplab.com/patienthistory or by contacting ARUP Client Services at (800) 522-2787.
Unacceptable Conditions: Samples exposed to more than two freeze/thaw cycles.
Stability (collection to initiation of testing): After separation from cells: Ambient: Unacceptable; Refrigerated: 24 hours; Frozen at -20°C: 1 week; Frozen at -70°C: 1 year

Reference Interval:

Age	Pipecolic Acid	Total AASA-P6C
0-12 months	Less than or equal to 5.2 umol/L	Less than or equal to 1.6 umol/L
Greater than 1 year	Less than or equal to 6.3 umol/L	Less than or equal to 3.1 umol/L

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

CPT Code(s): 82542

New York DOH approval pending. Call for status update.

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

New Test **2013355** **Pyridoxine-Dependent Epilepsy Panel, Urine** **P-DEP U**
Available May 16, 2016

Patient History For Biochemical Genetics

Methodology: Quantitative Liquid Chromatography-Tandem Mass Spectrometry
Performed: Fri
Reported: 4-12 days

Specimen Required: Collect: Random urine. First morning urine is preferred.
Specimen Preparation: Transfer 1 mL urine to an ARUP Standard Transport Tube and freeze immediately. (Min: 0.3 mL)
Storage/Transport Temperature: CRITICAL FROZEN (preferred). Refrigerated specimens are acceptable for testing if frozen within 24 hours from start of collection.
Remarks: Clinical information is needed for appropriate interpretation. Additional required information includes age, gender, diet (e.g.TPN therapy), drug therapy, and family history. Biochemical Genetics Patient History Form is available on the ARUP Web site at http://www.aruplab.com/patienthistory or by contacting ARUP Client Services.
Unacceptable Conditions: Samples exposed to more than two freeze/thaw cycles.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 24 hours; Frozen at -20°C: 1 week; Frozen at -70°C: 1 year

Reference Interval:

Age	Pipecolic Acid	Total AASA-P6C
0 - 30 days	Less than or equal to19.6 mmol/mol creatinine	Less than or equal to 18.7 mmol/mol creatinine
1 - 5 months	Less than or equal to 12.1 mmol/mol creatinine	Less than or equal to 13.4 mmol/mol creatinine
6 - 11 months	Less than or equal to7.2 mmol/mol creatinine	Less than or equal to 5.3 mmol/mol creatinine
Greater than 1 Year	Less than or equal to 1.2 mmol/mol creatinine	Less than or equal to 3.1 mmol/mol creatinine

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

CPT Code(s): 82542

New York DOH approval pending. Call for status update.

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

0040270 **Red Blood Cell Count** **RBC**

Time Sensitive

Specimen Required: Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 48 hours; Frozen: Unacceptable

Reference Interval: Effective May 16, 2016

Age	0 days	1-6 days	7-13 days	14-29 days	30-60 days	61-90 days	91-180 days	6-23 months	2-5 years	6-11 years	12-17 years	18 years and older
Male (M/µL)	3.9-5.5	4.0-6.6	3.9-6.3	3.6-6.2	3.0-5.4	2.7-4.9	3.1-4.5	3.7-5.3	3.9-5.3	4.0-5.2	4.5-5.3	4.7-6.14
Female (M/µL)	3.9-5.5	4.0-6.6	3.9-6.3	3.6-6.2	3.0-5.4	2.7-4.9	3.1-4.5	3.7-5.3	3.9-5.3	4.0-5.2	4.1-5.1	4.08-5.47

0040263 **Reticulocyte, Hemoglobin Panel** **CHR**

Time Sensitive

Specimen Required: Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 48 hours; Frozen: Unacceptable

Reference Interval: Effective May 16, 2016

Test Number	Components	Reference Interval
0040022	Reticulocytes, Percent and Number	

Age	0-13 days	14 days and older
Male (K/µL)	39.6-137.5	47-152
Female (K/µL)	39.6-137.5	47-127
%	2.7-6.6%	1.0-2.6%

	Cellular Hemoglobin	

Age	0-180 days	6-23 months	2-5 years	6-11 years	12-17 years	18 years and older
Male (pg)	27.6-38.7	28.7-35.7	27.7-37.8	32.4-37.6	30.3-40.4	27.9-37.0
Female (pg)	29.2-37.5	30.1-35.7	29.3-37.3	30.4-39.7	29.9-38.4	27.9-37.0

	Immature Reticulocyte Fraction	

Age	0-3 days	4-30 days	31-60 days	61-180 days	6-23 months	2-5 years	6-11 years	12-17 years	18 and older
%	30.5-35.1	14.5-24.6	19.1-28.9	13.4-23.3	11.4-25.8	8.4-21.7	8.9-24.1	9-18.7	2.9-15.5

HOT LINE NOTE: There is a component change associated with this test.
Add component 2013368, Immature Reticulocyte Fraction

0040022 **Reticulocytes, Percent and Number** **RETICULOCY**

Time Sensitive

Specimen Required: Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 48 hours; Frozen: Unacceptable

Reference Interval: Effective May 16, 2016

Test Number	Components	Reference Interval			
	Reticulocytes Percent				
		Age	**0-13 days**	**14 days and older**	
		%	2.7-6.6%	1.0-2.6%	
	Reticulocyte Number				
		Age	**0-13 days**	**14 days and older**	
		Male (K/µL)	39.6-137.5	47-152	
		Female (K/µL)	39.6-137.5	47-127	

New Test **2013358** **S100B, CSF** **S100B CSF**

Available April 18, 2016

Methodology: Quantitative Enzyme-Linked Immunosorbent Assay
Performed: Tue
Reported: 1-8 days

Specimen Required: Collect: CSF.
Specimen Preparation: Transport 1 mL CSF in an ARUP Standard Transport Tube. (Min. 0.5 mL)
Storage/Transport Temperature: Frozen.
Unacceptable Conditions: Grossly hemolyzed specimens.
Stability (collection to initiation of testing): Ambient: 4 hours; Refrigerated: 1 week; Frozen: 1 month

Reference Interval: 0-690 ng/L

Interpretive Data: This assay is performed using the CanAg S100 Enzyme Immunoassay. Results obtained with different assay methods or kits cannot be used interchangeably.

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

CPT Code(s): 83520

New York DOH approval pending. Call for status update.

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

New Test **2013251** **STAT6 by Immunohistochemistry** **STAT6 IHC**
Available April 18, 2016

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 (ARUP supply #47808 recommended but not required) available online through eSupply using ARUP Connect or contact ARUP Client Services at (800) 522-2787. (Min: 2 slides) If sending precut slides, do not oven bake.
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Unacceptable Conditions: Specimens submitted with non-representative tissue type. Depleted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely, Refrigerated: Indefinitely, Frozen: Unacceptable

Note: All stains will be handled as "Stain and Return" unless a consultation is requested. To request a consultation, submit the pathology report, all associated case materials (clinical history, blocks, slides, etc.), and the Anatomic Pathology requisition form (#32960) in place of the Immunohistochemistry Stain Form.

CPT Code(s): 88342

New York DOH approval pending. Call for status update.

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

0050725 ***Streptococcus pneumoniae* Antibodies, IgG (14 Serotypes)** **PNEUMO AB**

Interpretive Data: A pre- and post-vaccination comparison is required to adequately assess the humoral immune response to Prevnar 7 (P7), Prevnar 13 (P13), and/or Pneumovax 23 (PNX) *Streptococcus pneumoniae* vaccines. Pre-vaccination samples should be collected prior to vaccine administration. Post-vaccination samples should be obtained at least 4 weeks after immunization. Testing of post-vaccination samples alone will provide only general immune status of the individual to various pneumococcal serotypes.

In the case of pure polysaccharide vaccine, indication of immune system competence is further delineated as an adequate response to at least 50 percent of the serotypes in the vaccine challenge for those 2-5 years of age and to at least 70 percent of the serotypes in the vaccine challenge for those 6-65 years of age. Individual immune response may vary based on age, past exposure, immunocompetence, and pneumococcal serotype.

Responder Status	**Antibody Ratio**
Non-Responder	Less than 2-fold
Weak Responder	2-fold to 4-fold
Good Responder	Greater than 4-fold

A response to 50-70 percent or more of the serotypes in the vaccine challenge is considered a normal humoral response[1]. Antibody concentration greater than 1.0 – 1.3 µg/mL is generally considered long-term protection[2].

References:

1. Daly TM, Pickering JW, Zhang X, Prince HE, Hill HR. Multilaboratory assessment of threshold versus fold-change algorithms for minimizing analytical variability in multiplexed pneumococcal IgG measurements. *Clin Vaccine Immunol*. 2014;21(7):982-8.
2. Daly TM, Hill HR. Use and Clinical Interpretation of Pneumococcal Antibody Measurements in the Evaluation of Humoral Immune Function. *Clin Vaccine Immunol*. 2015;22(2):148-152.

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

HOT LINE NOTE: Remove information found in the Note field.
HOT LINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name of component 0050706 from Pneumococcal Serotype 1 IgG to Pneumo serotype 1 IgG (P13,PNX)
Change the charting name of component 0050708 from Pneumococcal Serotype 4* IgG to Pneumo serotype 4 IgG (P7,P13,PNX)
Change the charting name of component 0050709 from Pneumococcal Serotype 5 IgG to Pneumo serotype 5 IgG (P13,PNX)
Change the charting name of component 0050713 from Pneumococcal Serotype 6B* IgG to Pneumo serotype 6B IgG (P7,P13,PNX)
Change the charting name of component 0050715 from Pneumococcal Serotype 3 IgG to Pneumo serotype 3 IgG (P13,PNX)
Change the charting name of component 0050716 from Pneumococcal Serotype 7F IgG to Pneumo serotype 7F IgG (P13,PNX)
Change the charting name of component 0050717 from Pneumococcal Serotype 9N IgG to Pneumo serotype 9N IgG (PNX)
Change the charting name of component 0050718 from Pneumococcal Serotype 14* IgG to Pneumo serotype 14 IgG (P7,P13,PNX)
Change the charting name of component 0050721 from Pneumococcal Serotype 8 IgG to Pneumo serotype 8 IgG (PNX)
Change the charting name of component 0050722 from Pneumococcal Serotype 9V*, IgG to Pneumo serotype 9V IgG (P7,P13,PNX)
Change the charting name of component 0050723 from Pneumococcal Serotype 12F IgG to Pneumo serotype 12F IgG (PNX)
Change the charting name of component 0050724 from Pneumococcal Serotype 18C* IgG to Pneumo serotype 18C IgG (P7,P13,PNX)
Change the charting name of component 0050726 from Pneumococcal Serotype 19F* IgG to Pneumo serotype 19F IgG (P7,P13,PNX)
Change the charting name of component 0050727 from Pneumococcal Serotype 23F* IgG to Pneumo serotype 23F IgG (P7,P13,PNX)

2005779 ***Streptococcus pneumoniae*** **Antibodies, IgG (23 Serotypes)** **PNEUMO 23**

Interpretive Data: A pre- and post-vaccination comparison is required to adequately assess the humoral immune response to Prevnar 7 (P7), Prevnar 13 (P13), and/or Pneumovax 23 (PNX) Streptococcus pneumoniae vaccines. Pre-vaccination samples should be collected prior to vaccine administration. Post-vaccination samples should be obtained at least 4 weeks after immunization. Testing of post-vaccination samples alone will provide only general immune status of the individual to various pneumococcal serotypes.

In the case of pure polysaccharide vaccine, indication of immune system competence is further delineated as an adequate response to at least 50 percent of the serotypes in the vaccine challenge for those 2-5 years of age and to at least 70 percent of the serotypes in the vaccine challenge for those 6-65 years of age. Individual immune response may vary based on age, past exposure, immunocompetence, and pneumococcal serotype.

Responder Status	**Antibody Ratio**
Non-Responder	Less than 2-fold
Weak Responder	2-fold to 4-fold
Good Responder	Greater than 4-fold

A response to 50-70 percent or more of the serotypes in the vaccine challenge is considered a normal humoral response[1]. Antibody concentration greater than 1.0 – 1.3 µg/mL is generally considered long-term protection[2].

References:

1. Daly TM, Pickering JW, Zhang X, Prince HE, Hill HR. Multilaboratory assessment of threshold versus fold-change algorithms for minimizing analytical variability in multiplexed pneumococcal IgG measurements. Clin Vaccine Immunol. 2014;21(7):982-8.
2. Daly TM, Hill HR. Use and Clinical Interpretation of Pneumococcal Antibody Measurements in the Evaluation of Humoral Immune Function. Clin Vaccine Immunol. 2015;22(2):148-152.

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

HOT LINE NOTE: Remove information found in the Reference Interval and Note fields.
HOT LINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name of component 0050706 from Pneumococcal Serotype 1 IgG to Pneumo serotype 1 IgG (P13,PNX)
Change the charting name of component 0050708 from Pneumococcal Serotype 4* IgG to Pneumo serotype 4 IgG (P7,P13,PNX)
Change the charting name of component 0050709 from Pneumococcal Serotype 5 IgG to Pneumo serotype 5 IgG (P13,PNX)
Change the charting name of component 0050713 from Pneumococcal Serotype 6B* IgG to Pneumo serotype 6B IgG (P7,P13,PNX)
Change the charting name of component 0050715 from Pneumococcal Serotype 3 IgG to Pneumo serotype 3 IgG (P13,PNX)
Change the charting name of component 0050716 from Pneumococcal Serotype 7F IgG to Pneumo serotype 7F IgG (P13,PNX)
Change the charting name of component 0050717 from Pneumococcal Serotype 9N IgG to Pneumo serotype 9N IgG (PNX)
Change the charting name of component 0050718 from Pneumococcal Serotype 14* IgG to Pneumo serotype 14 IgG (P7,P13,PNX)
Change the charting name of component 0050721 from Pneumococcal Serotype 8 IgG to Pneumo serotype 8 IgG (PNX)
Change the charting name of component 0050722 from Pneumococcal Serotype 9V*, IgG to Pneumo serotype 9V IgG (P7,P13,PNX)
Change the charting name of component 0050723 from Pneumococcal Serotype 12F IgG to Pneumo serotype 12F IgG (PNX)
Change the charting name of component 0050724 from Pneumococcal Serotype 18C* IgG to Pneumo serotype 18C IgG (P7,P13,PNX)
Change the charting name of component 0050726 from Pneumococcal Serotype 19F* IgG to Pneumo serotype 19F IgG (P7,P13,PNX)
Change the charting name of component 0050727 from Pneumococcal Serotype 23F* IgG to Pneumo serotype 23F IgG (P7,P13,PNX)
Change the charting name of component 2005780 from Pneumococcal Serotype 2 IgG to Pneumo serotype 2 IgG (PNX)
Change the charting name of component 2005781 from Pneumococcal Serotype 10A IgG to Pneumo serotype 10A IgG (PNX)
Change the charting name of component 2005782 from Pneumococcal Serotype 11A IgG to Pneumo serotype 11A IgG (PNX)
Change the charting name of component 2005783 from Pneumococcal Serotype 15B IgG to Pneumo serotype 15B IgG (PNX)
Change the charting name of component 2005784 from Pneumococcal Serotype 17F IgG to Pneumo serotype 17F IgG (PNX)
Change the charting name of component 2005785 from Pneumococcal Serotype 19A IgG to Pneumo serotype 19A IgG (P13,PNX)
Change the charting name of component 2005786 from Pneumococcal Serotype 20 IgG to Pneumo serotype 20 IgG (PNX)
Change the charting name of component 2005787 from Pneumococcal Serotype 22F IgG to Pneumo serotype 22F IgG (PNX)
Change the charting name of component 2005788 from Pneumococcal Serotype 33F IgG to Pneumo serotype 33F IgG (PNX)

2008919 ***Streptococcus pneumoniae*** **Antibodies, IgG (9 Serotypes)** **PNEUMO 9**

Interpretive Data: A pre- and post-vaccination comparison is required to adequately assess the humoral immune response to Prevnar 7 (P7), Prevnar 13 (P13), and/or Pneumovax 23 (PNX) *Streptococcus pneumoniae* vaccines. Pre-vaccination samples should be collected prior to vaccine administration. Post-vaccination samples should be obtained at least 4 weeks after immunization. Testing of post-vaccination samples alone will provide only general immune status of the individual to various pneumococcal serotypes.

In the case of pure polysaccharide vaccine, indication of immune system competence is further delineated as an adequate response to at least 50 percent of the serotypes in the vaccine challenge for those 2-5 years of age and to at least 70 percent of the serotypes in the vaccine challenge for those 6-65 years of age. Individual immune response may vary based on age, past exposure, immunocompetence, and pneumococcal serotype.

Responder Status	**Antibody Ratio**
Non-Responder	Less than 2-fold
Weak Responder	2-fold to 4-fold
Good Responder	Greater than 4-fold

A response to 50-70 percent or more of the serotypes in the vaccine challenge is considered a normal humoral response[1]. Antibody concentration greater than 1.0 – 1.3 µg/mL is generally considered long-term protection[2].

References:

1. Daly TM, Pickering JW, Zhang X, Prince HE, Hill HR. Multilaboratory assessment of threshold versus fold-change algorithms for minimizing analytical variability in multiplexed pneumococcal IgG measurements. *Clin Vaccine Immunol*. 2014;21(7):982-8.
2. Daly TM, Hill HR. Use and Clinical Interpretation of Pneumococcal Antibody Measurements in the Evaluation of Humoral Immune Function. *Clin Vaccine Immunol*. 2015;22(2):148-152.

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

HOT LINE NOTE: Remove information found in the Reference Interval and Note field.
HOT LINE NOTE: There is a clinically significant charting name change associated with this test.
Change the charting name of component 2005780 from Pneumococcal Serotype 2 IgG to Pneumo serotype 2 IgG (PNX)
Change the charting name of component 2005781 from Pneumococcal Serotype 10A IgG to Pneumo serotype 10A IgG (PNX)
Change the charting name of component 2005782 from Pneumococcal Serotype 11A IgG to Pneumo serotype 11A IgG (PNX)
Change the charting name of component 2005783 from Pneumococcal Serotype 15B IgG to Pneumo serotype 15B IgG (PNX)
Change the charting name of component 2005784 from Pneumococcal Serotype 17F IgG to Pneumo serotype 17F IgG (PNX)
Change the charting name of component 2005785 from Pneumococcal Serotype 19A IgG to Pneumo serotype 19A IgG (P13,PNX)
Change the charting name of component 2005786 from Pneumococcal Serotype 20 IgG to Pneumo serotype 20 IgG (PNX)
Change the charting name of component 2005787 from Pneumococcal Serotype 22F IgG to Pneumo serotype 22F IgG (PNX)
Change the charting name of component 2005788 from Pneumococcal Serotype 33F IgG to Pneumo serotype 33F IgG (PNX)

New Test **2013325** **Systemic Scleroderma Comprehensive Panel** **SCL COMP**
Available July 5, 2016

Methodology: Semi-Quantitative Immunoblot/Semi-Quantitative Indirect Fluorescent Antibody/Semi-Quantitative Multiplex Bead Assay/Semi-Quantitative Enzyme-Linked Immunosorbent Assay
Performed: Tue
Reported: 1-8 days

Specimen Required: Collect: Serum Separator Tube (SST).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 3 mL serum to an ARUP Standard Transport Tube. (Min: 1.5 mL)
Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen.
Unacceptable Conditions: Hemolyzed, hyperlipemic, icteric, heat-treated or contaminated specimens
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year

Reference Interval:

Test Number	Components	Reference Interval
0050599	Scleroderma (Scl-70) (ENA) Antibody, IgG	29 AU/mL or less: Negative 30-40 AU/mL: Equivocal 41 AU/mL or greater: Positive
0050470	Ribonucleic Protein (U1) (ENA) Ab, IgG	29 AU/mL or less: Negative 30-40 AU/mL: Equivocal 41 AU/mL or greater: Positive
0050714	Centromere Ab, IgG	29 AU/mL or less: Negative 30-40 AU/mL: Equivocal 41 AU/mL or greater: Positive
0050639	Anti-Nuclear Antibody (ANA), IgG by IFA	Less than 1:40
2012173	Fibrillarin (U3 RNP) Ab, IgG	5 Units or less: Negative 6-10 Units: Equivocal 11 Units or greater: Positive
2003040	PM/Scl 100 Antibody, IgG	5 Units or less: Negative 6-10 Units: Equivocal 11 Units or greater: Positive
2001601	RNA Polymerase III Antibody, IgG	19 Units or less: Negative 20-39 Units: Weak Positive 40-80 Units: Positive 81 Units or greater: Strong Positive

Interpretive Data: Refer to report.

Note: Panel includes: Anti-Nuclear Ab (ANA) Titer, Anti-Nuclear Ab (ANA) Pattern, Anti-Scl-70, Anti-RNA Polymerase III Ab, Anti-Centromere Ab, Anti-U1 RNP Ab, Anti-Fibrillarin (U3 RNP), Anti-PM/Scl Ab.

CPT Code(s): 86039, 86235 x4, 83516 x2

New York DOH Approved.

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

New Test **2013275** **Tartrate-Resistant Acid Phosphatase, Cytochemical Stain Only** **TRAP SO**
Available May 16, 2016

Time Sensitive

Methodology: Cytochemical Stain
Performed: Mon-Fri
Reported: 2-5 days

Specimen Required: Collect: Lavender (EDTA), Green (Lithium Heparin), or Green (Sodium Heparin). Also acceptable: Heparinized Bone Marrow Aspirate.
Specimen Preparation: Transport 6 unfixed, air-dried, and unstained push smears **AND** 5 mL whole blood (smears should be made from the blood submitted). **OR** transport 6 unfixed, air-dried, and unstained bone marrow aspirate smears. Protect from light.
Storage/Transport Temperature: Room temperature. Blood specimens must be **received** within 24 hours of collection**;** testing must be **performed** within 48 hours of collection.
Unacceptable Conditions: Peripheral blood smears older than one year. Anticoagulated blood or bone marrow sent without well-prepared unfixed smears if greater than 48 hours.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: Unacceptable; Frozen: Unacceptable

Note: Further information on how to make an adequate slide, in the form of an instructional video, can be found at: https://www.youtube.com/watch?v=ca3NwrlpS40&feature=youtube

CPT Code(s): 88319

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

New Test **2013335** **Thrombopoietin (TPO), Serum** **THROMBO S**
Available April 18, 2016

Methodology: Quantitative Immunoassay
Performed: Varies
Reported: 6-13 days

Specimen Required: Collect: Plain Red. Also acceptable: Serum Separator Tube (SST)
Specimen Preparation: Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Frozen.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 1 month

Reference Interval: By Report

CPT Code(s): 83520

New York DOH Approved.

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

New Test **2013290** ***Tropheryma whipplei* PCR** **TWHIPPCR**
Available April 18, 2016

Methodology: Qualitative Polymerase Chain Reaction
Performed: Tue, Fri
Reported: 2-5 days

Specimen Required: Collect: Lavender (EDTA), pink (K_2EDTA), Serum Separator Tube (SST), or CSF.
Specimen Preparation: Transfer 1 mL serum, plasma, whole blood, or CSF to a sterile container. (Min: 0.5 mL)
Storage/Transport Temperature: Frozen.
Remarks: Specimen source required.
Unacceptable Conditions: Heparinized specimens.
Stability (collection to initiation of testing): Ambient: 8 hours; Refrigerated: 5 days; Frozen: 2 weeks

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

CPT Code(s): 87798

New York DOH approval pending. Call for status update.

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

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

Specimen Required: Stability (collection to initiation of testing): After separation from cells: Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 1 year (avoid repeated freeze/thaw cycles)

0080380 **Vitamin C (Ascorbic Acid), Plasma** **VIT C**

Specimen Required: Unacceptable Conditions: EDTA plasma, whole blood, or body fluids. Grossly hemolyzed specimens.

0040320 **White Blood Cell Count** **WBC**

Time Sensitive

Specimen Required: Collect: Lavender (EDTA) or Pink (K_2 EDTA).
Specimen Preparation: Mix specimens thoroughly. Transport 5 mL whole blood. (Min: 0.25 mL)
Storage/Transport Temperature: Refrigerated.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 48 hours; Frozen: Unacceptable

Reference Interval: Effective May 16, 2016

Age	0 days	1-6 days	7-13 days	14-29 days	30-60 days	2-11 months	1-3 years	4-5 years	6-7 years	8-13 years	14-17 years	18 years and older
Male (K/µL)	9-30	9-34	5-21	5-20	5-19.5	5.5-17	6-17	5.5-15.5	5-14.5	4.5-13.5	4.5-13	4.3-11.3
Female (K/µL)	9-30	9-34	5-21	5-20	5-19.5	5.5-17	6-17	5.5-15.5	5-14.5	4.5-13.5	4.5-13	4.3-11.3

Quarterly HOT LINE: Effective May 16, 2016

The following will be discontinued from ARUP's test menu on July 5, 2016.
Replacement test options are supplied if applicable.

Test Number	Test Name	Refer To Replacement
0055566	Apolipoprotein E (*APOE*) 2 Mutations, Cardiovascular Risk	APOE CR (2013337)
0055691	BIRC2-MALT1 (*API2-MALT1*) Translocation, t(11;18) by RT-PCR	Chromosome FISH, Interphase (2002298)
0051434	Bloom Syndrome (*BLM*) 1 Mutation, Fetal	
0051454	Canavan Disease (*ASPA*) 4 Mutations, Fetal	
0021021	Carotenes, Fractionated, Plasma or Serum	
0055283	Cysticercosis Antibody, IgG by Western Blot	
0055282	Cysticercosis Antibody, IgG by Western Blot (CSF)	
2008920	Cytochrome P450 Pain Management Panel, *CYP2D6*, *CYP2C9*, *CYP2C19* - Common Variants	Cytochrome P450 Genotype Panel (2013098)
0091589	Darvocet, Urine	
0051464	Dysautonomia, Familial (*IKBKAP*) 2 Mutations, Fetal	
0051469	Fanconi Anemia, Group C (*FANCC)* 2 Mutations, Fetal	
0030140	Fibrin/Fibrinogen Degradation Split Products	FDP Plasma (2006491)
0091509	Formic Acid, Urine	
0051439	Gaucher Disease (*GBA*) 8 Mutations, Fetal	
0091353	Glyburide Quantitative, Serum or Plasma	
0050567	Inflammatory Bowel Disease Differentiation Profile	Inflammatory Bowel Disease Differentiation Panel (2013270)
0091530	Inhalants Panel, Solvents, Serum or Plasma	
0051449	Mucolipidosis, Type IV (*MCOLN1*) 2 Mutations, Fetal	
2012535	Nerve Fiber Density Analysis, Intraepidermal	
0051459	Niemann-Pick, Type A (*SMPD1*) 4 Mutations, Fetal	
2008868	Nonalcoholic steatohepatitis (NASH) FibroSURE	
2006462	Scleroderma Antibodies Panel	Systemic Scleroderma Comprehensive Panel (2013325)
0051429	Tay-Sachs Disease (*HEXA*) 7 Mutations, Fetal	
2011025	*Tropheryma whipplei* Detection by PCR, Blood	Tropheryma whipplei PCR (2013290)
2008116	Urine Culture, Invasive Collection	Urine Culture (0060131)
2004175	Vascular Endothelial Growth Factor C (VEGF-C) by Immunohistochemistry	
2011127	Zolpidem and Metabolites Quantitative, Urine	Zolpidem, Urine, Quantitative (2012319)