ARUP LABORATORIES

Quarterly HOTLINE: Effective February 19, 2019

MEDICARE COVERAGE OF LABORATORY TESTING

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

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

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

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

Hotline Page #	Test Number	Summary of Changes by Test Name	Name Change	Methodology	Performed/Reported Schedule	Specimen Requirements	Reference Interval	Interpretive Data	Note	CPT Code	Component Change	Other Interface Change	New Test	Inactive
8	0060245	*Acanthamoeba* and *Naegleria* Culture							x					
8	3000878	*Acanthamoeba* and *Naegleria* Culture and Stain, CSF											x	
58	2002584	*Acanthamoeba* and *Naegleria* Culture and Stains, CSF												x
9	2014521	Acetaminophen Quantitative, Urine		x		x								
58	0065066	Adenovirus 40-41 Antigens by EIA												x
9	2012710	Aggressive B-Cell Lymphoma FISH Reflex, Tissue							x			x		
58	2014168	Alagille Syndrome (*JAG1*) Sequencing and Microarray												x

Hotline Page #	Test Number	Summary of Changes by Test Name	Name Change	Methodology	Performed/Reported Schedule	Specimen Requirements	Reference Interval	Interpretive Data	Note	CPT Code	Component Change	Other Interface Change	New Test	Inactive
9	2011431	ALK (D5F3) by Immunohistochemistry with Reflex to *ALK* Gene Rearrangements by FISH										x		
58	2006102	*ALK* Gene Rearrangements by FISH, Lung												x
10	3001302	*ALK* Gene Rearrangements by FISH, Lung											x	
58	0055422	Allergen, Drugs, Ampicillin												x
58	0091204	Allopurinol and Metabolite, Serum or Plasma												x
10	0080500	Alpha-1-Antitrypsin Phenotype (Includes Alpha-1-Antitrypsin)				x								
11	3001257	Alpha-Amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, CSF											x	
12	3001260	Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, Serum											x	
12	0090161	Amiodarone and Metabolite			x									
12	0060250	Amoeba Calcofluor Stain							x					
58	0091236	Amoxapine and Metabolite Quantitative, Serum or Plasma												x
13	0099007	Antimony, Blood			x	x	x	x	x			x		
13	2007945	Aripiprazole and Metabolite, Serum or Plasma			x	x					x			
14	3001283	Autoimmune CNS Demyelinating Disease Reflexive Panel											x	
14	2008665	*Babesia* Species by PCR				x								
58	2010107	BCL6 (3q27) Gene Rearrangement by FISH												x
15	3001311	*BCL6* (3q27) Gene Rearrangement by FISH											x	
15	3000967	Beryllium Quantitative, Serum or Plasma											x	
58	0091278	Beryllium, Serum or Plasma												x
16	0099478	Bismuth, Blood			x	x	x	x	x			x		
16	2011436	Bromide, Serum or Plasma				x					x			
58	2012002	Bruton Tyrosine Kinase (BTK) Protein Expression by Flow Cytometry												x
17	2010357	Bupropion, Serum or Plasma				x		x			x			
17	0050301	C1q Binding Assay					x	x				x		
18	3001129	Capillary Malformation-Arteriovenous Malformation 2 (*EPHB4*) Sequencing											x	
18	0091352	Carbidopa and Levodopa Quantitative, Serum or Plasma		x		x								

Hotline Page #	Test Number	Summary of Changes by Test Name	Name Change	Methodology	Performed/Reported Schedule	Specimen Requirements	Reference Interval	Interpretive Data	Note	CPT Code	Component Change	Other Interface Change	New Test	Inactive
19	2011450	Carisoprodol and Meprobamate, Serum or Plasma, Quantitative			x	x		x			x			
19	2012219	Carisoprodol and Meprobamate, Urine, Quantitative			x									
58	0091223	Clonidine, Urine												x
20	3001132	Capillary Malformation-Arteriovenous Malformation (*EPHB4 and RASA1*) Sequencing, and (*RASA1*) Deletion/Duplication											x	
58	2006220	Congenital Amegakaryocytic Thrombocytopenia (CAMT) Sequencing												x
20	0020414	Creatine Kinase Isoenzymes			x	x			x					
20	0090060	Cyanide			x									
58	0091303	Cyclobenzaprine Quantitative, Serum or Plasma												x
58	2003845	Cytokeratin 19 (CK 19) by Immunohistochemistry												x
58	2007223	*DDIT3 (CHOP)* (12q13) Gene Rearrangement by FISH												x
21	3001304	*DDIT3 (CHOP)* (12q13) Gene Rearrangement by FISH											x	
21	2011487	Desipramine, Serum or Plasma by Tandem Mass Spectrometry				x		x			x			
58	2006236	Diamond-Blackfan Anemia (*RPL11*) Sequencing												x
58	2006234	Diamond-Blackfan Anemia (*RPL5*) Sequencing												x
58	2006238	Diamond-Blackfan Anemia (*RPS19*) Sequencing												x
22	0090080	Digoxin				x								
22	0090499	Drug Screen (Nonforensic), Serum			x			x						
22	0090500	Drug Screen (Nonforensic), Urine, Qualitative			x			x						
58	2006244	Dyskeratosis Congenita, Autosomal (*TERC*) Sequencing												x
58	2006228	Dyskeratosis Congenita, X-linked (*DKC1*) Sequencing												x
58	2008605	*EGFR* Gene Amplification by FISH												x
23	3001310	EGFR Gene Amplification by FISH											x	
23	2002440	*EGFR* Mutation Detection by Pyrosequencing			x									
23	2007862	*Ehrlichia* and *Anaplasma* Species by PCR	x			x								
23	0051002	*Ehrlichia chaffeensis* Antibodies, IgG & IgM by IFA				x								
24	0051004	*Ehrlichia chaffeensis* Antibody, IgG by IFA				x								
24	0051003	*Ehrlichia chaffeensis* Antibody, IgM by IFA				x								
24	2007909	Ethyl Glucuronide and Ethyl Sulfate, Urine, Quantitative			x									

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58	2007225	*EWSR1* (22q12) Gene Rearrangement by FISH												x
24	3001305	*EWSR1* (22q12) Gene Rearrangement by FISH											x	
25	2013694	Explify Respiratory Pathogens by Next Generation Sequencing (Pricing Change Only)												
25	2011776	Fentanyl and Metabolite, Serum or Plasma, Quantitative				x					x			
58	2007883	Filaggrin (*FLG*) 2 Mutations												x
25	0090003	Flecainide			x			x						
26	3001161	*FLT3* ITD and TKD Mutation Detection											x	
58	0091517	Formic Acid, Serum or Plasma												x
58	2001497	*FOXO1 (FKHR)* (13q14) Gene Rearrangement by FISH												x
27	3001297	*FOXO1* (*FKHR*) (13q14) Gene Rearrangement by FISH											x	
27	0090057	Gabapentin			x			x						
27	2012227	Gabapentin, Urine			x									
28	3001267	Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, CSF											x	
29	3001270	Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, Serum											x	
29	3001284	Herpesvirus 6 Antibody, IgM by IFA, Serum											x	
58	2011420	Herpesvirus 6 Antibody, IgM Screen with Reflex to Titer by IFA												x
30	3001393	HLA-B*58:01 Genotyping, Allopurinol Hypersensitivity											x	
30	2010292	Hypoglycemia Panel, Sulfonylureas Qualitative, Serum or Plasma			x			x						
31	2014183	Ibuprofen Quantitative, Serum or Plasma		x		x								
58	2001536	*IGH-BCL2* Fusion, t(14;18) by FISH												x
31	3001298	*IGH-BCL2* Fusion, t(14;18) by FISH											x	
32	3001306	*IGH-CCND1* Fusion, t(11;14) by FISH											x	
58	2007226	*IGH-CCND1* Fusion, t(11;14) by FISH												x
58	2001538	*IGH-MYC* Fusion t(8;14) by FISH												x
33	3001299	*IGH-MYC* Fusion t(8;14) by FISH											x	
33	0050667	Immune Complex Panel					x	x				x		

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34	2012084	*JAK2* Gene, V617F Mutation, Qualitative with Reflex to *CALR* (Calreticulin) Exon 9 Mutation Analysis by PCR with Reflex to *MPL* Mutation Detection	x	x	x				x					
34	0040105	Kleihauer-Betke Stain for Fetal Hemoglobin				x								
34	0050021	LDL Subclasses				x								
58	2014683	LeukoStrat CDx *FLT3* Mutation Detection by PCR												x
34	2008894	Lung Cancer Panel										x		
34	2008895	Lung Cancer Panel with *KRAS*										x		
35	0099272	Manganese, Whole Blood			x	x		x	x			x		
35	2014704	Maternal T Cell Engraftment in SCID, Maternal Specimen				x								
58	2003016	MDM2 Gene Amplification by FISH												x
36	3001301	*MDM2* Gene Amplification by FISH											x	
36	3001158	Melatonin Quantitative, Serum or Plasma											x	
37	2011521	Meprobamate, Serum or Plasma, Quantitative			x	x		x			x			
58	2013082	MET Gene Amplification by FISH												x
37	3001313	*MET* Gene Amplification by FISH											x	
58	0091090	Methaqualone Quantitative, Serum or Plasma												x
38	2011539	Mexiletine, Serum or Plasma			x	x					x			
38	0051740	Microsatellite Instability (MSI), HNPCC/Lynch Syndrome, by PCR			x									
38	2005545	*MPL* Mutation Detection by Capillary Electrophoresis	x	x		x			x					
58	2002345	*MYC* (8q24) Gene Rearrangement by FISH												x
39	3001300	*MYC* (8q24) Gene Rearrangement by FISH											x	
40	3001307	*MYCN* (*N-MYC*) Gene Amplification by FISH											x	
58	2007227	*MYCN (N-MYC)* Gene Amplification by FISH												x
40	2010359	Mycophenolic Acid and Metabolites			x									
41	3001277	Myelin Oligodendrocyte Glycoprotein (MOG) Antibody, IgG by IFA with Reflex to Titer, Serum											x	
58	0099685	*Neisseria gonorrhoea* Antibodies, Total												x
41	3001291	*Neisseria gonorrhoeae* Antibody by CF, Serum											x	
42	0099452	Nickel, Serum			x	x		x	x					
42	0099289	Organic Acids, Plasma		x							x			
42	2002277	Ova and Parasite Exam, Body Fluid or Urine				x								

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42	0098834	Oxcarbazepine or Eslicarbazepine Metabolite (MHD)			x			x						
58	2008604	1p/19q Deletion by FISH												x
43	3001309	1p/19q Deletion by FISH											x	
43	2007949	Paliperidone, Serum or Plasma			x	x					x			
43	2013284	PD-L1 22C3 IHC with Tumor Proportion Score (TPS) Interpretation, pembrolizumab (KEYTRUDA)	x											
44	2011549	Pentobarbital, Serum or Plasma			x	x		x			x			
58	2003237	PhenoSense Entry												x
58	2003235	PhenoSense Integrase Inhibitor												x
58	0051309	Platelet Antigen 1 Genotyping (HPA-1)												x
45	3001170	Platelet Antigen 1 Genotyping (HPA-1)											x	
58	0051314	Platelet Antigen 15 Genotyping (HPA-15)												x
58	0051310	Platelet Antigen 2 Genotyping (HPA-2)												x
58	0051311	Platelet Antigen 3 Genotyping (HPA-3)												x
58	0051490	Platelet Antigen 4 Genotyping (HPA-4)												x
58	0051312	Platelet Antigen 5 Genotyping (HPA-5)												x
58	0051313	Platelet Antigen 6 Genotyping (HPA-6)												x
46	3000193	Platelet Antigen Genotyping Panel											x	
58	0051308	Platelet Antigen Genotyping Panel												x
47	2011609	Pregabalin, Serum or Plasma			x	x					x			
47	2012229	Pregabalin, Urine			x									
58	2007533	Progressive Myoclonic Epilepsy (PME) Panel, Sequence Analysis and Exon-Level Deletion/Duplication												x
47	3000134	Prostate Health Index										x		
58	2004091	Protein Gene Product (PGP) 9.5 by Immunohistochemistry												x
48	3001255	14-3-3 Protein Tau, Total, CSF											x	
58	2008095	14-3-3 Protein Tau/Theta, CSF												x
48	2003118	Quetiapine, Serum or Plasma			x									
58	2012654	*RET* Gene Rearrangements by FISH												x
49	3001312	*RET* Gene Rearrangements by FISH											x	
49	2007951	Risperidone and Metabolite, Serum or Plasma			x									
58	2008418	*ROS1* by FISH												x
50	3001308	*ROS1* by FISH											x	

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50	2008414	*ROS1* with Interpretation by Immunohistochemistry with Reflex to FISH if Equivocal or Positive										x		
58	0065067	Rotavirus and Adenovirus 40-41 Antigens												x
50	0098745	Sertraline			x			x						
58	2007222	*SS18 (SYT)* (18q11) Gene Rearrangement by FISH												x
51	3001303	*SS18* (*SYT*) (18q11) Gene Rearrangement by FISH											x	
51	2002270	ST2, Soluble				x								
58	0091574	Strychnine, Serum or Plasma												x
51	0020044	Sulfonamides (Sulfas)			x			x						
51	2003128	Tapentadol and Metabolite, Urine, Quantitative			x									
58	0091386	Temazepam and Metabolite Quantitative, Serum or Plasma												x
52	0099610	Thallium, Whole Blood			x	x	x	x	x					
52	0090064	Thiocyanate, 24-Hour Urine			x									
52	0090063	Thiocyanate, Random Urine			x									
52	2011575	Thiocyanate, Serum or Plasma			x	x					x			
53	0056200	Thrombotic Risk, DNA Panel				x		x						
53	3001184	Tiagabine Quantitative, Serum/Plasma											x	
58	0091541	Tiagabine, Serum or Plasma												x
53	2008670	Tick-Borne Disease Panel by PCR, Blood				x	x							
58	0091555	Tin, Total, Whole Blood												x
54	2007515	Tricyclic Antidepressants, Quantitative, Urine			x			x						
58	0091399	Trihexyphenidyl Quantitative, Serum or Plasma												x
58	0091396	Trimethoprim, Serum or Plasma												x
58	2004747	Trofile DNA Co-Receptor Tropism Assay												x
54	3001149	Uroplakin II by Immunohistochemistry											x	
54	2005415	Urticaria-Inducing Activity with Thyroid Antibodies and Stimulating Hormone				x								
55	2007957	Venlafaxine and Metabolite, Serum or Plasma			x	x					x			
55	0020056	Viscosity, Serum				x	x	x						
58	0020054	Viscosity, Whole Blood												x
55	0080111	Vitamin B_6 (Pyridoxal 5-Phosphate)		x		x								
56	3001387	Voltage-Gated Potassium Channel (VGKC) Antibody, CSF											x	
56	2004890	Voltage-Gated Potassium Channel (VGKC) Antibody, Serum	x			x								

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57	2009373	Zinc Quantitative, Whole Blood			x	x	x	x				x		

0060245 ***Acanthamoeba* and *Naegleria* Culture** **ACANT**

Note: For CSF refer to *Acanthamoeba* and *Naegleria* Culture and Stain, CSF (ARUP test code 3000878). For *Entamoeba histolytica* detection refer to *Entamoeba histolytica* Antigen, EIA (ARUP test code 0058001).

New Test **3000878** ***Acanthamoeba* and *Naegleria* Culture and Stain, CSF** **ACANT CSF**
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Methodology: Qualitative Culture/Microscopy/Giemsa Stain
Performed: Sun-Sat
Reported: 2-10 days

Specimen Required: Collect: CSF.
Specimen Preparation: Transfer 1 mL CSF to a sterile ARUP Standard Transport Tube (ARUP supply # 43115) available online through eSupply using ARUP Connect™ or contact Client Services at (800) 522-2787. (Min: 0.5 mL)
Storage/Transport Temperature: Room temperature.
Unacceptable Conditions: Specimens in media or preservatives.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: Unacceptable; Frozen: Unacceptable

Reference Interval: Negative

Interpretive Data: The stain will detect free-living amoeba such as *Naegleria fowleri, and Balamuthia mandrillaris*.

The culture will detect free-living amoeba such as *Acanthamoeba* species and *Naegleria fowleri*, but will NOT detect *Balamuthia mandrillaris.*

Note: For all other specimen types refer to *Acanthamoeba* and *Naegleria* Culture (ARUP test code 0060245) and Amoeba Calcofluor Stain (ARUP test code 0060250). For *Entamoeba histolytica* detection refer to *Entamoeba histolytica* Antigen, EIA (ARUP test code 0058001).

CPT Code(s): 87081; 87207

New York DOH Approved.

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

2014521 Acetaminophen Quantitative, Urine — ACETA U

Methodology: Quantitative High Performance Liquid Chromatography-Tandem Mass Spectrometry

Specimen Required: Collect: Random urine.
Specimen Preparation: Transfer 1 mL urine to an ARUP Standard Transport Tube. (Min: 0.3 mL)
Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen.
Stability (collection to initiation of testing): Ambient: 1 month; Refrigerated: 1 month; Frozen: 1 month

2012710 Aggressive B-Cell Lymphoma FISH Reflex, Tissue — DLBCL FISH

Note: If *MYC* (8q24) Gene Rearrangement by FISH is positive then *IGH-BCL2* Fusion, t(14;18) by FISH will be added. If result is negative then *BCL6* (3q27) Gene Rearrangement by FISH will be added. Additional charges apply.

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Remove reflex to 2001536, *IGH-BCL2* t(14;18) by FISH
Remove reflex to 2010107, *BCL6* (3q27) Gene Rearrangement by FISH
Add reflex to 3001298, *IGH-BCL2* t(14;18), FISH
Add reflex to 3001311, *BCL6* (3q27) Gene Rearrangement, FISH

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

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Remove reflex to 2006102, *ALK* by FISH, Lung
Add reflex to 3001302, *ALK* FISH, Lung

New Test **3001302** ***ALK* Gene Rearrangements by FISH, Lung** **ALK_FISH**
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Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed tumor tissue. Protect paraffin block and/or slides from excessive heat. Transport tissue block or 4 unstained, consecutively cut, 4-micron thick sections, mounted on positively charged glass 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: 4 slides)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated.
Remarks: Include surgical pathology report with reason for referral. The laboratory will not reject specimens that arrive without a pathology report but will hold the specimen until this information is received.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88366

New York DOH Approved.

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

0080500 **Alpha-1-Antitrypsin Phenotype (Includes Alpha-1-Antitrypsin)** **A1A PHENO**

Specimen Required: Collect: Serum Separator Tube (SST) or Plain Red.
Specimen Preparation: Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.3 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Grossly hemolyzed specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 1 week; Refrigerated: 3 months; Frozen: 3 months (avoid repeated freeze/thaw cycles)

New Test **3001257** **Alpha-Amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, CSF** **AMPA CSF**

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

Specimen Required: Collect: CSF.
Specimen Preparation: Transfer 0.5 mL CSF to an ARUP Standard Transport Tube. (Min: 0.15 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Hemolyzed, contaminated, or severely lipemic specimens.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval: Less than 1:1

Interpretive Data: Alpha-amino-3-hydroxy-5-methyl-4-isoxazoleproprionic acid (AMPA) receptor antibody is found in a subset of patients with autoimmune limbic encephalitis and may occur with or without associated tumor. Decreasing antibody levels may be associated with therapeutic response; therefore, clinical correlation must be strongly considered. A negative test result does not rule out a diagnosis of autoimmune encephalitis.

This indirect fluorescent antibody assay utilizes AMPA transfected cell lines for detection and semi-quantification of AMPA IgG antibody.

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

Note: If Alpha-Amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, CSF IgG is positive, then an Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody Titer, IgG, CSF is reported. Additional charges apply.

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

New York DOH approval pending. Call for status update.

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

New Test **3001260** **Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, Serum** **AMPA SER**

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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: Hemolyzed, contaminated, or severely lipemic specimens.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval: Less than 1:10

Interpretive Data: Alpha-amino-3-hydroxy-5-methyl-4-isoxazoleproprionic acid (AMPA) receptor antibody is found in a subset of patients with autoimmune limbic encephalitis and may occur with or without associated tumor. Decreasing antibody levels may be associated with therapeutic response; therefore, clinical correlation must be strongly considered. A negative test result does not rule out a diagnosis of autoimmune encephalitis.

This indirect fluorescent antibody assay utilizes AMPA transfected cell lines for the detection and semi-quantification of AMPA IgG antibody.

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

Note: If Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody, IgG by IFA with Reflex to Titer, Serum is positive, then an Alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic Acid (AMPA) Receptor Antibody Titer, IgG, Serum is reported. Additional charges apply.

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

New York DOH approval pending. Call for status update.

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

0090161 **Amiodarone and Metabolite** **AMIOD**

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

0060250 **Amoeba Calcofluor Stain** **ACANTSTAIN**

Note: For CSF specimens refer to *Acanthamoeba and Naegleria* Culture and Stain, CSF (ARUP Test code 3000878). For *Entamoeba histolytica* Antigen, EIA (ARUP test code 0058001).

0099007 Antimony, Blood — ANT B

Performed: Sun-Sat
Reported: 1-3 days

Specimen Required: Patient Prep: Diet, medication, and nutritional supplements may introduce interfering substances. Patient should be encouraged to discontinue nutritional supplements, vitamins, minerals, and non-essential over-the-counter medications (upon the advice of their physician).
Collect: Royal Blue (K_2EDTA or Na_2EDTA).
Specimen Preparation: Transport 7 mL whole blood in the original collection tube. (Min: 0.5 mL)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated.
Unacceptable Conditions: Specimens collected in tubes other than Royal Blue (EDTA). Specimens transported in containers other than a Royal Blue (EDTA) tube or Trace Element-Free Transport Tube. Heparin anticoagulant. Clotted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: Effective February 19, 2019
Less than or equal to 6.0 µg/L

Interpretive Data: Elevated results may be due to skin or collection-related contamination, including the use of a noncertified metal-free collection/transport tube. If contamination concerns exist due to elevated levels of blood antimony, confirmation with a second specimen collected in a certified metal-free tube is recommended.

Blood antimony levels predominantly reflect recent exposure and are most useful in the diagnosis of acute poisoning. Blood concentrations in unexposed individuals rarely exceed 10 µg/L. The form of antimony greatly influences distribution and elimination. Trivalent antimony readily enters red blood cells, has an extended half-life on the order of weeks to months, and is eliminated predominantly through the bile. Pentavalent antimony resides in the plasma, has a relatively short half-life on the order of hours to days, and is eliminated predominantly through the kidneys. Reported symptoms after toxic antimony exposure vary based upon route of exposure, duration and antimony source and may include abdominal pain, dyspnea, nausea, vomiting, dermatitis and eye irritation. Clinical presentation is similar to that of inorganic arsenic exposure.

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

HOTLINE NOTE: Remove information found in the Note field. There is also a numeric map change associated with this test.
Change the numeric map for component 0099007, Antimony Blood from XXX to XX.X.

2007945 Aripiprazole and Metabolite, Serum or Plasma — ARIPIPRAZO

Performed: Wed, Sat
Reported: 1-5 days

Specimen Required: Patient Prep: Pre-dose (trough) draw - At steady state concentration.
Collect: Plain Red. Also acceptable: Lavender (EDTA) or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Gel separator tubes, light blue (citrate), or yellow (SPS or ACD solution).
Stability (collection to initiation of testing): Ambient: 2 weeks; Refrigerated: 2 weeks; Frozen: 2 weeks

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field. There is also a component change associated with this test.
Remove component 2011432, Aripiprazole Dose
Remove component 2011433, Aripiprazole Dose Frequency
Remove component 2011434, Aripiprazole Route
Remove component 2011435, Aripiprazole Type of Draw

New Test **3001283** **Autoimmune CNS Demyelinating Disease Reflexive Panel** **CNS PAN**
Click for Pricing

Additional Technical Information

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

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: Hemolyzed, contaminated, or severely lipemic specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month (avoid repeated freeze/thaw cycles)

Reference Interval:

Test Number	Components	Reference Interval
2013320	Aquaporin-4 Receptor Antibody, IgG by IFA with Reflex to Titer, Serum	Less than 1:10
3001277	Myelin Oligodendrocyte Glycoprotein (MOG) Antibody, IgG by IFA with Reflex to Titer, Serum	Less than 1:10

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

Note: If Aquaporin-4 Receptor Antibody, IgG by IFA with Reflex to Titer, Serum is positive, then an Aquaporin-4 Receptor Antibody, IgG by IFA, Serum Titer will be added. If Myelin Oligodendrocyte Glycoprotein (MOG) Antibody, IgG by IFA with Reflex to Titer, Serum is positive, then a Myelin Oligodendrocyte Glycoprotein (MOG) Antibody Titer, IgG will be added. Additional charges apply.

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

New York DOH approval pending. Call for status update.

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

2008665 ***Babesia* Species by PCR** **BABPCR**

Specimen Required: Collect: Lavender (EDTA) or Pink (K_2EDTA).
Specimen Preparation: Transport 1 mL whole blood. (Min: 0.6 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Serum, plasma, and heparinized specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: 1 month

New Test **3001311** ***BCL6* (3q27) Gene Rearrangement by FISH** **BCL6_FISH**
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Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed specimen. Protect paraffin block and/or slides from excessive heat. Transport tissue block or 5 unstained (3-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 or refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

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

CPT Code(s): 88366

New York DOH Approved.

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

New Test **3000967** **Beryllium Quantitative, Serum or Plasma** **BERYLLI SP**
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Methodology: Quantitative Inductively Coupled Plasma-Mass Spectrometry
Performed: Varies
Reported: 3-8 days

Specimen Required: Collect: Royal Blue (no additive) or Royal Blue (EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an Acid Washed Transport Vial (ARUP supply #54350) available online through eSupply using ARUP Connect or contact ARUP Client Services at (800) 522-2787. (Min: 0.4 mL)
Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen.
Unacceptable Conditions: Separator tubes.
Stability (collection to initiation of testing): Ambient: 2 weeks; Refrigerated: 2 weeks; Frozen: 2 weeks

Reference Interval: By report

CPT Code(s): 83018

New York DOH Approved.

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

0099478 Bismuth, Blood — BS B

Performed: Sun-Sat
Reported: 1-3 days

Specimen Required: Patient Prep: Diet, medication, and nutritional supplements may introduce interfering substances. Patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and non-essential over-the-counter medications (upon the advice of their physician).
Collect: Royal Blue (K_2EDTA or Na_2EDTA).
Specimen Preparation: Transport 7 mL whole blood in the original collection tube. (Min: 0.5 mL)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated.
Unacceptable Conditions: Specimens collected in tubes other than Royal Blue (EDTA). Specimens transported in containers other than a Royal Blue (EDTA) tube or Trace Element-Free Transport Tube. Heparin anticoagulant. Clotted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: Effective February 19, 2019
Less than or equal to 5.0 µg/L

Interpretive Data: Elevated results may be due to skin or collection-related contamination, including the use of a noncertified metal-free collection/transport tube. If contamination concerns exist due to elevated levels of blood bismuth, confirmation with a second specimen collected in a certified metal-free tube is recommended.

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

HOTLINE NOTE: Remove information found in the Note field. There is also a numeric map change associated with this test.
Change the numeric map for component 0099478, Bismuth, Whole Blood from XXX to XX.X.

2011436 Bromide, Serum or Plasma — BROMIDE

Specimen Required: Collect: Plain Red, Lavender (K_2EDTA), Lavender (K_3EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Whole blood. Gel Separator Tubes, Light Blue (Sodium Citrate), or Yellow (SPS or ACD Solution).
Stability (collection to initiation of testing): Ambient: 1 week; Refrigerated: 1 weeks; Frozen: Indefinitely

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field. There is also a component change associated with this test.
Remove component 2011441, Bromide Dose
Remove component 2011438, Bromide Route
Remove component 2011437, Bromide Dose Frequency
Remove component 2011439, Bromide Type of Draw

2010357 Bupropion, Serum or Plasma BUPRO

Specimen Required: Patient Prep: Timing of specimen collection: Pre-dose (trough) draw - At steady state concentration.
Collect: Plain red. Also acceptable: Lavender (K_2 or K_3EDTA) or pink (K_2EDTA).
Specimen Preparation: Separate serum or plasma from cells ASAP or within 2 hours of collection. Transfer 2 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 1.5 mL)
Storage/Transport Temperature: CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered
Unacceptable Conditions: Whole blood. Gel separator tubes, light blue (citrate), or yellow (SPS or ACD solution).
Stability (collection to initiation of testing): After separation from cells: Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 1 month

Interpretive Data: The therapeutic range is based on serum pre-dose (trough) draw at steady-state concentration. Toxic concentrations may cause mental confusion, cardiac abnormalities and seizures. Concentrations below 25 ng/mL may have no effect. This method does not quantify the major metabolite, hydroxybupropion.

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

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field. There is also a component change associated with this test.
Remove component 2011442, Bupropion Dose
Remove component 2011444, Bupropion Route
Remove component 2011443, Bupropion Dose Frequency
Remove component 2011445, Bupropion Type of Draw

0050301 C1q Binding Assay C1Q

Reference Interval: Effective February 19, 2019
Less than or equal to 3.9 µg Eq/mL

Interpretive Data: Less than or equal to 3.9 µg Eq/mL is considered negative for circulating complement binding immune complexes. Circulating immune complexes may be found without any evident pathology and positive results do not necessarily implicate the immune complex in a disease process.

HOTLINE NOTE: There is a unit of measure change associated with this test.
Change the unit of measure for component 0050301, C1q Binding Assay from µgE/mL to µg Eq/mL.

New Test **3001129** **Capillary Malformation-Arteriovenous Malformation 2 (*EPHB4*) Sequencing** **EPHB4 FGS**

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Additional Technical Information

Patient History Form

Methodology: Polymerase Chain Reaction/Sequencing
Performed: Sun-Sat
Reported: Within 2 weeks

Specimen Required: Collect: Lavender (EDTA), Pink (K_2EDTA), or Yellow (ACD).
Specimen Preparation: Transport 3 mL whole blood. (Min: 1 mL)
Storage/Transport Temperature: Refrigerated.
Stability (collection to initiation of testing): Ambient: 1 week; Refrigerated: 1 month; Frozen: 6 months

Interpretive Data:
Background Information for *Capillary Malformation-Arteriovenous Malformation 2* (*EPHB4*) Sequencing:
Characteristics of Capillary Malformation-Arteriovenous Malformation (CM-AVM): Multifocal, randomly distributed, capillary malformations (CM) that may be associated with a fast-flow lesion (arteriovenous malformations [AVM] or arteriovenous fistula). Fast-flow lesions in the skin, muscle, bone, or central nervous system can cause life-threatening complications such as bleeding, congestive heart failure, or neurological consequences. Capillary malformation-arteriovenous malformation syndrome type 1 (CM-AVM1) is caused by *RASA1* pathogenic variants; capillary malformation-arteriovenous malformation syndrome type 2 (CM-AVM2) is caused by *EPHB4* pathogenic variants.
Incidence: Estimated at 1 in 20,000 for CM-AVM1 and 1 in 12,000 for CM-AVM2.
Inheritance: Autosomal dominant.
Penetrance: 90-95 percent.
Cause: Pathogenic *EPHB4* or *RASA1* gene variants.
Gene Tested: *EPHB4* only.
Clinical Sensitivity: Not well established, at least 15 percent.
Methodology: Bidirectional sequencing of all coding regions and intron-exon boundaries of the *EPHB4* gene.
Analytical Specificity and Sensitivity: 99 percent.
Limitations: Diagnostic errors can occur due to rare sequence variations. Regulatory region variants, deep intronic variants, and large deletions/duplications will not be detected. Variants in genes other than *EPHB4* are not detected.

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

CPT Code(s): 81479

New York DOH approval pending. Call for status update.

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

0091352 **Carbidopa and Levodopa Quantitative, Serum or Plasma** **SINEMET SP**

Methodology: Quantitative High Performance Liquid Chromatography-Tandem Mass Spectrometry

Specimen Required: Collect: Plain Red, Lavender (EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube and flash freeze immediately with dry ice. (Min: 0.3 mL)
Storage/Transport Temperature: **CRITICAL FROZEN.** Separate specimens must be submitted when multiple tests are ordered.
Unacceptable Conditions: Separator tubes. Thawed specimens.
Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 6 days

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

Performed: Sun, Tue, Thu
Reported: 1-4 days

Specimen Required: Collect: Serum Pre-dose (Trough) Draw - At a Steady State Concentration or Plasma Pre-dose (Trough) Draw - At a Steady State Concentration in Plain Red, Lavender (K_2EDTA), Lavender (K_3EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Whole blood. Gel Separator Tubes, Light Blue (Sodium Citrate), or Yellow (SPS or ACD Solution).
Stability (collection to initiation of testing): Ambient: 1 week; Refrigerated: 1 month; Frozen: 3 months

Interpretive Data: The therapeutic range is based on serum pre-dose (trough) draw at steady-state concentration. Adverse effects may include drowsiness, dizziness and headache.

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

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field. There is also a component change associated with this test.
Remove component 2011451, Carisoprodol Dose
Remove component 2011453, Carisoprodol Route
Remove component 2011452, Carisoprodol Dose Frequency
Remove component 2011454, Carisoprodol Type of Draw

2012219 Carisoprodol and Meprobamate, Urine, Quantitative CARIS U

Performed: Sun, Tue, Thu
Reported: 1-6 days

New Test **3001132** **Capillary Malformation-Arteriovenous Malformation (*EPHB4 and RASA1*) Sequencing, and (*RASA1*) Deletion/Duplication** **CMAVM PAN**

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Methodology: Polymerase Chain Reaction/Sequencing/Multiplex Ligation-dependent Probe Amplification
Performed: Sun- Sat
Reported: Within 1 month

Specimen Required: Collect: Lavender (EDTA), Pink (K_2EDTA), or Yellow (ACD).
Specimen Preparation: Transport 3 mL whole blood. (Min: 1 mL)
Storage/Transport Temperature: Refrigerated.
Stability (collection to initiation of testing): Ambient: 1 week; Refrigerated: 1 month; Frozen: 6 months

Interpretive Data:
Background Information for Capillary Malformation-Arteriovenous Malformation (*EPHB4* and *RASA1*) Sequencing and (*RASA1*) Deletion/Duplication:
Characteristics: Multifocal, randomly distributed, capillary malformations (CM) of the skin that may be associated with a fast-flow lesion (arteriovenous malformations [AVM] or arteriovenous fistula). Fast-flow lesions in the skin, muscle, bone, or central nervous system can cause life-threatening complications such as bleeding, congestive heart failure, or neurological consequences. Capillary malformation-arteriovenous malformation syndrome type 1 (CM-AVM1) is caused by *RASA1* pathogenic variants; capillary malformation-arteriovenous malformation syndrome type 2 (CM-AVM2) is caused by *EBHB4* pathogenic variants.
Incidence: Estimated at 1 in 20,000 for CM-AVM1 and 1 in 12,000 for CM-AVM2.
Inheritance: Autosomal dominant; approximately one-third of *RASA1* pathogenic variants are de novo.
Penetrance: 90-95 percent.
Cause: Pathogenic *RASA1* and *EPHB4* variants.
Clinical Sensitivity: Not well-established, but at least 65 percent.
Methodology: Bidirectional sequencing of all coding regions and intron-exon boundaries of the *EPHB4 and RASA1* genes; Multiplex Ligation-dependent Probe Amplification (MLPA) to detect large *RASA1* deletions/duplications.
Analytical Specificity and Sensitivity: 99 percent.
Limitations: Diagnostic errors can occur due to rare sequence variations. Regulatory region variants and deep intronic variants will not be detected. Large deletions/duplications will not be detected in *EPHB4*. The breakpoints of large *RASA1* deletions/duplications will not be determined.

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

CPT Code(s): 81479

New York DOH approval pending. Call for status update.

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

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

Performed: Sun-Sat
Reported: 2-3 days

Specimen Required: Collect: Serum Separator Tube (SST) or Plain Red.
Specimen Preparation: Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Frozen.
Unacceptable Conditions: Specimens preserved in citrate, EDTA, fluoride, heparin, or iodoacetate. Grossly hemolyzed specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: Unacceptable; Refrigerated: 1 week; Frozen: 1 month (avoid repeated freeze/thaw cycles)

Note: This test will detect CK macroenzymes.

0090060 **Cyanide** **CYAN**

Performed: Sun, Tue, Fri
Reported: 1-5 days

New Test **3001304** ***DDIT3 (CHOP)* (12q13) Gene Rearrangement by FISH** **DDIT3 FISH**
Click for Pricing

Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed tissue. Protect paraffin block from excessive heat. Transport tissue 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 required). (Min 2 slides).
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88366

New York DOH Approved.

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

2011487 **Desipramine, Serum or Plasma by Tandem Mass Spectrometry** **DESIPRAMIN**

Specimen Required: Collect: Serum Pre-dose (Trough) Draw - At a Steady State Concentration or Plasma Pre-dose (Trough) Draw - At a Steady State Concentration in Plain Red, Lavender (K_2EDTA), Lavender (K_3EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Whole blood. Gel Separator Tubes, Light Blue (Sodium Citrate), or Yellow (SPS or ACD Solution).
Stability (collection to initiation of testing): Ambient: 5 days; Refrigerated: 2 weeks; Frozen: 6 months

Interpretive Data: The therapeutic range is based on serum pre-dose (trough) draw at steady-state concentration. Toxic concentrations may cause anticholinergic effects, drowsiness and cardiac abnormalities.

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

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field.There is also a component change associated with this test.
Remove component 2011492, Desipramine Dose
Remove component 2011489, Desipramine Route
Remove component 2011488, Desipramine Dose Frequency
Remove component 2011490, Desipramine Type of Draw

0090080 Digoxin — DIG

Specimen Required: Patient Prep: Collect specimen 8-12 hours (no earlier than 6 hours) after administration of oral dose.
Collect: Plain red. Also acceptable: Green (sodium or lithium heparin).
Specimen Preparation: Remove serum or plasma from cells within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Frozen. Also acceptable: Refrigerated.
Remarks: Refrigerated.
Unacceptable Conditions: Specimens collected in sodium fluoride, potassium oxalate or separator tubes. Hemolyzed specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 8 hours; Refrigerated: 48 hours; Frozen: 1 week

0090499 Drug Screen (Nonforensic), Serum — BLD SCREEN

Performed: Sun, Tue-Sat
Reported: 1-6 days

Interpretive Data: The following drugs or drug classes may be detected: acetaminophen, barbiturates, benzodiazepines, carbamazepine, carisoprodol, disopyramide, meprobamate, phenytoin, primidone, salicylate, theophylline, tricyclic and other antidepressants.

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

0090500 Drug Screen (Nonforensic), Urine, Qualitative — URN SCREEN

Performed: Sun, Tue-Sat
Reported: 1-6 days

Interpretive Data: The following drugs or drug classes may be detected:

Acetaminophen, barbiturates, benzodiazepines, carbamazepine, carisoprodol, chlorpheniramine, cocaine and metabolites, diphenhydramine, ethchlorvynol, ibuprofen, lidocaine, meprobamate, narcotics and synthetics, phencyclidine, phenothiazines, phenytoin, primidone and metabolites, pyrilamine, salicylate, sympathomimetic amines, theophylline, tricyclic and other antidepressants.

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

New Test **3001310** **EGFR Gene Amplification by FISH** **EGFR_FISH**
Click for Pricing

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed tissue. Protect paraffin block from excessive heat. Transport tissue 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)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88377

New York DOH Approved.

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

2002440 ***EGFR* Mutation Detection by Pyrosequencing** **EGFR PCR**

Performed: **DNA isolation:** Sun-Sat
Assay: Tue, Thu, Sat
Reported: 6-14 days

2007862 ***Ehrlichia* and *Anaplasma* Species by PCR** **EHR ANAPCR**

Specimen Required: Collect: Lavender (EDTA) or Pink (K_2EDTA).
Specimen Preparation: Transport 1 mL whole blood. (Min: 0.6 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Serum, plasma, and heparinized specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: 1 week

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0051002 ***Ehrlichia chaffeensis* Antibodies, IgG & IgM by IFA** **E CHAF ABS**

Specimen Required: Collect: Serum separator tube.
Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.1 mL) Parallel testing is preferred and convalescent specimens **must** be received within 30 days from receipt of the acute specimens. **Mark specimens plainly as acute or convalescent.**
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Contaminated, hemolyzed, or severely lipemic specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

0051004 ***Ehrlichia chaffeensis* Antibody, IgG by IFA** **E CH G**

Specimen Required: Collect: Serum separator tube.
Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.1 mL) Parallel testing is preferred and convalescent specimens **must** be received within 30 days from receipt of the acute specimens. **Mark specimens plainly as acute or convalescent.**
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Contaminated, hemolyzed, or severely lipemic specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

0051003 ***Ehrlichia chaffeensis* Antibody, IgM by IFA** **E CH M**

Specimen Required: Collect: Serum separator tube.
Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.1 mL) Parallel testing is preferred and convalescent specimens **must** be received within 30 days from receipt of the acute specimens. **Mark specimens plainly as acute or convalescent.**
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Contaminated, hemolyzed, or severely lipemic specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year (avoid repeated freeze/thaw cycles)

2007909 **Ethyl Glucuronide and Ethyl Sulfate, Urine, Quantitative** **CDCO ETG/S**

Performed: Sun, Tue-Wed, Fri-Sat
Reported: 1-6 days

New Test **3001305** ***EWSR1* (22q12) Gene Rearrangement by FISH** **EWSR1_FISH**
Click for Pricing

Additional Technical Information

Test not New York DOH approved at any laboratory. An approved NPL form must accompany specimen.

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed tissue. Protect paraffin block from excessive heat. Transport tissue 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)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

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

CPT Code(s): 88366

New York DOH approval pending. Call for status update.

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

2013694 Explify Respiratory Pathogens by Next Generation Sequencing RESP NGS

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

2011776 Fentanyl and Metabolite, Serum or Plasma, Quantitative CDCO FNSP

Specimen Required: Collect: Plain Red, Lavender (K_2EDTA), Lavender (K_3EDTA), Green (Sodium Heparin), Gray (Potassium Oxalate/Sodium Fluoride), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 4 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Whole blood. Serum separator tubes, Light Blue (Sodium Citrate), or Plasma separator tubes. Specimens exposed to repeated freeze/thaw cycles.
Stability (collection to initiation of testing): Ambient: 1 week; Refrigerated: 2 weeks; Frozen: 3 years

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field. There is also a component change associated with this test.
Remove component 2011778, Fentanyl Dose
Remove component 2011780, Fentanyl Route
Remove component 2011779, Fentanyl Dose Frequency
Remove component 2011781, Fentanyl Type of Draw

0090003 Flecainide FLEC

Performed: Mon, Thu, Sat
Reported: 1-5 days

Interpretive Data: Toxic concentrations may cause cardiac abnormalities, hypotension and seizure.

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

New Test Available Now
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3001161 ***FLT3* ITD and TKD Mutation Detection** **FLT3-PCR**

Additional Technical Information

Methodology: Polymerase Chain Reaction
Performed: **DNA isolation:** Sun-Sat
Assay: Mon, Wed, Fri
Reported: 2-7 days

Specimen Required: Collect: Lavender (EDTA) or bone marrow (EDTA).
Specimen Preparation: **Whole Blood:** Transport 5 mL whole blood. (Min: 1 mL)
Bone Marrow: Transport 3 mL bone marrow. (Min: 1 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: FFPE tumor tissue. Fresh Tissue. Clotted or grossly hemolyzed specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 5 days; Frozen: Unacceptable

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

CPT Code(s): 81245, 81246

New York DOH approval pending. Call for status update.

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

New Test **3001297** ***FOXO1* (*FKHR*) (13q14) Gene Rearrangement by FISH** **FKHR_FISH**
Click for Pricing

Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed tissue. Protect paraffin block from excessive heat. Transport tissue 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)
Storage/Transport Temperature: Room temperature or refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88366

New York DOH Approved.

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

0090057 **Gabapentin** **GABAP**

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

Interpretive Data: Pharmacokinetics of gabapentin vary widely among patients, particularly those with compromised renal function. Adverse effects may include somnolence, dizziness, ataxia, and fatigue.

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

2012227 **Gabapentin, Urine** **GABAP U**

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

New Test **3001267** **Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, CSF** **GABA-B CSF**

Click for Pricing

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

Specimen Required: Collect: CSF.
Specimen Preparation: Transfer 0.5 mL CSF to an ARUP Standard Transport Tube. (Min: 0.15 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Hemolyzed, contaminated, or severely lipemic specimens.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval: Less than 1:1

Interpretive Data: Gamma-amino butyric acid receptor, type B (GABA-BR) antibody is found in a subset of patients with autoimmune limbic encephalitis and may occur with or without associated tumor. Decreasing antibody levels may be associated with therapeutic response; therefore, clinical correlation must be strongly considered. A negative test result does not rule out a diagnosis of autoimmune encephalitis.

This indirect fluorescent antibody assay utilizes GABA-BR transfected cell lines for the detection and semi-quantification of GABA-BR IgG antibody.

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

Note: If Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, CSF is positive, then a Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody Titer, IgG, CSF is performed. Additional charges apply.

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

New York DOH approval pending. Call for status update.

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

New Test **3001270** **Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, Serum** **GABA-B SER**

Click for Pricing

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: Hemolyzed, contaminated, or severely lipemic specimens.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval: Less than 1:10

Interpretive Data: Gamma-amino butyric acid receptor, type B (GABA-BR) antibody is found in a subset of patients with autoimmune limbic encephalitis and may occur with or without associated tumor. Decreasing antibody levels may be associated with therapeutic response; therefore, clinical correlation must be strongly considered. A negative test result does not rule out a diagnosis of autoimmune encephalitis.

This indirect fluorescent antibody assay utilizes GABA-BR transfected cell lines for the detection and semi-quantification of GABA-BR IgG antibody.

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

Note: If Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody, IgG by IFA with Reflex to Titer, Serum is positive, then a Gamma Aminobutyric Acid Receptor, Type B (GABA-BR) Antibody Titer, IgG, Serum is performed. Additional charges apply.

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

New York DOH approval pending. Call for status update.

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

New Test **3001284** **Herpesvirus 6 Antibody, IgM by IFA, Serum** **HHV6 AB M**

Click for Pricing

Methodology: Semi-Quantitative Indirect Fluorescent Antibody
Performed: Varies
Reported: 3-7 days

Specimen Required: Collect: Plain Red or Serum Separator Tube (SST).
Specimen Preparation: Transfer 0.5 mL serum to an ARUP Standard Transport Tube. (Min: 0.1 mL)
Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen.
Stability (collection to initiation of testing): Ambient: 1 week; Refrigerated: 2 weeks; Frozen: 1 month

CPT Code(s): 86790

New York DOH Approved.

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

New Test **3001393** **HLA-B*58:01 Genotyping, Allopurinol Hypersensitivity** **HLA B5801**
Click for Pricing

Methodology: Polymerase Chain Reaction/Sequence Specific Oligonucleotide Probe Hybridization
Performed: Mon-Fri
Reported: 3-7 days

Specimen Required: Collect: Lavender (EDTA), Pink (K_2EDTA), or Yellow (ACD Solution A or B).
Specimen Preparation: Transport 5 mL whole blood. (Min: 3 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Specimens collected in green (sodium or lithium heparin).
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable

Reference Interval: By report

Interpretive Data:
Characteristics: Allopurinol is the most commonly used drug for the treatment of hyperuricemia and gout. It inhibits xanthine oxidase, a key enzyme involved in uric acid formation. However, allopurinol is one of the most common causes of life-threatening severe cutaneous adverse reactions (SCAR), which include drug hypersensitivity syndrome, Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN). The presence of HLA-B*58:01 allele shows strong association with allopurinol-induced SCAR, including TEN and SJS. Although allopurinol-induced SCAR is rare with an estimated risk of 0.1-0.4 percent in allopurinol users, the severity can be high, with a mortality rate of up to 25 percent. Symptoms include rash, combined with eosinophilia, leukocytosis, fever, hepatitis and progressive kidney failure. Due to the severity of adverse reactions, it is recommended to test for the HLA-B*58:01 allele prior to initiation of the drug.
Incidence: HLA-B*58:01 allele frequency varies by ethnicity. In the US population, the highest incidence at 5.3 percent is found in Asians, 3.8 percent in African Americans, 1.45 percent in Native Hawaiians or Pacific Islanders, 1.35 percent in Hispanics, 1.19 percent in American Indians or Alaska Natives and 0.8 percent in Caucasians. Frequencies may be higher in other countries, up to 20 percent in Singapore, Taiwan and among Han Chinese, 15.4 percent in India, 14.2 percent in Hong Kong, 12 percent in China and Korea, 11 percent in Indonesia.
Cause: Allopurinol-induced SCAR, including SJS and TEN, is strongly associated with the presence of one or two copies of HLA-B*58:01 allele. The mechanism is immune mediated and involves direct interactions between the allopurine metabolite oxypurinol, and HLA-B*58:01, which may result in drug-induced changes in peptide presentation, allowing activation of self-reactive T lymphocytes.
Alleles tested: HLA-B*58:01 allele.
Clinical Sensitivity and Specificity: 71 percent sensitivity and 92 percent specificity, overall mean values from pooled populations (Yu KH at al, Int J Rheum Dis 2017). Higher in populations with increased HLA-B*58:01 allele frequency.
Methodology: PCR followed by Sequence Specific Oligonucleotide Probe Hybridization of HLA-B locus.
Analytical Sensitivity and Specificity: Greater than 99 percent.
Limitations: Copy number of HLA-B*58:01 will not be reported. Other genetic and non-genetic factors that influence allopurinol hypersensitivity are not evaluated. Other rare, or novel alleles may occur which may lead to false positive or false negative results.

CPT Code(s): 81381

New York DOH approval pending. Call for status update.

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

2010292 **Hypoglycemia Panel, Sulfonylureas Qualitative, Serum or Plasma** **HYPOGLYPAN**

Performed: Sun, Tue, Thu
Reported: 1-6 days

Interpretive Data: This assay is used to evaluate hypoglycemia that may be caused from the ingestion of sulfonylurea drugs. Hypoglycemic drugs are detected (present) in this assay if the drug concentration is greater than the limit of detection (cut-off). The presence of hypoglycemic drug(s) indicates a recent ingestion.

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

2014183 **Ibuprofen Quantitative, Serum or Plasma** **IBUPRO SP**

Methodology: Quantitative High Performance Liquid Chromatography/Tandem Mass Spectrometry

Specimen Required: Collect: Plain Red. Also acceptable: Lavender (EDTA) or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.21 mL)
Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen.
Unacceptable Conditions: Separator tubes
Stability (collection to initiation of testing): Ambient: 15 days; Refrigerated: 15 days; Frozen: 15 days

New Test **3001298** ***IGH-BCL2* Fusion, t(14;18) by FISH** **BCL2_FISH**
Click for Pricing

Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin-embed specimen. Protect paraffin block from excessive heat. Transport tissue block or 5 unstained (3-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 is recommended by not necessary). (Min: 2 slides)
Storage/Transport Temperature: Room temperature or refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88366

New York DOH Approved.

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

New Test **3001306** ***IGH-CCND1* Fusion, t(11;14) by FISH** **IGHCC_FISH**
Click for Pricing

Additional Technical Information

Test not New York DOH approved at any laboratory. An approved NPL form must accompany specimen.

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin-embed specimen. Protect paraffin block from excessive heat. Transport tissue block or 5 unstained (3-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 is recommended but not necessary). (Min: 2 slides)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable.

Reference Interval: By report

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

CPT Code(s): 88366

New York DOH approval pending. Call for status update.

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

New Test **3001299** ***IGH-MYC* Fusion t(8;14) by FISH** **IGHMC FISH**
Click for Pricing

Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin-embed specimen. Protect paraffin block and/or slides from excessive heat. Transport tissue block or 5 unstained (3-micron thick sections) positively charge 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 is recommended but not necessary). (Min: 2 slides) If sending precut slides, do not oven bake.
Storage/Transport Temperature: Room temperature or refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88366

New York DOH Approved.

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

0050667 **Immune Complex Panel** **C1Q/RAJI**

Reference Interval:

Available Separately	Components	Reference Interval
0050301	C1q Binding Assay	Effective February 19, 2019 Less than or equal to 3.9 µg Eq/mL
0050302	Raji Cell Immune Complex Assay	By report

Interpretive Data: Less than or equal to 3.9 µg Eq/mL is considered negative for circulating complement binding immune complexes. Circulating immune complexes may be found without any evident pathology and positive results do not necessarily implicate the immune complex in a disease process. Many autoimmune disorders, chronic infections, and malignancies are associated with circulating immune complexes. Quantitation of immune complexes assists in staging immunologic disorders.

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

HOTLINE NOTE: There is a unit of measure change associated with this test.
Change the unit of measure for component 0050301, C1q Binding Assay from µgE/mL to µg Eq/mL.

2012084 ***JAK2* Gene, V617F Mutation, Qualitative with Reflex to *CALR* (Calreticulin) Exon 9 Mutation Analysis by PCR with Reflex to *MPL* Mutation Detection** **ET PMF RFX**

Methodology: Polymerase Chain Reaction/Capillary Electrophoresis/Capillary Electrophoresis
Performed: DNA Isolation: Sun-Sat
Assay: Mon, Wed, Fri
Reported: 3-6 days

Note: If *JAK2* V617F is reported as "Not Detected" then *CALR* Exon 9 Mutation Analysis by PCR will be added. If *CALR* is reported as "Not Detected," then *MPL* Mutation Detection will be added. Additional charges apply.

0040105 **Kleihauer-Betke Stain for Fetal Hemoglobin** **KB**

Specimen Required: Collect: Lavender (EDTA) or Pink (K_2EDTA).
Specimen Preparation: Transport 3 mL whole blood. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Specimens collected after Rh immunoglobulin administered, Cord or Fetal blood, Clotted specimens.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 72 hours; Frozen: Unacceptable

0050021 **LDL Subclasses** **LDL SUBC**

Specimen Required: Patient Prep: Patient should be fasting for 12 hours prior to collection.
Collect: Lavender (EDTA), Pink (K_2EDTA), Plain Red, or Serum Separator Tube (SST).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Heparinized plasma. Specimens from patients receiving heparin. Grossly hemolyzed specimens.
Stability (collection to initiation of testing): Ambient: 8 hours; Refrigerated: 2 weeks; Frozen: Unacceptable

2008894 **Lung Cancer Panel** **LUNG PANEL**

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Remove reflex to 2008418, *ROS1* by FISH
Add reflex to 3001308, *ROS1*, FISH

2008895 **Lung Cancer Panel with *KRAS*** **LUNG PLUS**

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Remove reflex to 2008418, *ROS1* by FISH
Add reflex to 3001308, *ROS1*, FISH

0099272 Manganese, Whole Blood — MANG WB

Performed: Sun-Sat
Reported: 1-3 days

Specimen Required: Patient Prep: Diet, medication, and nutritional supplements may introduce interfering substances. Patient should be encouraged to discontinue nutritional supplements, vitamins, minerals, and non-essential over-the-counter medications (upon the advice of their physician).
Collect: Royal Blue (K_2EDTA or Na_2EDTA).
Specimen Preparation: Transport 7 mL whole blood in the original collection tube. (Min: 0.5 mL)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated.
Unacceptable Conditions: Specimens collected in tubes other than Royal Blue (EDTA). Specimens transported in containers other than a Royal Blue (EDTA) tube or Trace Element-Free Transport Tube. Heparin anticoagulant. Clotted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Interpretive Data: Elevated results may be due to skin or collection-related contamination, including the use of a noncertified metal-free collection/transport tube. If contamination concerns exist due to elevated levels of blood manganese, confirmation with a second specimen collected in a certified metal-free tube is recommended.

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

HOTLINE NOTE: Remove information found in the Note field. There is also a numeric map change associated with this test.
Change the numeric map for component 0099272, Manganese, Bloodfrom XXXX.X to XXX.X.

2014704 Maternal T Cell Engraftment in SCID, Maternal Specimen — SCID-MAT

Time Sensitive

New York Clients: Direct Submission Instructions

Specimen Required: Collect: Lavender (EDTA), Pink (K_2EDTA), or Yellow (ACD Solution A).
New York State Clients: Lavender (EDTA). **Collect Monday-Thursday only.**
Specimen Preparation: Transport 3 mL whole blood. (Min: 1 mL)
New York State Clients: Transport 14 mL whole blood. (Min: 6 mL). **Do not send to ARUP Laboratories**. Specimens must be received at performing laboratory within 24 hours of collection. For specimen requirements and direct submission instructions please contact ARUP Referral Testing at (800) 242-2787, ext. 5145.
Storage/Transport Temperature: Refrigerated.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1week; Frozen: Unacceptable
New York State Clients: Ambient: 24 hours; Refrigerated: Unacceptable; Frozen: Unacceptable

New Test **3001301** ***MDM2* Gene Amplification by FISH** **MDM2_FISH**
Click for Pricing

Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin-embed tissue. 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)
Storage/Transport Temperature: Room temperature or refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88377

New York DOH Approved.

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

New Test **3001158** **Melatonin Quantitative, Serum or Plasma** **MELATON SP**
Click for Pricing

Methodology: Quantitative High Performance Liquid Chromatography-Tandem Mass Spectrometry
Performed: Varies
Reported: 7-10 days

Specimen Required: Collect: Plain Red, Lavender (EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.4 mL)
Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen.
Unacceptable Conditions: Separator tubes.
Stability (collection to initiation of testing): Ambient: 2 weeks; Refrigerated: 1 month; Frozen: 1 year

Reference Interval: By report

CPT Code(s): 80375 (Alt code: G0480)

New York DOH Approved.

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

2011521 Meprobamate, Serum or Plasma, Quantitative MEPRO SP

Performed: Sun, Tue, Thu
Reported: 1-4 days

Specimen Required: Collect: Plain Red, Lavender (K_2EDTA), Lavender (K_3EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Whole blood. Gel Separator Tubes, Light Blue (Sodium Citrate), or Yellow (SPS or ACD Solution).
Stability (collection to initiation of testing): Ambient: 1 week; Refrigerated: 1 month; Frozen: 3 months

Interpretive Data: The therapeutic range is based on serum pre-dose (trough) draw at steady-state concentration. Adverse effects may include drowsiness, dizziness and headache.

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

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field. There is also a component change associated with this test.
Remove component 2011522, Meprobamate Dose
Remove component 2011524, Meprobamate Route
Remove component 2011523, Meprobamate Dose Frequency
Remove component 2011525, Meprobamate Type of Draw

New Test 3001313 *MET* Gene Amplification by FISH MET_FISH

Click for Pricing

Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Varies
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed tumor tissue. Transport tissue block or 4 unstained, consecutively cut, 5-micron thick sections, mounted on positively charged glass slides. (Min: 4 slides) Protect paraffin block and/or slides from excessive heat.
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated.
Remarks: Include surgical pathology report with reason for referral. The laboratory will not reject specimens that arrive without a pathology report but will hold the specimen until this information is received.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88366

New York DOH Approved.

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

2011539 Mexiletine, Serum or Plasma — MEXILE

Performed: Mon, Thu, Sat
Reported: 1-5 days

Specimen Required: Collect: Serum Pre-dose (Trough) Draw - At a Steady State Concentration or Plasma Pre-dose (Trough) Draw - At a Steady State Concentration in Plain Red, Lavender (K_2EDTA), Lavender (K_3EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Whole blood. Gel Separator Tubes, Light Blue (Sodium Citrate), or Yellow (SPS or ACD Solution).
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 5 days; Frozen: 2 months

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field. There is also a component change associated with this test.
Remove component 2011540, Mexiletine Dose
Remove component 2011542, Mexiletine Route
Remove component 2011541, Mexiletine Dose Frequency
Remove component 2011543, Mexiletine Type of Draw

0051740 Microsatellite Instability (MSI), HNPCC/Lynch Syndrome, by PCR — MSI PCR

Performed: **DNA isolation:** Sun-Sat
Assay: Sun, Tue, Thu
Reported: 10-20 days

2005545 *MPL* Mutation Detection by Capillary Electrophoresis — MPL

Methodology: Polymerase Chain Reaction/Capillary Electrophoresis

Specimen Required: Collect: Lavender (EDTA).
Specimen Preparation: Transport 5 mL whole blood or 3 mL bone marrow. (Min: 1 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma or serum. Specimens collected in anticoagulants other than EDTA. Clotted or grossly hemolyzed specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 5 days; Frozen: Unacceptable

Note: The test will detect *MPL* mutations W515K, W515L, W515A, and S505N.

New Test **3001300** ***MYC* (8q24) Gene Rearrangement by FISH** **MYC FISH**
Click for Pricing

Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin-embed specimen. Protect paraffin block from excessive heat. Transport tissue block or 5 unstained (3-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 is recommended but not necessary). (Min: 2 slides)
Storage/Transport Temperature: Room temperature or refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88366

New York DOH Approved.

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

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

Click for Pricing

Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin-embed tissue. 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)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

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

CPT Code(s): 88377

New York DOH Approved.

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

2010359 **Mycophenolic Acid and Metabolites** **MPA MET**

Performed: Sun-Sat
Reported: 1-3 days

New Test **3001277** **Myelin Oligodendrocyte Glycoprotein (MOG) Antibody, IgG by IFA with Reflex to Titer, Serum** **MOG SER**

Click for Pricing

Additional Technical Information

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: Hemolyzed, contaminated, or severely lipemic specimens.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month

Reference Interval: Less than 1:10

Interpretive Data: Myelin oligodendrocyte glycoprotein (MOG) antibody is found in a subset of patients with neuromyelitis optica spectrum disorders, including optic neuritis and transverse myelitis, brainstem encephalitis, and acute disseminated encephalomyelitis. Persistence of antibody positivity may be associated with a relapsing course. Decreasing antibody levels may be associated with therapeutic response; therefore, clinical correlation must be strongly considered. A negative test result does not rule out a diagnosis of CNS demyelinating disease or autoimmune encephalitis.

This indirect fluorescent antibody assay utilizes full-length MOG transfected cell lines for the detection and semi-quantification of MOG IgG antibody.

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

Note: If Myelin Oligodendrocyte Glycoprotein (MOG) Antibody, IgG by IFA with Reflex to Titer, Serum is positive, then a Myelin Oligodendrocyte Glycoprotein (MOG) Antibody Titer, IgG is performed. Additional charges apply.

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

New York DOH approval pending. Call for status update.

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

New Test **3001291** ***Neisseria gonorrhoeae* Antibody by CF, Serum** **N GONOR AB**

Click for Pricing

Methodology: Semi-Quantitative Complement Fixation
Performed: Varies
Reported: 3-7 days

Specimen Required: Collect: Plain Red or Serum Separator Tube (SST).
Specimen Preparation: Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen.
Stability (collection to initiation of testing): Ambient: 1 week; Refrigerated: 2 weeks; Frozen: 1 month

CPT Code(s): 86609

New York DOH Approved.

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

0099452 Nickel, Serum NICKEL

Performed: Sun-Sat
Reported: 1-3 days

Specimen Required: Patient Prep: Diet, medication, and nutritional supplements may introduce interfering substances. Patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and non-essential over-the-counter medications (upon the advice of their physician).
Collect: Royal Blue (no additive).
Specimen Preparation: Centrifuge; do not allow serum to remain on cells. Transfer 2 mL serum to an ARUP Trace Element-Free Transport Tube (ARUP supply #43116) within 2 hours of collection. Available online through eSupply using ARUP Connect™ or contact ARUP Client Services at (800) 522-2787. (Min: 0.5 mL)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated or frozen.
Unacceptable Conditions: Specimens collected in tubes other than Royal Blue (no additive). Specimens transported in containers other than a Royal Blue (no additive) tube or Trace Element-Free Transport Tube. Heparin anticoagulant. Specimens that are not separated from the red cells or clot within 2 hours.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Indefinitely

Interpretive Data: Elevated results may be due to skin or collection-related contamination, including the use of a noncertified metal-free collection/transport tube. If contamination concerns exist due to elevated levels of serum nickel, confirmation with a second specimen collected in a certified metal-free tube is recommended.

Serum nickel testing is intended to detect potentially toxic exposure.

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

HOTLINE NOTE: Remove information found in the Note field.

0099289 Organic Acids, Plasma ORG AC P

Methodology: Quantitative Gas Chromatography/Mass Spectrometry

HOTLINE NOTE: There is a component change associated with this test.
Add component 3001293, Glutaric Acid, Plasma
Remove component 0081052, Citric Acid, Plasma

2002277 Ova and Parasite Exam, Body Fluid or Urine OPBF

Specimen Required: Patient Prep: **Urine:** If *S. haematobium* is suspected, collect at midday or 24-hour collection in a container without preservative. Peak egg excretion occurs between noon and 3 p.m.
Collect: Body fluid, CSF, or urine.
Specimen Preparation: Transfer 4 mL body fluid, CSF, or urine to an ARUP Standard Transport Tube (ARUP Supply #46307). (Min: 1 mL)
Storage/Transport Temperature: **Body Fluid or Urine:** Refrigerated.
CSF: Room temperature.
Remarks: Specimen source required.
Stability (collection to initiation of testing): **Body Fluid:** Ambient: Unacceptable; Refrigerated: 72 hours; Frozen: Unacceptable
CSF: Ambient: 72 hours; Refrigerated: Unacceptable; Frozen: Unacceptable
Urine: Ambient: 72 hours; Refrigerated: 72 hours; Frozen: Unacceptable

0098834 Oxcarbazepine or Eslicarbazepine Metabolite (MHD) OXCARB

Performed: Sun-Sat
Reported: 3 days

Interpretive Data: This test measures monohydroxyoxcarbazepine (MHD). Adverse effects may include dizziness, fatigue, nausea, headache, somnolence, ataxia and tremor.

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

New Test **3001309** **1p/19q Deletion by FISH** **1P19Q_FISH**
Click for Pricing

Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed tissue. Protect paraffin block from excessive heat. Transport block or 6 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 3 slides)
Storage/Transport Temperature: Room temperature or refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88377 x2

New York DOH Approved.

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

2007949 **Paliperidone, Serum or Plasma** **PALIPERID**

Performed: Wed, Sat
Reported: 1-5 days

Specimen Required: Patient Prep: Pre-dose (trough) draw - At steady state concentration.
Collect: Lavender (EDTA), Pink (K_2EDTA), or Plain Red.
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Gel separator tubes, light blue (citrate), or yellow (SPS or ACD solution).
Stability (collection to initiation of testing): Ambient: 2 weeks; Refrigerated: 2 weeks; Frozen: 2 months

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field. There is also a component change associated with this test.
Remove component 2011545, Paliperidone Dose
Remove component 2011546, Paliperidone Dose Frequency
Remove component 2011547, Paliperidone Route
Remove component 2011548, Paliperidone Type of Draw

2013284 **PD-L1 22C3 IHC with Tumor Proportion Score (TPS) Interpretation, pembrolizumab (KEYTRUDA)** **22C3 IP**

HOTLINE NOTE: Name change only.

2011549 **Pentobarbital, Serum or Plasma** **PENTOBAR**

Performed: Sat
Reported: 1-8 days

Specimen Required: Collect: Serum Pre-dose (Trough) Draw - At a Steady State Concentration or Plasma Pre-dose (Trough) Draw - At a Steady State Concentration in Plain Red, Lavender (K_2EDTA), Lavender (K_3EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Whole blood. Gel Separator Tubes, Light Blue (Sodium Citrate), or Yellow (SPS or ACD Solution).
Stability (collection to initiation of testing): Ambient: 3 months; Refrigerated: 3 months; Frozen: 1 year

Interpretive Data: The therapeutic range is based on serum pre-dose (trough) draw at steady-state concentration. Toxic concentrations may cause respiratory depression, hypotension, coma, and death.

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

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field. There is also a component change associated with this test.
Remove component 2011550, Pentobarbital Dose
Remove component 2011552, Pentobarbital Route
Remove component 2011551, Pentobarbital Dose Frequency
Remove component 2011553, Pentobarbital Type of Draw

New Test **3001170** **Platelet Antigen 1 Genotyping (HPA-1)** **HPA_1 GENO**
Click for Pricing

Additional Technical Information

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

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

Reference Interval: By report

Interpretive Data:
Background Information for Platelet Antigen 1 Genotyping (HPA-1):
Characteristics: Spontaneous fetal intracranial bleeding may occur in 20 percent of pregnancies affected with severe perinatal alloimmune thrombocytopenia (PAT); there is a risk of fetal death. Post-transfusion purpura may occur in transfusion recipients with antibodies to a specific platelet antigen.
Incidence: PAT occurs in 1 in 5000 births.
Inheritance: For women homozygous for a rare "b" HPA allele with antibodies to the common "a" allele, there is a 50 percent risk a pregnancy will be affected if her partner is heterozygous for the "a" allele and 100 percent risk if her partner is homozygous for the "a" allele.
Cause: Maternal-fetal HPA incompatibility.
Polymorphism Tested: HPA-1 (*ITGB3*, GPIIIa) c.176T>C, p.L59P
Clinical Sensitivity: 80 percent in Caucasians, unknown in other ethnicities.
Methodology: PCR followed by fluorescent monitoring.
Analytic Sensitivity and Specificity: 99 percent.
Limitations: Bloody amniotic fluid specimens may give false-negative results because of maternal cell contamination. Diagnostic errors can occur due to rare sequence variations.
Informed consent: Recommended; forms are available at http://www.aruplab.com.

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

Note: Maternal specimen is recommended for proper test interpretation if contamination of the fetal specimen from the mother is suspected. Order Maternal Cell Contamination.

CPT Code(s): 81105

New York DOH approval pending. Call for status update.

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

New Test **3000193** **Platelet Antigen Genotyping Panel** **HPA GENO**
Click for Pricing

Additional Technical Information

Methodology: Polymerase Chain Reaction/Fluorescence Monitoring
Performed: Varies
Reported: 2-7 days

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

Interpretive Data:
Background Information for Platelet Antigen Genotyping Panel:
Characteristics: Spontaneous fetal intracranial bleeding may occur in 20 percent of pregnancies affected with severe perinatal alloimmune thrombocytopenia (PAT); there is a risk of fetal death. Post-transfusion purpura may occur in transfusion recipients with antibodies to a specific platelet antigen.
Incidence: PAT occurs in 1 in 5000 births.
Inheritance: For women homozygous for the less common "b" HPA allele with antibodies to the common "a" allele, there is a 50 percent risk a pregnancy will be affected if her partner is heterozygous for the "a" allele and 100 percent risk if her partner is homozygous for the "a" allele.
Cause: Maternal-fetal HPA incompatibility.
Polymorphisms Tested: HPA-1 (*ITGB3,* GPIIIa) c.176T>C, p.L59P; HPA-2 (*GP1BA,* GPIba) c.482C>T, p.T161M; HPA-3 (*ITGA2B,* GPIIb) c.2621T>G, p.I874S; HPA-4 (*ITGB3,* GPIIIa) c.506G>A, p.R169Q; HPA-5 (*ITGA2,* GPIa) c.1600G>A, p.E534K; HPA-6 (*ITGB3,* GPIIIa) c.1544G>A, p.R515Q; HPA-15 (*CD109,* CD109) c.2108C>A, p.S703Y
Clinical Sensitivity: Variable, dependent on ethnicity.
Methodology: PCR followed by fluorescent monitoring.
Analytic Sensitivity and Specificity: 99 percent.
Limitations: Bloody amniotic fluid specimens may give false-negative results because of maternal cell contamination. Diagnostic errors can occur due to rare sequence variations.
Informed consent: Recommended; forms are available at www.aruplab.com.

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

PA 1-6, 15 Polymorphism

HPA System	"a" Allele Common	"b" Allele Variant
HPA 1	T	C
HPA 2	C	T
HPA 3	T	G
HPA 4	G	A
HPA 5	G	A
HPA 6	G	A
HPA 15	C	A

Note: Maternal specimen is recommended for proper test interpretation if contamination of the fetal specimen from the mother is suspected. Order Maternal Cell Contamination.

CPT Code(s): 81105; 81106; 81107; 81108; 81109; 81110; 81112

New York DOH approval pending. Call for status update.
HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.

2011609 Pregabalin, Serum or Plasma — PREGABALIN

Performed: Wed, Sat
Reported: 1-6 days

Specimen Required: Collect: Serum Pre-dose (Trough) Draw - At a Steady State Concentration or Plasma Pre-dose (Trough) Draw - At a Steady State Concentration in Plain Red, Lavender (K_2EDTA), Lavender (K_3EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Citrated Plasma.
Stability (collection to initiation of testing): Ambient: 1 month; Refrigerated: 1 month; Frozen: 2 months

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field. There is also a component change associated with this test.
Remove component 2011894, Pregabalin Dose
Remove component 2011895, Pregabalin Route
Remove component 2011896, Pregabalin Dose Frequency
Remove component 2011897, Pregabalin Type of Draw

2012229 Pregabalin, Urine — PREGABA U

Performed: Wed, Sat
Reported: 1-6 days

3000134 Prostate Health Index — PROST INDX

HOTLINE NOTE: There is a numeric map change associated with this test.
Change the numeric map for component 3000518, Total PSA from XXXXX.XXX to XXXXX.X.

New Test **3001255** **14-3-3 Protein Tau, Total, CSF** **14-3-3 TAU**
Click for Pricing

CJD Surveillance CTR Test Request Form

Methodology: Qualitative Western Blot/Quantitative Enzyme-Linked Immunosorbent Assay/Qualitative Real-Time Quaking-Induced Conversion
Performed: Varies
Reported: 7-17 days

Specimen Required: Collect: CSF
Specimen Preparation: The first 2 mL of CSF that flows from the tap should be discarded. Transfer 5 mL CSF to ARUP Standard Transport Tubes and freeze immediately. (Min: 2 mL)
Storage/Transport Temperature: Frozen.
Remarks: Completed requisition form required.
Unacceptable Conditions: Specimens exposed to more than one freeze/thaw cycle.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: Indefinitely

Reference Interval: By report

Note: Repeat testing should be collected no sooner than 2 weeks following last encounter.

CPT Code(s): 86317; 84182; 0035U

New York DOH Approved.

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

2003118 **Quetiapine, Serum or Plasma** **QUETIAP**

Performed: Wed
Reported: 1-8 days

New Test **3001312** ***RET* Gene Rearrangements by FISH** **RET_FISH**
Click for Pricing

Methodology: Fluorescence in situ Hybridization
Performed: Varies
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed tumor tissue. Transport tissue block or 4 unstained, consecutively cut, 5-micron thick sections, mounted on positively charged glass slides. (Min: 2 slides) Protect paraffin block and/or slides from excessive heat.
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated.
Remarks: Include surgical pathology report with reason for referral. The laboratory will not reject specimens that arrive without a pathology report but will hold the specimen until this information is received.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88366

New York DOH Approved.

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

2007951 **Risperidone and Metabolite, Serum or Plasma** **RISPERIDON**

Performed: Mon, Wed, Sat
Reported: 1-5 days

New Test **3001308** ***ROS1* by FISH** **ROS1_FISH**
Click for Pricing

Additional Technical Information

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed specimen. Protect paraffin block from excessive heat. Transport tissue 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 Connector contact ARUP Client Services at (800) 522-2787 (kit recommended but not necessary). (Min: 2 slides)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

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

CPT Code(s): 88366

New York DOH Approved.

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

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

HOTLINE NOTE: There is a reflexive pattern change associated with this test.
Remove reflex to 2008418, *ROS1* by FISH
Add reflex to 3001308, *ROS1*, FISH

0098745 **Sertraline** **SERTRALINE**

Performed: Wed
Reported: 1-8 days

Interpretive Data: Sertraline doses ranging from 50-200 mg/d produce serum concentration ranging from 30-200 ng/mL. Dosing above 200 mg/d is associated with increased adverse effects and decreased efficacy. Adverse effects may include dry mouth, headache, dizziness, somnolence, nausea and diarrhea.

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

New Test **3001303** ***SS18* (*SYT*) (18q11) Gene Rearrangement by FISH** **SYT_FISH**
Click for Pricing

Additional Technical Information

Test not New York DOH approved at any laboratory. An approved NPL form must accompany specimen.

Methodology: Fluorescence in situ Hybridization
Performed: Monday-Friday
Reported: 3-7 days

Specimen Required: Collect: Tumor tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin-embed tissue. Protect paraffin block from excessive heat. Transport tissue 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)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Remarks: Include surgical pathology report.
Unacceptable Conditions: Specimens fixed or processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). No tumor in tissue. Decalcified specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: By report

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

CPT Code(s): 88366

New York DOH approval pending. Call for status update.

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

2002270 **ST2, Soluble** **ST2**

Specimen Required: Collect: Serum Separator Tube (SST), Plain Red, Lavender (EDTA), Pink (K_2EDTA), or Green (Sodium or Lithium Heparin).
Specimen Preparation: Allow specimen to clot completely at room temperature. Separate from cells ASAP or within 2 hours of collection. Transport 1 mL serum or plasma in an ARUP Standard Transport Tube. (Min: 0.2 mL)
Storage/Transport Temperature: Frozen.
Unacceptable Conditions: Citrated plasma. Grossly hemolyzed or severely lipemic specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigerated: 10 days; Frozen: 18 months

0020044 **Sulfonamides (Sulfas)** **SULFA**

Performed: Mon
Reported: 1-8 days

Interpretive Data: This test is designed to measure sulfamethoxazole. Peak sulfonamide (total) blood levels of 5.0-15.0 mg/dL may be effective for most infections, with concentrations of 12.0-15.0 mg/dL being optimal for serious infections. Sulfonamide levels should not exceed 20.0 mg/dL. Adverse effects may include blood dyscrasias, skin rash, nausea, vomiting and fever.

2003128 **Tapentadol and Metabolite, Urine, Quantitative** **TAPENTA UR**

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

0099610 **Thallium, Whole Blood** **THALB**

Performed: Sun-Sat
Reported: 1-3 days

Specimen Required: Patient Prep: Diet, medication, and nutritional supplements may introduce interfering substances. Patients should be encouraged to discontinue nutritional supplements, vitamins, minerals, and non-essential over-the-counter medications (upon the advice of their physician).
Collect: Royal Blue (K_2EDTA or Na_2EDTA).
Specimen Preparation: Transport 7 mL whole blood in the original collection tube. (Min: 0.5 mL)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated.
Unacceptable Conditions: Specimens collected in tubes other than Royal Blue (EDTA). Specimens transported in containers other than a Royal Blue (EDTA) tube or Trace Element-Free Transport Tube. Heparin anticoagulant. Clotted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: Effective February 19, 2019
Less than or equal to 2.0 µg/L

Interpretive Data: Elevated results may be due to skin or collection-related contamination, including the use of a noncertified metal-free collection/transport tube. If contamination concerns exist due to elevated levels of blood thallium, confirmation with a second specimen collected in a certified metal-free tube is recommended.

Blood thallium levels reflect recent exposure as thallium has a biological half-life of approximately 2 to 4 days. Blood levels greater than 100 µg/L are considered toxic and greater than 300 µg/L indicate severe ingestion. After severe thallium poisonings, reported symptoms have varying times of onset and include gastroenteritis, multi-organ failure and neurologic injury. Peripheral neuropathy and alopecia are well-documented effects of acute and chronic exposure. Human health effects from low-level thallium exposure are unknown.
See Compliance Statement B: www.aruplab.com/CS

HOTLINE NOTE: Remove information found in the Note field.

0090064 **Thiocyanate, 24-Hour Urine** **THIO-U 24**

Performed: Sun, Thu
Reported: 1-5 days

0090063 **Thiocyanate, Random Urine** **THIO-U**

Performed: Sun, Thu
Reported: 1-5 days

2011575 **Thiocyanate, Serum or Plasma** **THIO SP**

Performed: Sun, Thu
Reported: 1-5 days

Specimen Required: Collect: Plain Red, Lavender (K_2EDTA), Lavender (K_3EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Whole blood. Gel Separator Tubes, Light Blue (Sodium Citrate), or Yellow (SPS or ACD Solution).
Stability (collection to initiation of testing): Ambient: 5 days; Refrigerated: 5 days; Frozen: 5 days

HOTLINE NOTE: Remove information found in the Specimen Require Remarks field. There is also a component change associated with this test.
Remove component 2011576, Thiocyanate Dose
Remove component 2011577, Thiocyanate Dose Frequency
Remove component 2011578, Thiocyanate Route
Remove component 2011579, Thiocyanate Type of Draw

0056200 Thrombotic Risk, DNA Panel THROMDNA

Specimen Required: Collect: Lavender (EDTA), Pink (K_2 EDTA) or Yellow (ACD Solution A or B).
Specimen Preparation: Transport 3 mL whole blood. (Min: 2 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma or serum; collection of specimen in sodium heparin tubes.
Stability (collection to initiation of testing): Ambient: 72 hours; Refrigerated: 1 week; Frozen: 1 month.

Interpretive Data: Refer to report

New Test 3001184 Tiagabine Quantitative, Serum/Plasma TIAGAB SP

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Methodology: Quantitative High Performance Liquid Chromatography/Tandem Mass Spectrometry
Performed: Varies
Reported: 7-10 days

Specimen Required: Patient Prep: Pre-dose (trough) draw.
Collect: Plain Red, Lavender (EDTA), or Pink (K_2EDTA).
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.4 mL)
Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen.
Unacceptable Conditions: Separator tubes.
Stability (collection to initiation of testing): Ambient: 1 month; Refrigerated: 1 month; Frozen: 48 months

Reference Interval: By report

CPT Code(s): 80199

New York DOH Approved.

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

2008670 Tick-Borne Disease Panel by PCR, Blood TICKPCR

Specimen Required: Collect: Lavender (EDTA) or Pink (K_2EDTA).
Specimen Preparation: Transport 1 mL whole blood. (Min: 0.6 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Serum, plasma, and heparinized specimens.
Stability (collection to initiation of testing): Ambient: 24 hours; Refrigerated: 1 week; Frozen: 1 week

Reference Interval:

Available Separately	Components	Reference Interval
Yes (2008665)	*Babesia* Species by PCR	Refer to report
Yes (2007862)	*Ehrlichia* and *Anaplasma* Species by PCR	Refer to report

2007515 Tricyclic Antidepressants, Quantitative, Urine TADQNT U

Performed: Tue, Thu, Sat
Reported: 1-5 days

Interpretive Data: Interpretive comments: Urine concentrations of tricyclic antidepressants do not correlate with signs or symptoms of therapy or toxicity.
Therapeutic ranges are not established.
100 ng/mL limit of quantification: Amitriptyline, Nortriptyline, Imipramine, Desipramine, Doxepin, Nordoxepin, Protriptyline
200 ng/mL limit of quantification: Clomipramine, Norclomipramine

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

New Test Available Now Click for Pricing 3001149 Uroplakin II by Immunohistochemistry UROPII IHC

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

Specimen Required: Collect: Tissue.
Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed specimen (cells must be prepared into a cellblock). Protect paraffin block and/or slides from excessive heat. Transport tissue block or 5 unstained (3- to 5-micron thick sections), positively charged slides in a tissue transport kit (recommended but not required), (ARUP supply #47808) available online through eSupply using ARUP Connect or contact ARUP Client Services at (800) 522-2787. (Min: 2 slides) If sending precut slides, do not oven bake.
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months.
Unacceptable Conditions: Specimens submitted with non-representative tissue type. Depleted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

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

Note: 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.

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

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

Specimen Required: Patient Prep: Patients taking calcineurin inhibitors should stop their medication 72 hours prior to draw. Patients on prednisone should be off their medication for 2 weeks prior to draw.
Collect: Plain red.
Specimen Preparation: Separate serum from cells ASAP or within 2 hours of collection. Transfer 1 mL serum to an ARUP Standard Transport tube and freeze immediately (Min: 0.5 mL) **AND** transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: **First Specimen: CRITICAL FROZEN. Separate specimens must be submitted for this multiple test panel.**
Second Specimen: Refrigerated.
Unacceptable Conditions: Specimens other than serum. Contaminated, grossly hemolyzed, or lipemic specimens.
Stability (collection to initiation of testing): **First Specimen:** After separation from cells: Ambient: 30 minutes; Refrigerated: Unacceptable; Frozen: 1 year (avoid repeated freeze/thaw cycles)
Second Specimen: After separation from cells: Ambient: 8 hours; Refrigerated: 1 Week; Frozen: 6 months

2007957 Venlafaxine and Metabolite, Serum or Plasma VENLAFAXSP

Performed: Wed, Sat
Reported: 1-5 days

Specimen Required: Patient Prep: Pre-dose (trough) draw - At steady state concentration.
Collect: Lavender (EDTA), Pink (K_2EDTA), or Plain Red.
Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Whole blood. Gel separator tubes, light blue (citrate), or yellow (SPS or ACD Solution).
Stability (collection to initiation of testing): Ambient: 2 weeks; Refrigerated: 2 weeks; Frozen: 2 weeks

HOTLINE NOTE: Remove information found in the Specimen Required Remarks field. There is also a component change associated with this test.
Remove component 2011589, Venlafaxine Dose
Remove component 2011590, Venlafaxine Dose Frequency
Remove component 2011591, Venlafaxine Route
Remove component 2011592, Venlafaxine Type of Draw

0020056 Viscosity, Serum VIS-S

Specimen Required: Collect: Serum separator or plain red tube.
Specimen Preparation: Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Clotted specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: 24 hours; Refrigerated: 7 days; Frozen: 1 month

Reference Interval: Effective February 19, 2019
1.10-1.40 cP

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

0080111 Vitamin B_6 (Pyridoxal 5-Phosphate) VIT B6

Methodology: Quantitative High Performance Liquid Chromatography-Tandem Mass Spectrometry

Specimen Required: Patient Prep: Collect specimen after an overnight fast.
Collect: Green (Sodium or Lithium Heparin), Lavender (EDTA), Pink (K_2 EDTA), Plasma Separator Tube (PST), Serum Separator Tube (SST), or Plain Red.
Specimen Preparation: Protect from light during collection, storage, and shipment. Separate from cells within 1 hour of collection. Transfer 1 mL plasma or serum to an ARUP Amber Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Frozen.
Unacceptable Conditions: Whole blood. Specimens not protected from light. Icteric specimens.
Stability (collection to initiation of testing): After separation from cells: Ambient: Unacceptable; Refrigerated: 1 week; Frozen: 2 months

New Test **3001387** **Voltage-Gated Potassium Channel (VGKC) Antibody, CSF** **VGKC CSF**

Click for Pricing

Additional Technical Information

Methodology: Quantitative Radioimmunoassay
Performed: Mon, Thu
Reported: 1-8 days

Specimen Required: Collect: CSF.
Specimen Preparation: Transfer 4 mL CSF to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma. Grossly lipemic or icteric specimens.
Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 month (avoid repeated freeze/thaw cycles)

Reference Interval:

Negative	0.0-1.1 pmol/L
Positive	1.2 pmol/L or greater

Interpretive Data: Voltage-Gated Potassium Channel (VGKC) antibodies are associated with neuromuscular weakness as found in neuromyotonia (also known as Issacs syndrome) and Morvan syndrome. VGKC antibodies are also associated with paraneoplastic neurological syndromes and limbic encephalitis; however, VGKC antibody-associated limbic encephalitis may be associated with antibodies to leucine-rich, glioma-inactivated 1 protein (Lgi1) or contactin-associated protein-2 (Caspr-2) instead of potassium channel antigens. The clinical significance of this test can only be determined in conjunction with the patient's clinical history and related laboratory testing.

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

CPT Code(s): 83519

New York DOH approval pending. Call for status update.

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

2004890 **Voltage-Gated Potassium Channel (VGKC) Antibody, Serum** **VGKC AB**

Specimen Required: Collect: Plain red or serum separator tube.
Specimen Preparation: Separate serum from cells within 1 hour. Transfer 4 mL serum to an ARUP Standard Transport Tube. (Min: 0.5 mL)
Storage/Transport Temperature: Refrigerated.
Unacceptable Conditions: Plasma. Grossly lipemic or icteric 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)

2009373 **Zinc Quantitative, Whole Blood** **ZINC WB**

Performed: Sun-Sat
Reported: 1-3 days

Specimen Required: Patient Prep: Diet, medication, and nutritional supplements may introduce interfering substances. Patient should be encouraged to discontinue nutritional supplements, vitamins, minerals, and non-essential over-the-counter medications (upon the advice of their physician).
Collect: Royal Blue (K_2EDTA or Na_2EDTA).
Specimen Preparation: Transport 2 mL whole blood in the original collection tube. (Min: 0.5 mL)
Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated.
Unacceptable Conditions: Specimens collected in tubes other than Royal Blue (EDTA). Specimens transported in containers other than a Royal Blue (EDTA) tube or Trace Element-Free Transport Tube. Heparin anticoagulant. Clotted specimens.
Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Reference Interval: Effective February 19, 2019
440.0-860.0 µg/dL

Interpretive Data: Elevated results may be due to skin or collection-related contamination, including the use of a noncertified metal-free collection/transport tube. If contamination concerns exist due to elevated levels of blood zinc, confirmation with a second specimen collected in a certified metal-free tube is recommended.

Zinc concentration in blood has not been shown to change significantly in deficiency or with supplementation.

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

HOTLINE NOTE: There is a numeric map change associated with this test.
Change the numeric map for component 2009374, Zinc Quantitative, Whole Blood from XXXXXX.X to XXXX.X.

The following will be discontinued from ARUP's test menu on February 19, 2019.
Replacement test options are supplied if applicable.

Test Number	Test Name	Refer To Replacement
2002584	*Acanthamoeba* and *Naegleria* Culture and Stains, CSF	*Acanthamoeba* and *Naegleria* Culture and Stain, CSF (3000878)
0065066	Adenovirus 40-41 Antigens by EIA	Gastrointestinal Viral Panel by PCR (2013577)
2014168	Alagille Syndrome (*JAG1*) Sequencing and Microarray	
2006102	*ALK* Gene Rearrangements by FISH, Lung	*ALK* Gene Rearrangements by FISH, Lung (3001302)
0055422	Allergen, Drugs, Ampicillin	
0091204	Allopurinol and Metabolite, Serum or Plasma	
0091236	Amoxapine and Metabolite Quantitative, Serum or Plasma	
2010107	*BCL6* (3q27) Gene Rearrangement by FISH	*BCL6* (3q27) Gene Rearrangement by FISH (3001311)
0091278	Beryllium, Serum or Plasma	Beryllium Quantitative, Serum or Plasma (3000967)
2012002	Bruton Tyrosine Kinase (BTK) Protein Expression by Flow Cytometry	
0091223	Clonidine, Urine	
2006220	Congenital Amegakaryocytic Thrombocytopenia (CAMT) Sequencing	
0091303	Cyclobenzaprine Quantitative, Serum or Plasma	
2003845	Cytokeratin 19 (CK 19) by Immunohistochemistry	
2007223	*DDIT3 (CHOP)* (12q13) Gene Rearrangement by FISH	*DDIT3 (CHOP)* (12q13) Gene Rearrangement by FISH (3001304)
2006236	Diamond-Blackfan Anemia (*RPL11*) Sequencing	
2006234	Diamond-Blackfan Anemia (*RPL5*) Sequencing	
2006238	Diamond-Blackfan Anemia (*RPS19*) Sequencing	
2006244	Dyskeratosis Congenita, Autosomal (*TERC*) Sequencing	
2006228	Dyskeratosis Congenita, X-linked (*DKC1*) Sequencing	
2008605	*EGFR* Gene Amplification by FISH	*EGFR* Gene Amplification by FISH (3001310)
2007225	*EWSR1* (22q12) Gene Rearrangement by FISH	*EWSR1* (22q12) Gene Rearrangement by FISH (3001305)
2007883	Filaggrin (*FLG*) 2 Mutations	
0091517	Formic Acid, Serum or Plasma	
2001497	*FOXO1 (FKHR)* (13q14) Gene Rearrangement by FISH	*FOXO1 (FKHR)* (13q14) Gene Rearrangement by FISH (3001297)
2011420	Herpesvirus 6 Antibody, IgM Screen with Reflex to Titer by IFA	Herpesvirus 6 Ab, IgM by IFA, Serum (3001284)
2001536	*IGH-BCL2* Fusion, t(14;18) by FISH	*IGH-BCL2* Fusion, t(14;18) by FISH (3001298)
2007226	*IGH-CCND1* Fusion, t(11;14) by FISH	*IGH-CCND1* Fusion, t(11;14) by FISH (3001306)
2001538	*IGH-MYC* Fusion t(8;14) by FISH	*IGH-MYC* Fusion t(8;14) by FISH (3001299)
2014683	LeukoStrat CDx *FLT3* Mutation Detection by PCR	*FLT3* ITD and TKD Mutation Detection (3001161)
2003016	*MDM2* Gene Amplification by FISH	*MDM2* Gene Amplification by FISH (3001301)
2013082	*MET* Gene Amplification by FISH	*MET* Gene Amplification by FISH (3001313)
0091090	Methaqualone Quantitative, Serum or Plasma	
2002345	*MYC* (8q24) Gene Rearrangement by FISH	*MYC* (8q24) Gene Rearrangement by FISH (3001300)
2007227	*MYCN (N-MYC)* Gene Amplification by FISH	*MYCN (N-MYC)* Gene Amplification by FISH (3001307)
0099685	*Neisseria gonorrhoea* Antibodies, Total	*Neisseria gonorrhoeae* Antibody by CF, Serum (3001291)
2008604	1p/19q Deletion by FISH	1p/19q Deletion by FISH (3001309)
2003237	PhenoSense Entry	
2003235	PhenoSense Integrase Inhibitor	
0051309	Platelet Antigen 1 Genotyping (HPA-1)	Platelet Antigen 1 Genotyping (HPA-1) (3001170)
0051314	Platelet Antigen 15 Genotyping (HPA-15)	Platelet Antigen Genotyping Profile (3000193)
0051310	Platelet Antigen 2 Genotyping (HPA-2)	Platelet Antigen Genotyping Profile (3000193)
0051311	Platelet Antigen 3 Genotyping (HPA-3)	Platelet Antigen Genotyping Profile (3000193)
0051490	Platelet Antigen 4 Genotyping (HPA-4)	Platelet Antigen Genotyping Profile (3000193)
0051312	Platelet Antigen 5 Genotyping (HPA-5)	Platelet Antigen Genotyping Profile (3000193)
0051313	Platelet Antigen 6 Genotyping (HPA-6)	Platelet Antigen Genotyping Profile (3000193)
0051308	Platelet Antigen Genotyping Panel	Platelet Antigen Genotyping Profile (3000193)
2007533	Progressive Myoclonic Epilepsy (PME) Panel, Sequence Analysis and Exon-Level Deletion/Duplication	
2004091	Protein Gene Product (PGP) 9.5 by Immunohistochemistry	
2008095	14-3-3 Protein Tau/Theta, CSF	14-3-3 Protein Tau, Total, CSF (3001255)
2012654	*RET* Gene Rearrangements by FISH	*RET* Gene Rearrangements by FISH (3001312)
2008418	*ROS1* by FISH	*ROS1* by FISH (3001308)
0065067	Rotavirus and Adenovirus 40-41 Antigens	Rotavirus Antigen by EIA (0065088) or Gastrointestinal Viral Panel by PCR (2013577)
2007222	*SS18 (SYT)* (18q11) Gene Rearrangement by FISH	*SS18 (SYT)* (18q11) Gene Rearrangement by FISH (3001303)
0091574	Strychnine, Serum or Plasma	
0091386	Temazepam and Metabolite Quantitative, Serum or Plasma	
0091541	Tiagabine, Serum or Plasma	Tiagabine Quantitative, Serum/Plasma (3001184)
0091555	Tin, Total, Whole Blood	
0091399	Trihexyphenidyl Quantitative, Serum or Plasma	
0091396	Trimethoprim, Serum or Plasma	
2004747	Trofile DNA Co-Receptor Tropism Assay	
0020054	Viscosity, Whole Blood	Viscosity, Serum (0020056)