ARUP LABORATORIES

A nonprofit enterprise of the University of Utah and its Department of Pathology

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Effective as of 09/08/2026

Additional ordering and billing information

Information when ordering laboratory tests that are billed to Medicare/Medicaid

Information regarding Current Procedural Terminology (CPT)

Test Number	Mnemonic	Test Name	New Test	Test Name Change	Specimen Requirements	Methodology	Note	Interpretive Data	Reference Interval	Component Charting Name	Component Change	Reflex Pattern	Result Type	Ask at Order Prompt	Numeric Map	Unit of Measure	CPT Code	Pricing Change	Inactivation w/ Replacement	Inactivation w/o Replacement
0081344	CYFRA	CYFRA 21-1 (Cytokeratin 19 Fragment), Serum																		x
0097688	BREAKAGE	Chromosome Analysis - Breakage, Fanconi Anemia, Whole Blood			x															
2006328	GLUT TOT	Glutathione Total			x															
2008682	STEROIDS	Anabolic Steroids, Urine - Screen with Reflex to Confirmation															x			
2014686	TRAMADOL	Tramadol and Metabolite, Quantitative, Serum or Plasma			x			x									x			
3002351	LTE URN	Leukotriene E4, Random Urine			x															
3003895	AAV8 Scrn	AAV8 Total Antibody Assay	x																	
3004792	LTE 24 URN	Leukotriene E4, 24 -Hour Urine			x															
3021300	XYLAZINE U	Xylazine, Urine	x																	
3021399	NFLC P	Neurofilament Light Chain, Plasma	x																	
3021400	NFLC S	Neurofilament Light Chain, Serum	x																	

TEST CHANGE

Chromosome Analysis - Breakage, Fanconi Anemia, Whole Blood

0097688, BREAKAGE

Specimen Requirements:	
Patient Preparation:	
Collect:	Dark green (sodium heparin).
Specimen Preparation:	Specimen must be received at performing laboratory within 48 hours of collection. Do not send to ARUP Laboratories. For direct submission instructions, please contact ARUP Referral Testing at 800-242-2787 ext. 5161. Transport 4 mL whole blood. (Min: 4 mL). Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Transport Temperature:	Specimen must be sent directly to performing laboratory. Room temperature. Also acceptable: Refrigerated.
Unacceptable Conditions:	Clotted specimens.
Remarks:	Ordering physician name~~, and~~ NPI number, and facility address are required.
Stability:	Ambient: 48 hours; Refrigerated: 48 hours; Frozen: Unacceptable
Methodology:	Cell Culture / Stain
Note:	Chromosome breakage study performed by culturing cells in both mitomycin-C (MMC) and diepoxybutane (DEB). These studies involve culturing of living cells; therefore, turnaround times given represent average times, which are subject to multiple variables. A routine Giemsa-banded chromosome analysis is included with breakage analysis. A processing fee will be charged if this procedure is canceled at the client's request after the test has been set up, or if the specimen integrity is inadequate to allow culture growth.
CPT Codes:	88230; add 88249 if performed
New York DOH Approval Status:	Specimens from New York clients will be sent out to a New York DOH approved laboratory, if possible.
Interpretive Data:	
Reference Interval:	

TEST CHANGE

Glutathione Total

2006328, GLUT TOT

Specimen Requirements:	
Patient Preparation:	
Collect:	Yellow (ACD solution A) or yellow (ACD solution B). ~~) (ARUP supply #49658). Available online through eSupply using ARUP Connect(TM) or contact ARUP Client Services at 800-522-2787.~~
Specimen Preparation:	Transport whole blood in original collection container. ACD solution A: 8.5 mL (Min: 4.2 mL) or ACD solution B: 6 mL (Min: 3 mL) or Transfer 1 mL aliquot whole blood from a fully drawn tube to an ARUP standard transport tube with documentation of original collection tube (Min: 1 mL). Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Transport Temperature:	Critical refrigerated
Unacceptable Conditions:	
Remarks:	Collection tube must be filled greater than 50% of total volume.
Stability:	Ambient: Unacceptable; Refrigerated: 3 weeks; Frozen: Unacceptable
Methodology:	Quantitative Kinetic Assay
Note:	
CPT Codes:	82978
New York DOH Approval Status:	This test is New York DOH approved.
Interpretive Data:	
Reference Interval:	
Refer to report	

TEST CHANGE

Anabolic Steroids, Urine - Screen with Reflex to Confirmation

2008682, STEROIDS

Specimen Requirements:	
Patient Preparation:	
Collect:	Urine.
Specimen Preparation:	Transfer 4 mL urine to ARUP standard transport tubes. (Min: 1.6 mL) Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Transport Temperature:	Refrigerated. Also acceptable: Frozen.
Unacceptable Conditions:	
Remarks:	
Stability:	Ambient: Unacceptable; Refrigerated: 1 month; Frozen: 2 years
Methodology:	Qualitative Colorimetry / Qualitative High Performance Liquid Chromatography-Tandem Mass Spectrometry ~~(HPLC-MS/MS)~~
Note:	If this test detects the presence of any of the included steroids, confirmation testing will be added at no additional charge. Test includes: bolasterone, boldenone, clenbuterol, clostebol~~Bolasterone, Boldenone, Clenbuterol, Clostebol~~ metabolite, clostebol, creatinine, drostanolone~~Clostebol, Creatinine, Drostanolone~~ metabolite, epitestosterone, fluoxymesterone, methandrostenolone, methandrostenolone~~Epitestosterone, Fluoxymesterone, Methandrostenolone, Methandrostenolone~~ metabolite, methenolone, methyltestosterone, nandrolone~~Methenolone, Methyltestosterone, Nandrolone~~ metabolite, nandrolone, norandrostenedione, norethandrolone~~Nandrolone, Norandrostenedione, Norethandrolone~~ metabolite, norethandrolone, norethindrone, oxandrolone, oxymetholone~~Norethandrolone, Norethindrone, Oxandrolone, Oxymetholone~~ metabolite, probenecid, stanozolol~~Probenecid, Stanozolol~~ metabolite, stanozolol, testosterone/epitestosterone~~Stanozolol, Testosterone/Epitestosterone~~ ratio, testosterone, tetrahydrogestrinone, trenbolone~~Testosterone, Tetrahydrogestrinone, Trenbolone~~ metabolite, t~~T~~urinabol.
CPT Codes:	80307; 82570; if reflexed~~positive~~ add 80328; 81002 ~~(Alt code: if positive add G0480)~~
New York DOH Approval Status:	This test is New York DOH approved.
Interpretive Data:	
Reference Interval:	

Refer to~~By~~ report

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Effective Date: September 8, 2026

TEST CHANGE

Tramadol and Metabolite, Quantitative, Serum or Plasma

2014686, TRAMADOL

Specimen Requirements:	
Patient Preparation:	
Collect:	Plain red, lavender (EDTA), or pink (K2EDTA).
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) Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Transport Temperature:	Frozen~~Refrigerated~~. Also acceptable: Room temperature or refrigerated~~frozen~~.
Unacceptable Conditions:	Polymer gel separation tube (SST or PST). ~~Separator tubes.~~
Remarks:	
Stability:	Ambient: 2 weeks; Refrigerated: 2 weeks; Frozen: 11 months
Methodology:	Qualitative High Performance Liquid Chromatography-Tandem Mass Spectrometry
Note:	Peak serum levels are recommended when monitoring patients because the level in the blood drops so rapidly that many negative results are found at the trough. The peak occurs at 40 to 90 minutes post dose.
CPT Codes:	80373 ~~(Alt code: G0480)~~
New York DOH Approval Status:	This test is New York DOH approved.
Interpretive Data:	
~~By report~~	
Reference Interval:	
Refer to~~By~~ report	

Deleted Cells

Deleted Cells

TEST CHANGE

Leukotriene E4, Random Urine

3002351, LTE URN

Specimen Requirements:	
Patient Preparation:	Patients taking 5-lipoxygenase inhibitor Zileuton/Zyflo may have decreased concentrations of leukotriene E4 (LTE4). If possible, discontinue 48 hours prior to collection.
Collect:	Urine.
Specimen Preparation:	Transfer 5 mL urine to ARUP standard transport tubes (Min: 2 mL). Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Transport Temperature:	Frozen. ~~Also acceptable: Refrigerated.~~
Unacceptable Conditions:	
Remarks:	
Stability:	Ambient: 8~~24~~ hours; Refrigerated: 3 days~~1 week~~; Frozen: 28 days
Methodology:	Quantitative Colorimetry / Liquid Chromatography-Tandem Mass Spectrometry
Note:	
CPT Codes:	82542; 82570
New York DOH Approval Status:	This test is New York DOH approved.
Interpretive Data:	
Reference Interval:	
Refer to report~~By Report~~	

NEW TEST – Available Now

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AAV8 Total Antibody Assay

3003895, AAV8 Scrn

Specimen Requirements:	
Patient Preparation:	
Collect:	Serum separator tube
Specimen Preparation:	Transfer 1 mL serum to an ARUP standard transport tube. (Min: 0.5 mL)
Transport Temperature:	Critical frozen
Unacceptable Conditions:	Hemolyzed specimens. Anything other than published.
Remarks:	Collect the patient's whole blood in a serum separator tube. NOTE: When drawing blood for the AAV8 Total Antibody Assay, universal precautions for bloodborne pathogens should be observed. Centrifuge the specimen and separate the serum within 72 hours of collection. Refer to your manufacturer's manual for recommended centrifuge speed and duration. Transfer 1 mL (minimum: 0.5 mL) of serum into a polypropylene pour-off (transport) tube. Sample stability for the AAV8 Total Antibody Assay has not been evaluated in tube types other than the ARUP transport tube (polypropylene). Failure to provide sufficient volume may result in the need for patient redraw. Label the transport tube with the patient's first and last name, date of birth, and sex. Freeze serum specimen at -10 C or below. Ship frozen serum specimens to ARUP as soon as possible and use overnight delivery to ensure next day arrival at ARUP. NOTE: Serum specimens must be frozen before they are shipped to ARUP Laboratories. NOTE: HCPs in New York who would like to order this test should contact ARUP Client Services for more information.
Stability:	Frozen (-10 C or colder): Acceptable; Ambient: Unacceptable; Refrigerated: Unacceptable
Methodology:	Qualitative Electrochemiluminescent Immunoassay (ECLIA)
Note:	Sponsored testing program eligibility criteria: Patients must be 8 years of age or older and have a confirmed diagnosis of glycogen storage disease type Ia (GSD Ia). 1. AAV8 Total Antibody Assay is offered at no cost to support an FDA-approved therapeutic. While the assay is provided at no cost, shipping supplies and any other expenses, charges, services, costs, materials, or lab tests that are not provided by

	ARUP are not covered under this program. No patient, private health plan, government health program, or any other individual or entity shall be billed for this test, and no reimbursement will be sought for any tests or materials provided at no cost in connection with such test. No-cost access to the test is not contingent upon the recommendation, order, prescription, or purchase of any other product or service. 2. The test should be ordered using the ARUP AAV8 Total Antibody Assay test requisition form or via ARUP's web-based ordering interface (available only to existing ARUP clients). The full name of the ordering physician, NPI number, and physician attestation must be included on the ARUP test requisition form to ensure timely testing of the specimen. Incomplete information may delay testing. 3. To send a specimen to ARUP, contact your local hospital/reference lab to determine if they have an existing process for shipping specimens to ARUP laboratories. If not, contact ARUP Client Services at 800-522-2787 to be directed to an alternative ordering mechanism. 4. This testing is being offered by ARUP as part of a collaboration between ARUP and a collaborator. The ordering provider acknowledges that ARUP may report information related to the number of tests ordered and the ordering facility to ARUP's collaborator. The terms applicable to ARUP's performance of this test are established through this program and ARUP's performance is not subject to the services agreement, if any, between ARUP and the ordering facility.
CPT Codes:	
New York DOH Approval Status:	Specimens from New York clients will be sent out to a New York DOH approved laboratory, if possible.
Interpretive Data:	
This test has only been validated on human serum samples. Other specimen types or conditions have not been validated.	
Reference Interval:	

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

TEST CHANGE

Leukotriene E4, 24-Hour Urine

3004792, LTE 24 URN

Specimen Requirements:	
Patient Preparation:	Patients taking 5-lipoxygenase inhibitor zileuton (Zyflo) may have decreased concentrations of leukotriene E4 (LTE4). If possible, discontinue 48 hours prior to collection.
Collect:	24-hour urine. ~~Refrigerate during collection.~~
Specimen Preparation:	From a well-mixed 24-hour collection transfer 5 mL urine to ARUP standard transport tubes (Min: 2 mL). Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Transport Temperature:	Frozen. ~~Also acceptable: Refrigerated~~
Unacceptable Conditions:	
Remarks:	Collection duration and urine volume must be provided for testing. Total collection volume must be greater than 300 mL.
Stability:	Ambient: 8~~24~~ hours; Refrigerated: 3 days~~1 week~~; Frozen: 28 days
Methodology:	Quantitative Colorimetry / Liquid Chromatography-Tandem Mass Spectrometry
Note:	
CPT Codes:	82542
New York DOH Approval Status:	This test is New York DOH approved.
Interpretive Data:	
Reference Interval:	
Refer to report~~By Report~~	

NEW TEST

Click for Pricing

Xylazine, Urine

3021300, XYLAZINE U

Specimen Requirements:	
Patient Preparation:	
Collect:	Urine.
Specimen Preparation:	Transfer 1 mL urine to an ARUP standard transport tube. (Min: 0.3 mL) Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Transport Temperature:	Refrigerated. Also acceptable: Room temperature or frozen.
Unacceptable Conditions:	
Remarks:	
Stability:	Ambient: 1 month; Refrigerated: 1 month; Frozen: 1 month
Methodology:	Quantitative High Performance Liquid Chromatography-Tandem Mass Spectrometry
Note:	
CPT Codes:	80375
New York DOH Approval Status:	This test is New York DOH approved.
Interpretive Data:	
Reference Interval:	
Refer to report	

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

NEW TEST

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Neurofilament Light Chain, Plasma

3021399, NFLC P

Specimen Requirements:	
Patient Preparation:	Discontinue biotin supplements (vitamin B7 or B8, vitamin H, or coenzyme R) for 72 hours prior to collection.
Collect:	Lavender (K2EDTA).
Specimen Preparation:	Separate from cells and transfer 1 mL plasma to an ARUP standard transport tube. (Min: 0.7 mL) Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Transport Temperature:	Room temperature. Also acceptable: Refrigerated or frozen.
Unacceptable Conditions:	
Remarks:	
Stability:	Ambient: 2 weeks; Refrigerated: 2 weeks; Frozen: 2 weeks
Methodology:	Quantitative Electrochemiluminescent Immunoassay (ECLIA)
Note:	Direct comparisons of absolute values can only be done on the same source fluid (serum or plasma).
CPT Codes:	83884
New York DOH Approval Status:	This test is New York DOH approved.
Interpretive Data:	
Reference Interval:	
Refer to report	

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

NEW TEST

Click for Pricing

Neurofilament Light Chain, Serum

3021400, NFLC S

Specimen Requirements:	
Patient Preparation:	Discontinue biotin supplements (vitamin B7 or B8, vitamin H, or coenzyme R) for 72 hours prior to collection.
Collect:	Plain red or serum separator tube (SST).
Specimen Preparation:	Transfer 1 mL serum to an ARUP standard transport tube. (Min: 0.7 mL) Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.
Transport Temperature:	Room temperature. Also acceptable: Refrigerated or frozen.
Unacceptable Conditions:	
Remarks:	
Stability:	Ambient: 2 weeks; Refrigerated: 2 weeks; Frozen: 2 weeks
Methodology:	Quantitative Electrochemiluminescent Immunoassay (ECLIA)
Note:	Direct comparisons of absolute values can only be done on the same source fluid (serum or plasma).
CPT Codes:	83884
New York DOH Approval Status:	This test is New York DOH approved.
Interpretive Data:	
Reference Interval:	
Refer to report	

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

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Inactivations

The following will be discontinued from ARUP's test menu on September 8, 2026
Replacement test options are indicated when applicable.

Test Number	Test Name	Refer to Replacement Test
0081344	CYFRA 21-1 (Cytokeratin 19 Fragment), Serum	