

Effective as of **01/02/2024**

**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	Performed/Reported	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
2003204	A GALACTO	Alpha-Galactosidase, Serum			x																
2005023	NARCOLEPS Y	Narcolepsy (HLA-DQB1*06:02) Genotyping (Change effective as of 01/02/24: Refer to 3017170 in the January Hotline)																		x	
2007237	PLT AB GP	Platelet Antibody (Glycoprotein) Plasma/Euate			x																
3001255	14-3-3 TAU	Prion Markers (CJD), CSF			x	x												x			
3003311	KRATOM U	Kratom (Mitragynine) - Screen With Reflex to Confirmation, Urine		x	x																
3003913	ORTHO PAN	Orthopedic Metals Panel (Chromium, Cobalt, Titanium), Body Fluid			x																
3016760	LYME STTTC	Borrelia burgdorferi VlsE1/pepC10 Antibodies, CSF, Total by ELISA With Reflex to IgM and IgG by Immunoblot (Standard Two-Tier Testing, CSF)			x																
3017170	HLANARCO	Narcolepsy HLA-DQ Genotyping (HLA-DQB1*06:02)		x																	



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

## Hotline Table of Contents

**TEST CHANGE**

Alpha-Galactosidase, Serum

2003204, A GALACTO

Specimen Requirements:

Patient Preparation:

Collect: Plain ~~r~~Red or serum separator tube~~Serum Separator Tube~~ (SST).

Specimen Preparation: Transfer 2 mL serum to an ARUP standard transport tube~~Standard Transport Tube~~. (Min: 0.2 mL) Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.

Transport Temperature: CRITICAL FROZEN.

Unacceptable Conditions: Thawed specimens.

Remarks: Physician name and phone number are required.

Stability: Ambient: Unacceptable; Refrigerated: 24 hours; Frozen: 2 weeks

Methodology: Quantitative Fluorometry

Performed: Varies

Reported: 8-18 days

Note: Results for this assay are not useful for carrier determination. Carriers usually have levels in the normal range.

CPT Codes: 82657

New York DOH Approval Status: This test is New York DOH approved.

Interpretive Data:

Reference Interval:

By report

**TEST CHANGE**

**Platelet Antibody (Glycoprotein) Plasma/Euate**

2007237, PLT AB GP

**Specimen Requirements:**

**Patient Preparation:** Platelet transfusion given within 4 days of specimen collection may affect results.

**Collect:** Yellow (ACD solution A or B). Collect and ship same day, Sunday-Wednesday~~Monday-Thursday~~ only.

**Specimen Preparation:** Transport 40 mL whole blood if platelet count is less than 100,000 or 10 mL if platelet count is greater than 100,000. Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.

**Transport Temperature:** CRITICAL REFRIGERATED.

**Unacceptable Conditions:**

**Remarks:**

**Stability:** Ambient: Unacceptable; Refrigerated: 4 days; Frozen: Unacceptable

**Methodology:** Qualitative Enzyme-Linked Immunosorbent Assay (ELISA)

**Performed:** Varies

**Reported:** 3-6 days

**Note:**

**CPT Codes:** 86022; 86023

**New York DOH Approval Status:** This test is New York DOH approved.

**Interpretive Data:**

**Reference Interval:**

**By Report**

**TEST CHANGE**

**Prion Markers (CJD), CSF**

3001255, 14-3-3 TAU

**Specimen Requirements:**

**Patient Preparation:** Patient must be 12 years of age or older.

**Collect:** CSF

**Specimen Preparation:** The first 2 mL of CSF that flows from the tap should be discarded. Transfer ~~2~~5 mL CSF to ARUP standard transport tubes and freeze immediately. (Min: ~~1~~2 mL) Test is not performed at ARUP; separate specimens must be submitted when multiple tests are ordered.

**Transport Temperature:** CRITICAL FROZEN

**Unacceptable Conditions:**

**Remarks:** Completed requisition form required. Cloudy or pink specimens may result in partial results for some components.

**Stability:** Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: Indefinitely

**Methodology:** ~~Qualitative Western Blot~~/Quantitative Enzyme-Linked Immunosorbent Assay (ELISA)/Qualitative Real-Time Quaking-Induced Conversion

**Performed:** Varies

**Reported:** 7-17 days

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

**CPT Codes:** 86317; ~~84182~~; 0035U

**New York DOH Approval Status:** This test is New York DOH approved.

**Interpretive Data:**

**Reference Interval:**

By report



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Effective Date: **January 2, 2024**

**TEST CHANGE**

Kratom (Mitragynine) - Screen ~~W~~with Reflex to Confirmation/~~Quantitation~~, Urine  
3003311, KRATOM U

Specimen Requirements:

Patient Preparation:

Collect: Urine.

Specimen Preparation: Transfer 10 mL urine to ARUP ~~standard transport tubes~~~~Standard Transport Tubes~~. (Min: 1 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: Urine from preservative tube.

Remarks:

Stability: Ambient: 72 hours; Refrigerated: 2 weeks; Frozen: 6 months

Methodology: Qualitative Immunoassay/~~Qualitative Liquid Chromatography-Tandem Mass Spectrometry~~

Performed: Varies

Reported: 6-9 days

Note: If screen is positive, then confirmation will be added. Additional charges apply.

CPT Codes: 80307 if reflexed, add 80323

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:

By report

**TEST CHANGE**

**Orthopedic Metals Panel (Chromium, Cobalt, Titanium), Body Fluid**

3003913, ORTHO PAN

**Specimen Requirements:**

**Patient Preparation:**

**Collect:** Body fluid.

**Specimen Preparation:** Transfer 5 mL body fluid to a trace element-free transport tube (ARUP supply #43116) or acid-washed transfer vial (ARUP supply #54350) available online through eSupply using ARUP Connect (TM) or contact ARUP Client Services at (800-)522-2787. (Min: 2.82 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: Undetermined; Refrigerated: Undetermined; Frozen: Undetermined

**Methodology:** Quantitative Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)

**Performed:** Varies

**Reported:** 7-10 days

**Note:**

**CPT Codes:** 82495; 83018 x 2

**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:**

By report



**TEST CHANGE**

**Borrelia burgdorferi VlsE1/pepC10 Antibodies, CSF, Total by ELISA With Reflex to IgM and IgG by Immunoblot (Standard Two-Tier Testing, CSF)**

3016760, LYME STTTC

**Specimen Requirements:**

**Patient Preparation:**

**Collect:** CSF. New York State Clients: CSF and serum separator tube (SST) or plain red. Serum specimen should be drawn within 24 hours of CSF collection.  
~~CSF.~~

**Specimen Preparation:** Transfer 6 mL CSF to an ARUP standard transport tube. (Min: 2.5 mL) New York State Clients: Transfer 2 mL CSF (Min: 1 mL) to an ARUP standard transport tube AND transfer 2 mL serum to an ARUP standard transport tube.

**Transport Temperature:** Refrigerated.

**Unacceptable Conditions:** Bacterially contaminated, heat-inactivated, hemolyzed, or xanthochromic specimens.

**Remarks:**

**Stability:** Ambient: 8 hours; Refrigerated: 2 weeks; Frozen: 1 month (avoid repeated freeze/thaw cycles)

**Methodology:** Semi-Quantitative Enzyme-Linked Immunosorbent Assay (ELISA)/Qualitative Immunoblot

**Performed:** Sun-Sat

**Reported:** 1-4 days

**Note:** If VlsE1/pepC10 antibodies by ELISA is 0.91 IV or greater, then B. burgdorferi IgG antibody by immunoblot and IgM antibody by immunoblot will be added. Additional charges apply.

**CPT Codes:** 86618; if reflexed, add 86617 x2

**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:**

The detection of antibodies to *Borrelia burgdorferi* in cerebrospinal fluid may indicate central nervous system infection. However, consideration must be given to possible contamination by blood or transfer of serum antibodies across the blood-brain barrier. Lyme disease diagnosis in serum is recommended prior to any CSF studies.

Component	Interpretation
B. burgdorferi VlsE1/pepC10 Abs, ELISA	0.90 IV or less: Negative; VlsE1 and pepC10 antibodies to B. burgdorferi not detected. 0.91-1.09 IV: Equivocal; repeat testing in 10-14 days may be helpful. 1.10 IV or greater: Positive; VlsE1 and pepC10 antibodies to B. burgdorferi detected.

Reference Interval:

Test Number	Components	Reference Interval
	B. burgdorferi VlsE1/pepC10 Abs, CSF	0.90 IV or less

**NEW TEST**

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**Narcolepsy HLA-DQ Genotyping (HLA-DQB1\*06:02)**

3017170, HLANARCO

**Specimen Requirements:**

**Patient Preparation:**

**Collect:** Lavender (EDTA). Also acceptable: Yellow (ACD solution A).

**Specimen Preparation:** Transport 3 mL whole blood. (Min: 1 mL)

**Transport Temperature:** Refrigerated.

**Unacceptable Conditions:** Specimens collected in yellow (ACD solution B). Clotted, grossly hemolyzed, or heparinized specimens.

**Remarks:**

**Stability:** Ambient: 72 hours; Refrigerated: 1 week; Frozen: Unacceptable.

**Methodology:** Massively Parallel Sequencing Sequence-Specific Oligonucleotide Probe Hybridization Polymerase Chain Reaction (PCR)

**Performed:** Mon-Fri

**Reported:** 8-15 days

**Note:**

**CPT Codes:** 81382

**New York DOH Approval Status:** This test is New York DOH approved.

**Interpretive Data:**

**Background information for Narcolepsy (HLA-DQB1\*06:02) Genotyping:**

**Characteristics:** Narcolepsy is a chronic neurological sleep disorder that manifests in excessive daytime sleepiness and difficulty in maintaining wakefulness. Narcolepsy type 1 is associated with cataplexy (the sudden loss of muscle tone triggered by strong emotions). Additionally, disturbed nighttime sleep, sleep paralysis, and hypnagogic hallucinations (occurring in the period between sleep and wakefulness) are common.

**Incidence:** Varies, depending on ethnicity. It affects 0.02-0.05% of the populations in the US and Europe, it is most common in Japan (0.16-0.18%).

Inheritance: Multifactorial.

Cause: The *HLA-DQB1\*06:02* allele is strongly associated with narcolepsy, but by itself is not causative. Homozygosity for *DQB1\*06:02* allele doubles the risk, compared to heterozygous individuals.

Alleles Tested: *HLA-DQB1* alleles.

Clinical Sensitivity: 85-95 percent depending on ethnicity. Greater than 98% of affected Caucasians with cataplexy have the *HLA-DQB1\*06:02* allele.

Clinical Specificity: Less than 1 percent; 15-25 percent of unaffected Caucasians carry the *HLA-DQB1\*06:02* allele.

Methodology: Polymerase Chain Reaction/Massively Parallel Sequencing, or Polymerase Chain Reaction/Sequence-Specific Oligonucleotide Probe Hybridization

Analytical Sensitivity and Specificity: 99 percent.

Limitations: Rare diagnostic errors may occur due to primer site mutations. Other genetic and nongenetic factors that influence narcolepsy disease are not evaluated. In cases where an HLA allele cannot be resolved unambiguously, the allele assignment will be reported as the most common, based on allele frequencies from the common, intermediate, and well-documented alleles catalogue version 3.0.0 (Hurley CK et al, 2020).

This test was developed and its performance characteristics determined by the Histocompatibility & Immunogenetics laboratory at the University of Utah Health. It has not been cleared or approved by the US Food and Drug Administration (FDA). The FDA has determined that such clearance or approval is not necessary. This test is used for clinical purposes. It should not be regarded as investigational or for research. Histocompatibility & Immunogenetics laboratory is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA-88) as qualified to perform high complexity clinical laboratory testing.

Performed at: Histocompatibility & Immunogenetics Laboratory, University of Utah Health, 417 Wakara Way, Suite 3220, Salt Lake City, UT 84108.

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

Reference Interval:

By report

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

## Inactivations

The following will be discontinued from ARUP's test menu on **January 2, 2024**  
Replacement test options are indicated when applicable.

Test Number	Test Name	Refer to Replacement Test
2005023	Narcolepsy (HLA-DQB1*06:02) Genotyping (Change effective as of 01/02/24: Refer to 3017170 in the January Hotline)	Narcolepsy Genotyping (HLA-DQB1*06:02) (3017170)