

**Update Summary**

<b>Update Existing Test</b>	10/20/2025	<a href="#">ANGLM - "Angelman and Prader-Willi Synd by MLPA"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">APCAR - "Activated Protein C Resistance Profile"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">BHYD - "Beta-hydroxybutyrate, Serum"</a>
<b>Update Existing Test</b>	10/7/2025	<a href="#">BRCAP - "BRCA Panel (BRCA1, BRCA2)"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">DNARA - "Pseudocholinesterase Dibucaine"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">F8AR - "Factor VIII Activity"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">FLUPH - "Fluphenazine (Prolixin)"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">GLUCN - "Glucagon"</a>
<b>Update Existing Test</b>	10/7/2025	<a href="#">MNNG - "Myeloid Neoplasm NGS Panel"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">PB19 - "Parvovirus B19 by Qualitative PCR"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">PSE - "Pseudocholinesterase"</a>
<b>Update Existing Test</b>	10/7/2025	<a href="#">RPRT - "Rapid Plasma Reagin (RPR) Titer"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">VWFAR - "Von Willebrand Act Ristocetin"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">VWMUT - "Von Willebrand Factor Multimer"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">VWPAP - "Von Willebrand Panel"</a>
<b>Update Existing Test</b>	10/20/2025	<a href="#">WVFAP - "Von Willebrand Factor Antigen"</a>
<b>Inactivate Test With Replacement</b>	10/20/2025	<a href="#">JAK2P - "JAK2 Exon 12 Mutation Analysis by PCR" replaced by JAK2E - "JAK2 Exon 12 Mutation Analysis by PCR"</a>
<b>Inactivate Test With Replacement</b>	10/20/2025	<a href="#">MLH1 - "MLH1 Promoter Methylation" replaced by MLH1P - "MLH1 Promoter Methylation"</a>
<b>Inactivate Test With Replacement</b>	10/7/2025	<a href="#">PMSCQ - "Anti-PM/Scl-100 Ab (RDL)" replaced by PSABG - "PM/Scl-100 Antibody, IgG by Immunoblot"</a>
<b>Inactivate Test With Replacement</b>	10/20/2025	<a href="#">STRS - "Transferrin Receptor (TFR) Soluble" replaced by STR - "Soluble Transferrin Receptor"</a>
<b>Inactivate Test Without Replacement</b>	10/31/2025	<a href="#">K78 - "Ethylene Oxide IgE"</a>

**Update Existing Test**

Effective Date	10/20/2025
Name	Angelman and Prader-Willi Synd by MLPA
Code	ANGLM
Interface Order Code	3600286
Legacy Code	ANGLM
Notes	Update to New York approval, CPT code, alternate specimen, rejection criteria, stability, methodology, and turnaround time.

**Required Testing Changes**

New York Approval	New York DOH Approval Status: Yes
CPT Code(s)	81331
Alternate Specimen	Pink (K2EDTA)
Rejection Criteria	Transfused whole blood, severely hemolyzed whole blood, heparinized whole blood, frozen whole blood.
Stability	Room temperature: 7 days Refrigerated: 30 days Frozen: Unacceptable
Methodology	Methylation-Specific Multiplex Ligation-Dependent Probe Amplification (MS-MLPA)
Turnaround Time	14 - 16 days

**Update Existing Test**

Effective Date	10/20/2025
Name	Activated Protein C Resistance Profile
Code	APCAR
Interface Order Code	3619180
Legacy Code	APCAR
Notes	Update to specimen requirements, stability, and reference range.

**Required Testing Changes**

Specimen Required	<b>Patient Preparation:</b> Collect using coagulation test collection method. <b>Collect:</b> Light blue sodium citrate <b>Specimen Preparation:</b> Send 1.5 mL platelet-poor plasma in a screw capped plastic vial. CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered. <b>Minimum Volume:</b> 1.0 mL <b>Transport Temperature:</b> CRITICAL FROZEN
Stability	Room temperature: 4 hours Refrigerated: Unacceptable <b>Frozen: 3 months</b>
Reference Range	2.00 or greater

**Update Existing Test**

<b>Effective Date</b>	10/20/2025
<b>Name</b>	Beta-hydroxybutyrate, Serum
<b>Code</b>	BHYD
<b>Interface Order Code</b>	3605800
<b>Legacy Code</b>	BHYD
<b>Notes</b>	Update to alternate specimen, stability, and reference range.

**Required Testing Changes**

<b>Alternate Specimen</b>	Plasma: Lavender EDTA, green sodium or lithium heparin, gray sodium fluoride, <b>Pink (K2EDTA)</b>
<b>Stability</b>	Room temperature: 2 hours Refrigerated: 7 days <b>Frozen: 2 months</b>
<b>Reference Range</b>	<b>0.02 - 0.27 mmol/L</b>

**Update Existing Test**

<b>Effective Date</b>	10/7/2025
<b>Name</b>	BRCA Panel (BRCA1, BRCA2)
<b>Code</b>	BRCAP
<b>Interface Order Code</b>	3400510
<b>Legacy Code</b>	BRCAP
<b>Notes</b>	Update to specimen requirements.

**Required Testing Changes**

<b>Specimen Required</b>	<i>Collect:</i> Lavender EDTA <b>Specimen Preparation:</b> Send 5.0 mL whole blood room temperature. Send report of results for family member with known BRCA mutation. <b>Minimum Volume:</b> 2.0 mL <b>Transport Temperature:</b> Room temperature
--------------------------	---

**Update Existing Test**

<b>Effective Date</b>	10/20/2025
<b>Name</b>	Pseudocholinesterase Dibucaine
<b>Code</b>	DNARA
<b>Interface Order Code</b>	3685445
<b>Legacy Code</b>	DNARA
<b>Notes</b>	Update to specimen requirements, alternate specimen, rejection criteria, and methodology.

**Required Testing Changes**

<b>Specimen Required</b>	<p><i>Patient Preparation:</i> Sample must be drawn prior to surgery or more than two days following surgery. Do not draw in recovery room.</p> <p><i>Collect:</i> Serum separator tube (SST)</p> <p><b>Specimen Preparation:</b> Allow sample to clot completely at room temperature. Separate serum or plasma from cells within 2 hours. Send 1.0 mL serum or plasma in a screw capped plastic vial.</p> <p><i>Minimum Volume:</i> 0.25 mL</p> <p><i>Transport Temperature:</i> Refrigerated</p>
<b>Alternate Specimen</b>	Serum: Red top; Plasma: EDTA, green sodium or lithium heparin, pink (K2EDTA)
<b>Rejection Criteria</b>	Light blue (sodium citrate), gray (oxalate/fluoride) whole blood
<b>Methodology</b>	Quantitative Enzymatic Assay

**Update Existing Test**

<b>Effective Date</b>	10/20/2025
<b>Name</b>	Factor VIII Activity
<b>Code</b>	F8AR
<b>Interface Order Code</b>	3619020
<b>Legacy Code</b>	F8AR
<b>Notes</b>	Update to specimen requirements and rejection criteria.

**Required Testing Changes**

<b>Specimen Required</b>	<p><i>Collect:</i> Light blue sodium citrate</p> <p><b>Specimen Preparation:</b> Send 2.0 mL Platelet-poor plasma in a screw capped plastic vial.</p> <p><b>CRITICAL FROZEN.</b> Separate specimens must be submitted when multiple tests are ordered.</p> <p><i>Minimum Volume:</i> 1.0 mL</p> <p><i>Transport Temperature:</i> Critical frozen</p>
<b>Rejection Criteria</b>	Serum, clotted or hemolyzed specimens, EDTA plasma

**Update Existing Test**

Effective Date	10/20/2025
Name	Fluphenazine (Prolixin)
Code	FLUPH
Interface Order Code	3502860
Legacy Code	FLUPHEN
Notes	Update to specimen requirements, alternate specimen, stability, and reference range.

**Required Testing Changes**

Specimen Required	<p><b>Patient Preparation:</b> Timing of specimen collection: Pre-dose (trough) draw - At steady state concentration.</p> <p><b>Collect:</b> Red top</p> <p><b>Specimen Preparation:</b> Centrifuge, separate serum from cells within 2 hours and send 1.0 mL serum in a screw capped plastic vial.</p> <p><b>Minimum Volume:</b> 0.5 mL</p> <p><b>Transport Temperature:</b> Refrigerated</p>
Alternate Specimen	Plasma: Lavender (K2EDTA, K3EDTA), Pink (K2EDTA)
Stability	<p><b>Room temperature:</b> 48 hours</p> <p><b>Refrigerated:</b> 7 days</p> <p><b>Frozen:</b> 1 month (avoid repeated freeze/thaw cycles)</p>
Reference Range	<p>Therapeutic Range: 1.0 - 10.0 ng/mL</p> <p>Toxic: &gt;=15.0 ng/mL</p>

**Update Existing Test**

Effective Date	10/20/2025
Name	Glucagon
Code	GLUCN
Interface Order Code	3680690
Legacy Code	GLUCAGOARP
Notes	Update to specimen requirements, alternate specimen, rejection criteria, stability, methodology, and reference range.

**Required Testing Changes**

Specimen Required	<p><b>Patient Preparation:</b> Fast 8 - 12 hours prior to collection.</p> <p><b>Collect:</b> Lavender EDTA</p> <p><b>Specimen Preparation:</b> Mix well. Centrifuge, separate plasma within 1 hour of collection and send 2.0 mL plasma frozen in a sterile screw capped plastic vial. <b>Separate specimens must be submitted when multiple tests are ordered.</b></p> <p><b>Minimum Volume:</b> 0.5 mL</p> <p><b>Transport Temperature:</b> Frozen</p>
Alternate Specimen	Pink (K2EDTA)
Rejection Criteria	Hemolyzed, lipemic, icteric or clotted specimens
Stability	<p><b>Room temperature:</b> 4 hours</p> <p><b>Refrigerated:</b> 72 hours</p> <p><b>Frozen:</b> 1 month</p>
Methodology	Quantitative Enzyme-Linked Immunosorbent Assay
Reference Range	150 pg/mL

**Update Existing Test**

<b>Effective Date</b>	10/7/2025
<b>Name</b>	Myeloid Neoplasm NGS Panel
<b>Code</b>	MNGS
<b>Interface Order Code</b>	3000886
<b>Legacy Code</b>	MNGS
<b>Notes</b>	Update to CPT code.

**Required Testing Changes**

<b>CPT Code(s)</b>	81479
--------------------	-------

**Update Existing Test**

<b>Effective Date</b>	10/20/2025
<b>Name</b>	Parvovirus B19 by Qualitative PCR
<b>Code</b>	PB19
<b>Interface Order Code</b>	3688400
<b>Legacy Code</b>	PARVOD
<b>Notes</b>	Update to specimen requirements, alternate specimen, stability, and turnaround time.

**Required Testing Changes**

<b>Specimen Required</b>	<p><i>Collect:</i> Lavender EDTA</p> <p><i>Specimen Preparation:</i> Centrifuge, separate plasma from cells and send 1.0 mL plasma in a screw capped plastic vial. SPECIMEN SOURCE REQUIRED.</p> <p><i>Minimum Volume:</i> 0.5 mL</p> <p><b>Transport Temperature:</b> Frozen</p> <p><b>Bone Marrow:</b> Refrigerated</p> <p><b>Paraffin Embedded Tissue:</b> Room temperature</p>
<b>Alternate Specimen</b>	Serum separator tube (SST), CSF, amniotic fluid, bone marrow, synovial fluid and <b>Pink (K2EDTA)</b> . Tissue (freeze immediately) and paraffin embedded tissue block.
<b>Stability</b>	<p><b>Serum and Plasma:</b></p> <p>Room temperature: 24 hours</p> <p>Refrigerated: 5 days</p> <p>Frozen: 6 months</p> <p> </p> <p><b>Bone Marrow:</b></p> <p>Room temperature: 7 days</p> <p>Refrigerated: 7 days</p> <p>Frozen: 7 days</p> <p> </p> <p><b>Fresh tissue:</b></p> <p>Room temperature: Unacceptable</p> <p>Refrigerated: Unacceptable</p> <p>Frozen: 6 months</p> <p> </p> <p><b>Paraffin-embedded tissue:</b></p> <p>Room temperature: Indefinitely</p> <p>Refrigerated: Indefinitely</p> <p>Frozen: Unacceptable</p>
<b>Turnaround Time</b>	<b>3 - 6 days</b>

**Update Existing Test**

Effective Date	10/20/2025
Name	Pseudocholinesterase
Code	PSE
Interface Order Code	3685280
Legacy Code	PSEAR
Notes	Update to alternate specimen, methodology, and turnaround time.

**Required Testing Changes**

Alternate Specimen	Plasma: Lavender EDTA or Pink (K2EDTA); Serum: Red top
Methodology	Quantitative Enzymatic Assay
Turnaround Time	3 - 6 days

**Update Existing Test**

Effective Date	10/7/2025
Name	Rapid Plasma Reagin (RPR) Titer
Code	RPRT
Interface Order Code	3000101
Legacy Code	RPRT
Notes	Update to alternate specimen.

**Required Testing Changes**

Alternate Specimen	Serum: Red top Plasma: Lavender EDTA, green sodium or lithium heparin, blue sodium citrate.
--------------------	--

**Update Existing Test**

Effective Date	10/20/2025
Name	Von Willebrand Act Ristocetin
Code	VWFAR
Interface Order Code	3619200
Legacy Code	VWFACAR
Notes	Update to specimen requirements, rejection criteria, and turnaround time.

**Required Testing Changes**

Specimen Required	<b>Patient Preparation:</b> Collect using coagulation testing collection methods. <b>Collect:</b> Light blue sodium citrate <b>Specimen Preparation:</b> Send 1.5 mL <b>platelet-poor plasma</b> in a screw capped plastic vial. CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.
Rejection Criteria	Serum, <b>clotted</b> or hemolyzed specimens, EDTA plasma
Turnaround Time	3 - 5 days

Update Existing Test

Effective Date	10/20/2025
Name	Von Willebrand Factor Multimer
Code	VWMUT
Interface Order Code	3689400
Legacy Code	VWMULAR
Notes	Update to specimen requirements, rejection criteria, stability, and methodology.

Required Testing Changes

Specimen Required	<p><b>Patient Preparation:</b> Collect using coagulation test collection methods.</p> <p>Collect: Light blue sodium citrate</p> <p><b>Specimen Preparation:</b> Send 1.0 mL platelet-poor plasma in a screw capped plastic vial.</p> <p><b>CRITICAL FROZEN.</b> Separate specimens must be submitted when multiple tests are ordered.</p> <p><b>Minimum Volume:</b> 0.5 mL</p> <p><b>Transport Temperature:</b> CRITICAL FROZEN</p>
Rejection Criteria	Hemolyzed specimens, clotted specimens, serum, EDTA plasma
Stability	<p><b>Room temperature:</b> 4 hours</p> <p><b>Refrigerated:</b> Unacceptable</p> <p><b>Frozen:</b> 3 months</p>
Methodology	Qualitative Electrophoresis

Update Existing Test

Effective Date	10/20/2025
Name	Von Willebrand Panel
Code	VWPAR
Interface Order Code	3689300
Legacy Code	VWPAR
Notes	Update to specimen requirements.

Required Testing Changes

Specimen Required	<p><b>Patient Preparation:</b> Collect using coagulation test collection methods.</p> <p>Collect: Light blue sodium citrate</p> <p><b>Specimen Preparation:</b> Send 3.0 mL platelet-poor plasma in a screw capped plastic vial.</p> <p><b>CRITICAL FROZEN.</b> Separate specimens must be submitted when multiple tests are ordered.</p> <p><b>Minimum Volume:</b> 1.0 mL</p> <p><b>Transport Temperature:</b> Critical frozen</p>
-------------------	---

**Update Existing Test**

<b>Effective Date</b>	10/20/2025
<b>Name</b>	Von Willebrand Factor Antigen
<b>Code</b>	WVFAP
<b>Interface Order Code</b>	3619000
<b>Legacy Code</b>	VWFAGAR
<b>Notes</b>	Update to specimen requirements, rejection criteria, and turnaround time.

**Required Testing Changes**

<b>Specimen Required</b>	<p><b>Patient Preparation:</b> Collect using coagulation test collection methods.</p> <p><b>Collect:</b> Light blue sodium citrate</p> <p><b>Specimen Preparation:</b> Send 1.5 mL <b>platelet-poor</b> plasma in a screw capped plastic vial. CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered.</p> <p><b>Minimum Volume:</b> 1.0 mL</p> <p><b>Transport Temperature:</b> CRITICAL FROZEN</p>
<b>Rejection Criteria</b>	Serum, Clotted or hemolyzed specimens, EDTA plasma
<b>Turnaround Time</b>	3 - 5 days

**Inactivate Test With Replacement**

<b>Effective Date</b>	10/20/2025
-----------------------	------------

**Inactivated Test**

<b>Name</b>	JAK2 Exon 12 Mutation Analysis by PCR
<b>Code</b>	JAK2P
<b>Legacy Code</b>	JAK2P
<b>Interface Order Code</b>	3600302

**Replacement Test**

<b>Name</b>	JAK2 Exon 12 Mutation Analysis by PCR
<b>Code</b>	JAK2E
<b>CPT Code(s)</b>	81279
<b>Notes</b>	New York DOH Approval Status: Yes

**Specimen Requirements**

<b>Specimen Required</b>	Collect: Lavender EDTA <i>Specimen Preparation:</i> Send 5.0 mL whole blood. <i>Minimum Volume:</i> Whole blood: 1.0 mL; Bone marrow: 1.0 mL <i>Transport Temperature:</i> Refrigerated
<b>Alternate Specimen</b>	Bone marrow: Lavender EDTA - 3.0 mL
<b>Rejection Criteria</b>	Plasma, serum, FFPE tissue blocks/slides, frozen tissue, specimens collected in anticoagulants other than EDTA. Clotted or grossly hemolyzed specimens.
<b>Stability</b>	Room temperature: Unacceptable Refrigerated: 7 days Frozen: Unacceptable

**Performing Information**

<b>Methodology</b>	Polymerase Chain Reaction (PCR)
<b>Reference Range</b>	See report
<b>Performed Days</b>	Varies
<b>Turnaround Time</b>	5 - 11 days
<b>Performing Laboratory</b>	ARUP Reference Laboratory

**Interface Information**

<b>Legacy Code</b>	JAK2E		
<b>Interface Order Code</b>	3600547		
<b>Result Code</b>	<b>Name</b>	<b>LOINC Code</b>	<b>AOE/Prompt</b>
3600548	JAK2EX12, Source	31208-2	No
3600549	JAK2EX12, Interpretation	63421-2	No

QC ACCOUNT (WARDE)  
 300 W. TEXTILE  
 ANN ARBOR MI 48108

**EXAMPLE, REPORT**

WX0000000237 F 12/05/1988 36 Y

**Referral Testing**

Collected: 09/18/2025 09:40 Received: 09/18/2025 09:40

<u>Test Name</u>	<u>Result</u>	<u>Flag</u>	<u>Ref-Ranges</u>	<u>Units</u>	<u>Site</u>
------------------	---------------	-------------	-------------------	--------------	-------------

**JAK2 Exon 12-Mutation Analysis by PCR**

JAK2EX12, Source	Whole Blood	ARRL
JAK2EX12, Interpretation	Not Detected	ARRL

There is no evidence of a JAK2 Exon 12 mutation. This result does not exclude the possibility of a JAK2 Exon 12 mutation below the test limit of detection or one which is not detectable by the assay specific design.

This result has been reviewed and approved by Archana Agarwal, M.D.

**INTERPRETIVE INFORMATION:** JAK2 Exon 12-Mutation Analysis by PCR

DNA from whole blood or bone marrow is isolated and subjected to PCR amplification in the presence of a short blocking oligonucleotide homologous to codons 537-544 of exon 12 of the wild-type JAK2 gene. The oligonucleotide is designed to specifically suppress PCR amplification of wild-type JAK2 exon 12 sequence. In contrast, JAK2 exon 12 mutations located between codons 537-544 disrupt proper binding of the blocking oligonucleotide during PCR amplification resulting in a product of approximately 225 base-pairs. Each assay includes control DNA from mutation positive and wild-type negative samples; all samples are tested in paired reactions with and without blocking oligonucleotide. A PCR product formed in the presence of blocking oligonucleotide indicates the presence of a mutation.

Results of this test must always be interpreted in the context of clinical and other relevant laboratory data such as erythropoietin level, exclusion of other causes of elevated hemoglobin, and should not be used alone for a diagnosis of polycythemia vera which is a form of malignancy, i.e., myeloproliferative disorder. This test does not identify JAK2 mutation outside of codons 537-544, and duplications or missense variants that compromise oligonucleotide binding may not be detected.

**Limit of Detection:** 5 percent mutant alleles for length-altering mutations.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

 E118000009  
 WX0000000237

 Ordered By: CLIENT CLIENT  
 WX000000000000336

Printed D&amp;T: 09/18/25 09:41

 Kajal V. Sitwala, MD, PhD - Medical Director  
 Form: MM RL1  
 PAGE 1 OF 2



## LABORATORY REPORT

QC ACCOUNT (WARDE)  
300 W. TEXTILE  
ANN ARBOR MI 48108

### EXAMPLE, REPORT

WX0000000237 F 12/05/1988 36 Y

### Referral Testing

Collected: 09/18/2025 09:40 Received: 09/18/2025 09:40

Test Name	Result	Flag	Ref-Ranges	Units	Site
Performed By: ARUP Laboratories 500 Chipeta Way Salt Lake City, UT 84108 Laboratory Director: Jonathan R. Genzen, MD, PhD CLIA Number: 46D0523979					

Reported Date: 09/18/2025 09:40 JAK2E

Performing Site:

ARRL: ARUP REFERENCE LAB 500 Chipeta Way Salt Lake City UT 841081221

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

E118000009  
WX0000000237  
Printed D&T: 09/18/25 09:41

Ordered By: CLIENT CLIENT  
WX000000000000336

Kajal V. Sitwala, MD, PhD - Medical Director  
Form: MM RL1  
PAGE 2 OF 2

**Inactivate Test With Replacement**

<b>Effective Date</b>	10/20/2025
-----------------------	------------

**Inactivated Test**

<b>Name</b>	MLH1 Promoter Methylation
<b>Code</b>	MLH1
<b>Legacy Code</b>	MLH1
<b>Interface Order Code</b>	3624180

**Replacement Test**

<b>Name</b>	MLH1 Promoter Methylation
<b>Code</b>	MLH1P
<b>CPT Code(s)</b>	81288
<b>Notes</b>	New York DOH Approval Status: Yes Z Code(s): ZB229

**Specimen Requirements**

<b>Specimen Required</b>	<p><i>Collect:</i> Tumor tissue</p> <p><i>Specimen Preparation:</i> Send formalin fixed paraffin embedded tissue block or 5 unstained 5 micron slides in a tissue transport kit. Include surgical pathology report.</p> <p>If multiple specimens (blocks or slides) are sent to ARUP, they must be accompanied by one of the following: an order comment indicating that the ARUP pathologist should choose the specimen most appropriate for testing, or individual orders for each sample submitted. A Pathologist Block Selection Fee will be added to orders that utilize the first option. If multiple specimens are sent to ARUP without a request for pathologist block/slide selection or individual orders, they will be held until clarification is provided.</p> <p><i>Minimum Volume:</i> 5 slides (if using)</p> <p><i>Transport Temperature:</i> Room temperature</p>
<b>Rejection Criteria</b>	Fixative other than 10 percent neutral buffered formalin, bone specimens submitted in non-EDTA decalifier, less than 25 percent tumor.
<b>Stability</b>	Room temperature: Indefinite Refrigerated: Indefinite Frozen: Unacceptable

**Performing Information**

<b>Methodology</b>	Real-Time Polymerase Chain Reaction/Fluorescence Resonance Energy Transfer
<b>Reference Range</b>	See report
<b>Performed Days</b>	Varies
<b>Turnaround Time</b>	9 - 14 days
<b>Performing Laboratory</b>	ARUP Reference Laboratory

**Interface Information**

<b>Legacy Code</b>	MLH1P		
<b>Interface Order Code</b>	3600543		
<b>Result Code</b>	<b>Name</b>	<b>LOINC Code</b>	<b>AOE/Prompt</b>
3600544	MLH1 PCR, Source	31208-2	No
3624190	MLH1 Promoter Methylation	58416-9	No
3624200	Block ID	57723-9	No

QC ACCOUNT (WARDE)  
 300 W. TEXTILE  
 ANN ARBOR MI 48108

**EXAMPLE, REPORT**

WX0000000237 F 12/05/1988 36 Y

**Referral Testing**

Collected: 09/18/2025 09:37 Received: 09/18/2025 09:37

Test Name	Result	Flag	Ref-Ranges	Units	Site
-----------	--------	------	------------	-------	------

**MLH1 Promoter Methylation**

MLH1 PCR, Source	Tissue	ARRL
MLH1 Promoter Methylation	Positive	AB

TEST INFORMATION: MLH1 Promoter Methylation, Paraffin

MLH1 methylation is common in sporadic microsatellite unstable tumors, like colorectal cancer and endometrial cancer, and rarely occurs in Lynch syndrome (hereditary non-polyposis colon cancer or HNPCC). Therefore, the presence of MLH1 methylation suggests that the tumor is sporadic and not associated with Lynch syndrome. However, since there have been rare reports of Lynch syndrome-associated MLH1 methylation, all results should be interpreted within the clinical context. The lack of MLH1 methylation in a mismatch repair deficient tumor suggests that it may be associated with Lynch syndrome, and germline evaluation is suggested. Finally, low level MLH1 methylation is not reported as positive, since it does not correlate with MLH1 inactivation and microsatellite instability.

METHODOLOGY: DNA is isolated from tumor tissue microdissected from prepared slides. DNA is treated with sodium bisulfite, followed by amplification of a segment of the MLH1 promoter region using methylation specific real-time PCR. The MLH1 methylation level is calculated by comparison to the amplification of a reference gene.

LIMITATIONS: Methylation at locations other than those covered by the primers and probes will not be detected. Results of this test must always be interpreted within the clinical context and other relevant data, and should not be used alone for a diagnosis of malignancy. This test is not intended to detect minimal residual disease.

ANALYTICAL SENSITIVITY: Methylation levels below 10 percent are reported as negative.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Block ID	12345	ARRL
Performed By:	ARUP Laboratories	

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

 E118000008  
 WX0000000237  
 Printed D&T: 09/18/25 09:37

 Ordered By: CLIENT CLIENT  
 WX000000000000336

 Kajal V. Sitwala, MD, PhD - Medical Director  
 Form: MM RL1  
 PAGE 1 OF 2



## LABORATORY REPORT

QC ACCOUNT (WARDE)  
300 W. TEXTILE  
ANN ARBOR MI 48108

### EXAMPLE, REPORT

WX0000000237 F 12/05/1988 36 Y

### Referral Testing

Collected: 09/18/2025 09:37 Received: 09/18/2025 09:37

Test Name	Result	Flag	Ref-Ranges	Units	Site
500 Chipeta Way Salt Lake City, UT 84108 Laboratory Director: Jonathan R. Genzen, MD, PhD CLIA Number: 46D0523979					

Reported Date: 09/18/2025 09:37 MLH1P

Performing Site:

ARRL: ARUP REFERENCE LAB 500 Chipeta Way Salt Lake City UT 841081221

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

E118000008  
WX0000000237  
Printed D&T: 09/18/25 09:37

Ordered By: CLIENT CLIENT  
WX0000000000000336

Kajal V. Sitwala, MD, PhD - Medical Director  
Form: MM RL1  
PAGE 2 OF 2

**Inactivate Test With Replacement**

<b>Effective Date</b>	10/7/2025
-----------------------	-----------

**Inactivated Test**

<b>Name</b>	Anti-PM/Scl-100 Ab (RDL)
<b>Code</b>	PMSCQ
<b>Legacy Code</b>	PMSCQ
<b>Interface Order Code</b>	3423685

**Replacement Test**

<b>Name</b>	PM/Scl-100 Antibody, IgG by Immunoblot
<b>Code</b>	PSABG
<b>CPT Code(s)</b>	86235
<b>Notes</b>	New York DOH Approval Status: Yes

**Specimen Requirements**

<b>Specimen Required</b>	<i>Collect:</i> Serum separator tube (SST) <i>Specimen Preparation:</i> Centrifuge, separate serum from cells and send 1.0 mL serum in a screw capped plastic vial. <i>Minimum Volume:</i> 0.3 mL <i>Transport Temperature:</i> Refrigerated
<b>Rejection Criteria</b>	Plasma, bacterial contamination, hemolyzed, or severely lipemic specimens.
<b>Stability</b>	Room temperature: 48 hours Refrigerated: 2 weeks Frozen: 1 month (avoid repeated freeze/thaw cycles)

**Performing Information**

<b>Methodology</b>	Qualitative Immunoblot
<b>Reference Range</b>	Negative
<b>Performed Days</b>	Tuesday, Thursday, Saturday
<b>Turnaround Time</b>	3 - 6 days
<b>Performing Laboratory</b>	ARUP Reference Laboratory

**Interface Information**

<b>Legacy Code</b>	PSABG		
<b>Interface Order Code</b>	3600542		
<b>Result Code</b>	<b>Name</b>	<b>LOINC Code</b>	<b>AOE/Prompt</b>
3600542	PM/Scl-100 Antibody, IgG by Immunoblot	81723-0	No

**LABORATORY REPORT**

 QC ACCOUNT (WARDE)  
 300 W. TEXTILE  
 ANN ARBOR MI 48108

**EXAMPLE, REPORT**

WX0000000237 F 12/05/1988 36 Y

**Referral Testing**

Collected: 09/17/2025 14:43 Received: 09/17/2025 14:43

<u>Test Name</u>	<u>Result</u>	<u>Flag</u>	<u>Ref-Ranges</u>	<u>Units</u>	<u>Site</u>
------------------	---------------	-------------	-------------------	--------------	-------------

PM/Scl-100 Antibody, IgG by Immunoblot	Negative		Negative		ARRL
--	----------	--	----------	--	------

For interface testing only. Please disregard.

INTERPRETIVE INFORMATION: PM/Scl-100 Antibody, IgG by Immunoblot

The presence of PM/Scl-100 IgG antibody along with a positive ANA IFA nucleolar pattern is associated with connective tissue diseases such as polymyositis (PM), dermatomyositis (DM), systemic sclerosis (SSc), and polymyositis/systemic sclerosis overlap syndrome. The clinical relevance of PM/Scl-100 IgG antibody with a negative ANA IFA nucleolar pattern is unknown. PM/Scl-100 is the main target epitope of the PM/Scl complex, although antibodies to other targets not detected by this assay may occur.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Performed By: ARUP Laboratories

500 Chipeta Way

Salt Lake City, UT 84108

Laboratory Director: Jonathan R. Genzen, MD, PhD

CLIA Number: 46D0523979

**Reported Date:** 09/17/2025 14:43 PSABG

**Performing Site:**

ARRL: ARUP REFERENCE LAB 500 Chipeta Way Salt Lake City UT 841081221

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

E117000003

WX0000000237

Printed D&T: 09/17/25 14:44

Ordered By: CLIENT CLIENT

WX000000000000336

Kajal V. Sitwala, MD, PhD - Medical Director

Form: MM RL1

PAGE 1 OF 1

**Inactivate Test With Replacement**

<b>Effective Date</b>	10/20/2025
-----------------------	------------

**Inactivated Test**

<b>Name</b>	Transferrin Receptor (TFR) Soluble
<b>Code</b>	STRS
<b>Legacy Code</b>	STRSP
<b>Interface Order Code</b>	3702360

**Replacement Test**

<b>Name</b>	Soluble Transferrin Receptor
<b>Code</b>	STR
<b>CPT Code(s)</b>	84238
<b>Notes</b>	New York DOH Approval Status: Yes

**Specimen Requirements**

<b>Specimen Required</b>	<i>Collect:</i> Serum separator tube (SST) <i>Specimen Preparation:</i> Centrifuge, separate serum from cells and send 1.0 mL serum in a screw capped plastic vial. <i>Minimum Volume:</i> 0.4 mL <i>Transport Temperature:</i> Refrigerated
<b>Alternate Specimen</b>	Plasma separator tube, green lithium heparin
<b>Rejection Criteria</b>	Contaminated, lipemic, severely hemolyzed, or icteric specimens
<b>Stability</b>	Room temperature: 5 days Refrigerated: 7 days Frozen: 30 days (avoid repeated freeze/thaw cycles)

**Performing Information**

<b>Methodology</b>	Quantitative Chemiluminescent Immunoassay
<b>Reference Range</b>	See report
<b>Performed Days</b>	Sunday - Saturday
<b>Turnaround Time</b>	3 - 5 days
<b>Performing Laboratory</b>	ARUP Reference Laboratory

**Interface Information**

<b>Legacy Code</b>	STR		
<b>Interface Order Code</b>	3600546		
<b>Result Code</b>	<b>Name</b>	<b>LOINC Code</b>	<b>AOE/Prompt</b>
3600546	Soluble Transferrin Receptor	30248-9	No

QC ACCOUNT (WARDE)  
 300 W. TEXTILE  
 ANN ARBOR MI 48108

**EXAMPLE, REPORT**

WX0000000237 F 12/05/1988 36 Y

**Referral Testing**

Collected: 09/18/2025 09:34 Received: 09/18/2025 09:34

Test Name	Result	Flag	Ref-Ranges	Units	Site
Soluble Transferrin Receptor	2.5	H	0.90-2.01	mg/L	ARRL

**INTERPRETIVE INFORMATION: Soluble Transferrin Receptor**

The Beckman Coulter Access sTfR immunoassay is intended as an aid in the diagnosis of iron deficiency anemia, especially in patients with chronic disease. In adult patients with anemia, an sTfR result greater than or equal to 1.55 mg/L is 86 percent sensitive and 49 percent specific for the presence of iron deficiency anemia, alone or in combination with anemia of chronic disease. The sTfR assay is not intended to be used in isolation; results should be interpreted in conjunction with the patient's clinical presentation and other diagnostic tests, such as other indicators of iron status (refer to table below).

Analyte	Tests for Changes in:	Iron Stores	Anemia Def.	Anemia of Chronic Disease	Combined Iron Def. and anemia of Chronic Dz
Ferritin	Iron Stores	Low	High	Normal or High	Normal or High
TIBC	Iron Status	High	Low	Normal or High	Normal or High
Serum Fe	Iron Status	Low	Low	Low	Low
sTfR	Iron Status	High	Normal	Normal	High

Performed By: ARUP Laboratories  
 500 Chipeta Way  
 Salt Lake City, UT 84108  
 Laboratory Director: Jonathan R. Genzen, MD, PhD  
 CLIA Number: 46D0523979

**Reported Date:** 09/18/2025 09:34 STR

**Performing Site:**

ARRL: ARUP REFERENCE LAB 500 Chipeta Way Salt Lake City UT 841081221

LAB: L - LOW, H - HIGH, AB - ABNORMAL, C - CRITICAL, . - NOT TESTED

 E118000007  
 WX0000000237  
 Printed D&T: 09/18/25 09:34

 Ordered By: CLIENT CLIENT  
 WX000000000000336

 Kajal V. Sitwala, MD, PhD - Medical Director  
 Form: MM RL1  
 PAGE 1 OF 1

**Inactivate Test Without Replacement**

<b>Effective Date</b>	10/31/2025
<b>Name</b>	Ethylene Oxide IgE
<b>Code</b>	K78
<b>Legacy Code</b>	RAK78
<b>Interface Code</b>	3062500
<b>Notes</b>	Test discontinued.