

## INSTRUCTIONS FOR CANADIAN CLIENTS ORDERING GENETIC TESTING

JANUARY 2012

This document provides instructions for Canadian clients ordering tests through ARUP Laboratories. Due to the involvement of the Ministry of Health (MOH) and the fact that testing is done internationally, test orders from Canada are more complex than test orders from within the United States. ARUP has developed the following instructions to streamline the process for Canadian clients and ARUP's internal operations.

### SPECIMEN REQUIREMENTS

- **Whole blood:** This is the only acceptable sample type for DNA (full gene analysis) tests; **ARUP cannot accept extracted DNA.** Sample should be shipped refrigerated; stability is seven days. Most tests require 5 mL of whole blood. Whole blood samples must be sent to ARUP directly after collection. To ensure sample stability, ARUP will extract DNA (client should order ARUP test code 0051619) and wait for the MOH letter to be issued before ordering or beginning the desired diagnostic DNA test.
- **Tumor tissue:** Sample should be shipped ambient and sent as unstained slides (see ARUP Test Descriptions table for number of slides) cut 5 microns thick from a paraffin-embedded, formalin-fixed block. ARUP will not be able to return any slides. If the tissue in question is a biopsy, five or more serial sections should be sent.
- **Urine:** Sample should be frozen immediately upon collection and shipped frozen.
- **Fibroblasts:** Sample should consist of cultured fibroblasts in two T25 flasks and shipped critical ambient.

### SHIPPING

- All samples should be sent to:  
**ARUP LABORATORIES**  
**Tim Mason, Genetics Processing**  
**565 Komas Drive, mail code 393**  
**Salt Lake City, UT 84108, U.S.A.**
- Canadian clients are responsible for all incurred shipping charges.
- ARUP can receive samples seven days a week, although some clients, depending on courier chosen, do not to ship on weekends.
- ARUP cannot send sample supplies (except test request forms) to Canadian clients.

### BILLING

- Testing will not be ordered in ARUP's system, nor will testing begin, until a letter guaranteeing payment for that patient's testing is received from the Ministry of Health.
- If the DNA-extraction test (ARUP test code 0051619) is the initial test ordered on a whole blood sample, fees from this test will be credited once the diagnostic DNA testing is completed.
- **In the event that ARUP receives a whole blood sample but approval from the MOH is never received, or the clinician decides to cancel testing completely, the client WILL be billed for the DNA extraction already performed.**

### ARUP CONTACT INFORMATION

**General number:** (800) 242-2787, ext. 3301

**Pricing inquiries or requests for faxed results:** (800) 242-2787, ext. 3301

**Test request forms:** (800) 522-2787 (ARUP Client Services direct line)

**Patient history forms can be found on ARUP's website:**

<http://www.aruplab.com/Testing-Information/consentforms-patienthistory.jsp>

THE KNOWLEDGE LEADER IN LABORATORY MEDICINE

**PROCESS OVERVIEW**

	<b>Clinician Responsibilities</b>	<b>ARUP Responsibilities</b>
<b>Sample collected: whole blood</b>	<ul style="list-style-type: none"> <li>Send whole blood samples directly to: ARUP Laboratories; <b>Tim Mason, Genetics Processing; 565 Komas Drive, mail code 393; Salt Lake City, UT 84108, U.S.A.</b></li> <li>Order ARUP test code 0051619 if approval from the MOH is pending.</li> <li>If MOH approval will accompany sample, complete test request form, indicating the needed DNA test.</li> <li>Sample should be shipped refrigerated.</li> </ul>	
<b>Sample collected: tumor blocks</b>	<ul style="list-style-type: none"> <li>Unstained slides should be sent to ARUP along with the MOH approval letter.</li> <li>Sample should be ambient.</li> <li>Include surgical histology report with sample; no patient history form required.</li> </ul>	
<b>Sample collected: urine</b>	<ul style="list-style-type: none"> <li>Urine specimens should be frozen immediately upon collection but do not require immediate shipment.</li> <li>Frozen samples can be held until the MOH approval letter is received and shipped with the letter.</li> <li>Sample should be shipped frozen.</li> </ul>	
<b>Sample collected: cultured fibroblasts</b>	<ul style="list-style-type: none"> <li>Cultured fibroblasts should be sent to ARUP along with the MOH approval letter.</li> <li>Sample should be shipped critical ambient.</li> </ul>	
<b>Sample shipped</b>	<ul style="list-style-type: none"> <li>Return a completed patient history form with the sample and fax a copy to ARUP's genetic counselors at (801) 584-5246 (for tumor slides, send a surgical histology report instead of a patient history form); OR</li> <li>Call an ARUP genetic counselor at (800) 522-2787 to discuss the case, including desired testing, patient name, DOB, and family history information.</li> </ul>	<ul style="list-style-type: none"> <li>ARUP's genetic counselors will enter the case information into an internal database and watch for the sample to arrive.</li> </ul>
<b>Sample arrives at ARUP</b>		<ul style="list-style-type: none"> <li>ARUP's genetic counselors will review patient history form to make sure the test is ordered appropriately and contact the client if information is missing.</li> <li>For whole blood tests still needing MOH approval letter, genetic counselors will make sure only the DNA extraction has been ordered.</li> </ul>
<b>MOH letter drafted</b>	<ul style="list-style-type: none"> <li>Letter should include patient name, desired ARUP test name and number, and cost of the test.</li> <li>MOH should contact the ARUP Genetics Department to confirm pricing at (800) 242-2787, ext. 3301.</li> </ul>	<ul style="list-style-type: none"> <li>If MOH has questions, ARUP Genetics Department will confirm the desired test, test number, and client number with MOH, or from internal notes at ARUP.</li> <li>Genetic counselors will contact ARUP Client Services for pricing information and provide accurate price to an MOH representative.</li> </ul>
<b>MOH letter received at ARUP</b>		<ul style="list-style-type: none"> <li>ARUP genetic counselors will make sure that the desired testing is ordered and the DNA extraction test is cancelled.</li> </ul>
<b>Testing performed; results completed</b>	<ul style="list-style-type: none"> <li>Clinician can request that additional copies of results be faxed to a specific clinic office by contacting the ARUP Genetics Department at (800) 242-2787, ext. 3301; a secure fax number must be provided.</li> </ul>	<ul style="list-style-type: none"> <li>Results will be automatically faxed to the client site.</li> </ul>

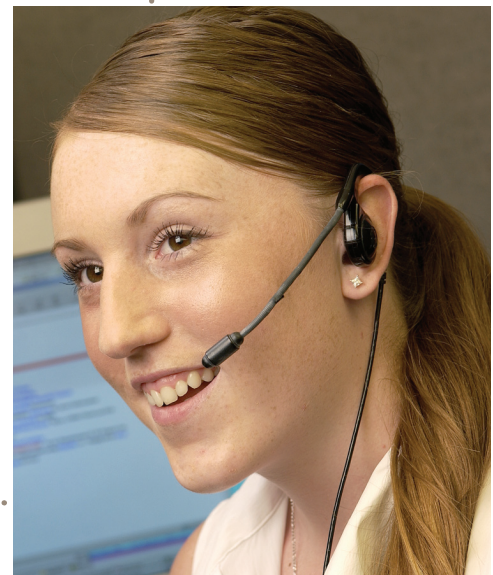
ARUP TEST DESCRIPTIONS			
Test Number	Test Name	Description	Sample Type Required
0051619	DNA Extraction, Sequencing	DNA extraction only—order for whole blood tests that are still awaiting MOH approval letter; sample should be shipped immediately after collection.	
<b>Cancer Tests</b>			
0051650	<i>MLH1</i> Full Gene Analysis	Sequencing and deletion/duplication	Whole blood (EDTA)
0051654	<i>MSH2</i> Full Gene Analysis	Sequencing and deletion/duplication	Whole blood (EDTA)
0051656	<i>MSH6</i> Full Gene Analysis	Sequencing and deletion/duplication	Whole blood (EDTA)
0051737	HNPCC/Lynch Syndrome ( <i>PMS2</i> ) Sequencing & Deletion/Duplication	Sequencing and deletion/duplication	Whole blood (EDTA)
2001728	HNPCC/Lynch Syndrome, Deletion/Duplication	Deletion/duplication only—order when patient already had sequencing and results were negative; specify gene to be tested.	Whole blood (EDTA)
2001961	Familial Mutation, Targeted Sequencing	Analysis of a specific mutation previously found in a family member; family member's report is required.	
0051740	HNPCC/Lynch Syndrome, Microsatellite Instability by PCR	Note: If the tissue in question is a biopsy, five or more serial sections should be sent.	Two slides from tumor; two from normal tissue (3 mL WB-EDTA can be used instead of normal tissue; ship directly after collection).
0049302	Microsatellite Instability/HNPCC by Immunohistochemical Stain		Six unstained slides from tumor
0051750	<i>BRAF</i> V600E Mutation with Reflex to <i>MLH1</i> Promoter Methylation, Paraffin		Two to three unstained slides from tumor
<b>Other Molecular Tests</b>			
0051382	Hereditary Hemorrhagic Telangiectasia ( <i>ACVRL1</i> and <i>ENG</i> ), Sequencing & Deletion/Duplication	Sequencing and deletion/duplication of both the <i>ACVRL1</i> and <i>ENG</i> genes	Whole blood (EDTA) 7–10 mL
0051381	Hereditary Hemorrhagic Telangiectasia ( <i>ACVRL1</i> and <i>ENG</i> ), Sequencing	Sequencing of both the <i>ACVRL1</i> and <i>ENG</i> genes	Whole blood (EDTA) 7–10 mL
0051348	Hereditary Hemorrhagic Telangiectasia ( <i>ACVRL1</i> and <i>ENG</i> ), Deletion/Duplication	Deletion/duplication analysis of both the <i>ACVRL1</i> and <i>ENG</i> genes	Whole blood (EDTA) 7–10 mL
2001961	Familial Mutation, Targeted Sequencing	Analysis of a specific mutation previously found in a family member; family member's report is required.	
2001971	Juvenile Polyposis ( <i>SMAD4</i> ), Sequencing & Deletion/Duplication	Sequencing and deletion/duplication	Whole blood (EDTA)
0051510	Juvenile Polyposis ( <i>SMAD4</i> ), Sequencing	Sequencing only	Whole blood (EDTA)
2001976	Juvenile Polyposis ( <i>SMAD4</i> ), Deletion/Duplication	Deletion/duplication only	Whole blood (EDTA)
2001961	Familial Mutation, Targeted Sequencing	Analysis of a specific mutation previously found in a family member; family member's report is required.	
2002005	Pancreatitis, Idiopathic ( <i>CFTR</i> , <i>PRSS1</i> , <i>SPINK1</i> ), Sequencing	Sequencing of three genes: <i>CFTR</i> , <i>PRSS1</i> , and <i>SPINK1</i>	Whole blood (EDTA)
2002012	Pancreatitis, Idiopathic ( <i>SPINK1</i> ), Sequencing	Sequencing of <i>SPINK1</i> only	Whole blood (EDTA)
2002016	Pancreatitis, Hereditary ( <i>PRSS1</i> ), Sequencing	Sequencing of <i>PRSS1</i> only	Whole blood (EDTA)
2001961	Familial Mutation, Targeted Sequencing	Analysis of a specific mutation previously found in a family member; family member's report is required.	
<b>Biochemical Tests</b>			
0080351	Ehlers-Danlos Syndrome Type VI Screen		Urine 4.5 mL
0080512	Carnitine Transport, Fibroblasts		Cultured fibroblasts (two T25 flasks)
2001875	Creatine Transport, Fibroblasts		Cultured fibroblasts (two T25 flasks)

### ABOUT ARUP LABORATORIES

ARUP Laboratories is a national clinical and anatomic pathology reference laboratory and an enterprise of the University of Utah and its Department of Pathology. ARUP offers in excess of 3,000 tests and test combinations, ranging from routine screening tests to highly esoteric molecular and genetic assays. Rather than competing with its clients for physician office business, ARUP chooses instead to support clients' existing test menus by offering highly complex and unique tests, with accompanying consultative support, to enhance clients' abilities to provide local and regional laboratory services. ARUP's clients include more than half of the nation's university teaching hospitals and children's hospitals, as well as multihospital groups, major commercial laboratories, group-purchasing organizations, military and government facilities, and major clinics. In addition, ARUP is a worldwide leader in innovative laboratory research and development, led by the efforts of the ARUP Institute for Clinical and Experimental Pathology®.

Since its formation in 1984 by the Department of Pathology at the University of Utah, ARUP has founded its reputation on reliable and consistent laboratory testing and service. This simple strategy contributes significantly to client satisfaction. When ARUP conducts surveys, clients regularly rate ARUP highly and respond that they would recommend ARUP to others.

As the most responsive source of quality information and knowledge, ARUP strives to be the reference laboratory of choice for community healthcare systems. ARUP clients can select elements from diverse laboratory and service areas to create customized relationships that meet the needs of their unique communities. Together, ARUP and its clients will improve patient care today and in the future.



#### ARUP LABORATORIES

500 Chipeta Way  
Salt Lake City, Utah 84108  
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Fax: (801) 583-2712

[www.aruplab.com](http://www.aruplab.com) | [www.arupconsult.com](http://www.arupconsult.com)

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