

UAB MEDICAL GENOMICS LABORATORY

720 Twentieth Street South, Suite 330 Phone: (205) 934-5562
 Birmingham, Alabama 35294-0005 Fax: (205) 996-2929
www.uab.edu/medicine/genetics/medical-genomics-laboratory

UAB MGL
 Accession

For MGL Lab Use Only	Received:	Reviewed:	Accession:	Billing:	Other:
	Initials:				
	Date:				
	Comment:				

Important Notes

-This form must accompany all specimens received -All specimens received must include **two** patient identifiers and **collection date**
 -Billing information (page 5) must be included -Testing must be ordered by a qualified clinician
 Additional information is available online at www.uab.edu/medicine/genetics/medical-genomics-laboratory

Test Requisition Form

Patient Information:				Ordering Physician:			
Sample Collected: (MM/DD/YY)				<input type="checkbox"/> Please check box if physician should receive report directly			
Legal Name: (First) (MI) (Last)				Name:		NPI:	
DOB: (MM/DD/YY) MRN:				Institution:			
Address:				Address:			
City:		State:	Zip:	City:		State:	Zip:
Sex at Birth:		SSN:		Country:		Phone:	
Parent or Guardian name (if minor):				Please check preferred result delivery: <input type="checkbox"/> Fax:			
Referring Lab/Hospital:				Additional Reports to:			
<input type="checkbox"/> Please check box if lab/hospital should receive report directly				Name:			
Name:				Institution:			
Institution:				Address:			
Address:				City:		State:	Zip:
City:		State:	Zip:	Country:		Phone:	
Country:		Phone:		Please check preferred result delivery: <input type="checkbox"/> Fax:		Please check preferred result delivery: <input type="checkbox"/> Fax:	
Please check preferred result delivery: <input type="checkbox"/> Fax:				Please check preferred result delivery: <input type="checkbox"/> Fax:			
<input type="checkbox"/> Email:				<input type="checkbox"/> Email:			

Previous Testing History

Check all that apply:	<input type="checkbox"/> Patient or family member is pregnant. LMP:	<input type="checkbox"/> Patient has had chemotherapy in the past 6 months
	<input type="checkbox"/> Patient has had a bone marrow transplant	<input type="checkbox"/> Infectious diseases (AIDS, Hepatitis, etc.)
Has this patient or relatives had previous testing? <input type="checkbox"/> Yes <input type="checkbox"/> No		
Name/Relationship to patient:		Test/Variant/Lab:
Name/Relationship to patient:		Test/Variant/Lab:

Informed Consent

Provider's statement: I acknowledge the risks, benefits, limitations, and implications of genetic testing as outlined on the complete informed consent handout; and I have discussed the test(s) requested with the patient/guardian and I have answered his/her questions regarding testing. Informed consent has been obtained from the patient/guardian and the hard copy will be maintained.

Provider's Signature: _____

UAB MEDICAL GENOMICS LABORATORY

720 Twentieth Street South, Suite 330
Birmingham, Alabama 35294-0005

Phone: (205) 934-5562
Fax: (205) 996-2929

UAB MGL
Accession

Name: (First) (MI) (Last)

DOB: (MM/DD/YY)

Lymphocyte/White Blood Cell-based Comprehensive Testing via Next-Gen Sequencing

RUSH Analysis: Testing completed within 15 working days of receipt of sample
(Additional \$600 RUSH fee applied; only available for tests on this page)

NF1/Legius syndrome and Other RASopathy Related Conditions

- NF1-NG: NGS and Del/Dup: *NF1* only
- NFSP-NG: NGS and Del/Dup: *NF1* and *SPRED1*
- NNP-NG: NGS: 17 genes (no *NF1*): *BRAF*, *CBL*, *HRAS*, *KRAS*, *LZTR1*, *MAP2K1*, *MAP2K2*, *NRAS*, *PPP1CB*, *PTPN11*, *RAF1*, *RASA2*, *RIT1*, *SHOC2*, *SOS1*, *SOS2*, and *SPRED1*; and Del/Dup: *SPRED1* and *LZTR1*
- RAS-NG: NGS: 18 genes: *BRAF*, *CBL*, *HRAS*, *KRAS*, *LZTR1*, *MAP2K1*, *MAP2K2*, *NF1*, *NRAS*, *PPP1CB*, *PTPN11*, *RAF1*, *RASA2*, *RIT1*, *SHOC2*, *SOS1*, *SOS2*, and *SPRED1*; and Del/Dup: *NF1*, *SPRED1*, and *LZTR1*
- CST-NG: NGS: *HRAS* only

NF2/Schwannomatosis/Meningiomatosis

- NF2-NG: NGS and Del/Dup: *NF2* only
- SCH-NG: NGS: 3 genes: *LZTR1*, *NF2*, and *SMARCB1*; and Del/Dup: *NF2*, *LZTR1*, and *SMARCB1*
- MEN-NG: NGS: 4 genes: *NF2*, *SMARCB1*, *SMARCE1*, and *SUFU*; and Del/Dup: *NF2* and *SMARCB1*

Peripheral Nerve Sheath Tumor Testing

- PNT-NG: NGS: 6 genes: *NF1*, *NF2*, *KRAS*, *LZTR1*, *PTPN11* and *SMARCB1*; and Del/Dup: *NF1*, *NF2*, *LZTR1*, and *SMARCB1*

McCune-Albright Syndrome

- GNAS-NG: NGS: *GNAS* exons 8 and 9 only

Rhabdoid Tumor Predisposition Syndrome

- RT-NG: NGS: *SMARCB1* and *SMARCA4*; and Del/Dup: *SMARCB1* only

Tuberous Sclerosis Complex

- TSCP-NG: NGS and Del/Dup: *TSC1* and *TSC2*

Capillary Malformation Arteriovenous Malformation Syndrome

- RASA-NG: NGS: and Del/Dup: *RASA1* and *EPHB4*

Additional Information

Test Description Key:

Next Generation Sequencing (NGS)
Deletion/Duplication analysis (Del/Dup)

For additional testing options via tumor/biopsy, please see page 3 of this order form.
Please contact the lab via phone (205) 934-5562 or via email at medgenomics@uabmc.edu if you have any questions when completing this form.
For additional information, visit our website at www.uab.edu/medicine/genetics/medical-genomics-laboratory

Important points of consideration for testing

The average coverage for all of our panels is >1600x. Specifically for the *NF1* gene, the NGS approach covers >98% of the *NF1* coding region at ≥350X and 99% ≥200X, allowing detection of very low level mosaicism, down to 3-5% variant allele fraction respectively. For all other genes on our panels, the NGS approach covers an average of 99% at ≥200X. Remaining regions are covered at ≥30X. However, for patients with segmental/mosaic presentation, deep coverage in lymphocyte cells may be insufficient to identify the underlying gene change. Testing the affected tissue(s) may be necessary to confirm a diagnosis. Please see page 3 for our tumor/biopsy-based testing options.

Please note: For patients with an ongoing pregnancy who require comprehensive NF1 testing, "NF1-R" is recommended due to the sensitivity and fast turnaround time of this test (please see page 4 for this option).

Specimen Requirements

Accepted Specimens

Specimen requirements vary based on test requested; please see our website for more details.

- Blood: 3-6ml EDTA (receipt within one week of collection)
- Saliva: OGR-575 DNA Genotek (kits are provided upon request)
- DNA: extracted from lymphocyte cells, a minimum of 25ul at 3µg, O.D. value at 260:280nm ≥1.6 (must be extracted in a CLIA or equivalent certified lab)
- Fibroblast cells

Specimen Information:

- Peripheral Blood (EDTA); # Tubes: _____
- Extracted DNA; Source: _____
- Saliva (kit must be provided by MGL)
- Other, please describe: _____

Please note: failure to provide a date of collection can delay release of results

Sample Collected Date (required): _____

Name: (First) (MI) (Last) DOB: (MM/DD/YY)

Tumor/Biopsy-based Comprehensive Testing

Please check here if blood or DNA is provided for confirmation testing. Blood Collected: (MM/DD/YY)

**NF1/SPRED1 on biopsied CALs and Neurofibromas
 *CURRENTLY UNDER MORATORIUM UNTIL 2023***

****Please contact the laboratory at least one week in advance of the biopsy before ordering this test as media must be provided in advance and special shipping instructions apply. Biopsies must arrive within 60 hours of collection****

- NF14C: Sanger(RNA) and Del/Dup: *NF1* (with automatic reflex to *SPRED1*) on biopsied CALs
- NF14N: Sanger(RNA) and Del/Dup: *NF1* on biopsied neurofibromas

NF2-, LZTR1-, SMARCB1-related Schwannomatosis

- NF2-NG: Fresh/Frozen Tumor or Tumor Block for NGS with reflex to Sanger as needed and Del/Dup: *NF2* only
- SCH-NG: Fresh/Frozen Tumor or Tumor Block for NGS with reflex to Sanger as needed and Del/Dup: *NF2, LZTR1, and SMARCB1*

Rhabdoid Tumor Predisposition Syndrome

- RT-NG: Fresh/Frozen Tumor or Tumor Block for NGS with reflex to Sanger as needed *SMARCB1* and *SMARCA4*; and Del/Dup: *SMARCB1* only

RASopathy Related Conditions

- NNP-NG: Fresh/Frozen Tumor for NGS (no *NF1*) or Tumor Block for NGS with reflex to Sanger as needed: *BRAF, CBL, HRAS, KRAS, LZTR1, MAP2K1, MAP2K2, NRAS, PPP1CB, PTPN11, RAF1, RASA2, RIT1, SHOC2, SOS1, SOS2, and SPRED1*; and Del/Dup: *SPRED1* and *LZTR1*
- RAS-NG: Fresh/Frozen Tumor or Tumor Block for NGS with reflex to Sanger as needed: *BRAF, CBL, HRAS, KRAS, LZTR1, MAP2K1, MAP2K2, NF1, NRAS, PPP1CB, PTPN11, RAF1, RASA2, RIT1, SHOC2, SOS1, SOS2, and SPRED1*; and Del/Dup: *NF1, SPRED1, and LZTR1*

Meningiomatosis

- MEN-NG: Fresh/Frozen Tumor or Tumor Block for NGS with reflex to Sanger as needed: *NF2, SMARCB1, SMARCE1, and SUFU*; and Del/Dup: *NF2* and *SMARCB1*

Peripheral Nerve Sheath Tumor Testing

- PNT-NG: Fresh/Frozen Tumor for NGS with reflex to Sanger as needed: *NF1, NF2, KRAS, LZTR1, PTPN11* and *SMARCB1*; and Del/Dup: *NF1, NF2, LZTR1, and SMARCB1*

Tuberous Sclerosis Complex

- TSC-NG: Fresh/Frozen Tumor or Tumor Block for NGS with reflex to Sanger as needed and Del/Dup: *TSC1* and *TSC2*

Additional Information

Test Description Key:

- Next Generation Sequencing (NGS)
- Sanger Sequencing (Sanger)
- Deletion/Duplication analysis (Del/Dup)

Please contact the lab via phone (205) 934-5562 or via email at medgenomics@uabmc.edu if you have any questions when completing this form.
 For additional information, visit our website at www.uab.edu/medicine/genetics/medical-genomics-laboratory

Important points of consideration for testing

- The MGL offers next generation sequencing testing options that provide the ability to identify variants (indels and substitutions) as low as 3% of the alleles, depending on coverage in the regions of interest.
- NF1/SPRED1 biopsy-based testing is considered the "gold standard" approach for confirming a diagnosis of mosaic/segmental NF1 or Legius Syndrome.
- A minimum of two biopsies is required for NF1 testing. Two or more tumors are suggested for our other testing options. There are no additional fees associated with testing on additional biopsy specimens.
- When proceeding with tumor-based testing for NF2-related SWN, test code "SCH-NG" (*NF2, SMARCB1, and LZTR1*) is suggested unless the patient has findings unique to NF2.

Specimen Requirements

Accepted Specimens

Specimen requirements vary based on test requested; please see our website for more details.

- CALs or Neurofibromas: require special media transport (kits are provided upon request, to be arranged at least one week in advance of procedure)
- Fresh/Frozen Tumors: please submit a pathology report; for additional requirements, see tumor submission checklist
- Formalin-Fixed Paraffin-Embedded Tumors (Tumor Block): please submit a pathology report; blocks are preferred to curls, when available; for additional requirements, see tumor submission checklist

Specimen Information:

- Frozen Fresh
- Paraffin Curls Paraffin Block
- Extracted DNA; Source: _____
- Biopsy-CAL-spot; # biopsies: _____
- Biopsy-Neurofibroma; # biopsies: _____
- Please note: failure to provide a date of collection can delay release of results
- Tumor Collection Date (required): _____

UAB MEDICAL GENOMICS LABORATORY

720 Twentieth Street South, Suite 330 Phone: (205) 934-5562
 Birmingham, Alabama 35294-0005 Fax: (205) 996-2929
www.uab.edu/medicine/genetics/medical-genomics-laboratory

UAB MGL
 Accession

Name: (First) (MI) (Last) DOB: (MM/DD/YY)

Sanger Testing from Blood/Saliva/DNA

NF1/Legius syndrome and Other RASopathy Related Conditions	Medium Chain Acyl-CoA Dehydrogenase Deficiency (MCADD)
<input type="checkbox"/> NF1-R: Sanger and Del/Dup: <i>NF1 (RNA)</i> <input type="checkbox"/> NFSP-R: Sanger and Del/Dup: <i>NF1 (RNA)</i> and <i>SPRED1 (gDNA)</i>	<input type="checkbox"/> MCD1: Targeted analysis of exon 11 and, if needed, reflexive full gene sequencing by Sanger: <i>ACADM</i>
Von Hippel-Lindau	Autosomal Recessive Polycystic Kidney Disease
<input type="checkbox"/> VHL1: Sanger and Del/Dup: <i>VHL</i>	<input type="checkbox"/> PKDL: Linkage Analysis for informativity <input type="checkbox"/> PKDPL: Prenatal Linkage (see Prenatal Specimen Requirements)
PTEN-Related Disorders	FATHER: <u>Name and DOB (mm/dd/yyyy)</u> MOTHER: <u>Name and DOB (mm/dd/yyyy)</u>
<input type="checkbox"/> PTEN1: Sanger and Del/Dup: <i>PTEN</i>	
Fragile X syndrome	
<input type="checkbox"/> FRX: PCR and, if needed, reflexive confirmatory testing by Southern blot analysis: <i>FMR1</i>	

Known Variant Testing

KT2: Targeted detection of a specific, previously identified known variant in any gene that is available at our lab by Sanger sequence, MLPA, and/or FISH analysis (Complete Previous Testing History: Page 1)
 KT2-NG: Targeted testing for a known variant with deep coverage of the alleles and detection of mosaicism for a variant present in at least 3% of alleles (Complete Previous Testing History: Page 1)
 RT2: Targeted RNA-based testing for VOUS found during Next Generation Sequencing (Complete Previous Testing History: Page 1)
 PT2: Prenatal testing (see Prenatal Specimen Requirements; Complete Previous Testing History: Page 1)
 MCC: Blood specimen for mother provided for maternal cell contamination studies (required if not previously tested)

Other (unlisted options, please indicate below)

****Please contact lab before selecting this option****

Additional Information

<p>Test Description Key: Next Generation Sequencing (NG) Sanger Sequencing (Sanger) Deletion/Duplication analysis (Del/Dup)</p>	<p>Please contact the lab via phone (205) 934-5562 or via email at medgenomics@uabmc.edu if you have any questions when completing this form. For additional information, visit our website at www.uab.edu/medicine/genetics/medical-genomics-laboratory</p>
---	---

Specimen Requirements

Accepted Prenatal Specimens	Prenatal Specimen Information:
Specimen requirements vary based on test requested; please see our website for more details. -Direct CVS: minimum 10 mg cleaned villi -Direct amniotic fluid: minimum 10 ml fluid -Cultured CVS: Two T25 flasks (>70% confluent) -Cultured amniocytes: Two T25 flasks (>70% confluent)	<input type="checkbox"/> Amniotic fluid <input type="checkbox"/> Direct CVS (cleaned) <input type="checkbox"/> Cultured amniocytes <input type="checkbox"/> Cultured villus cells Location of back-up culture (required): Sample Collected Date (required):
Accepted Specimens	Specimen Information:
Specimen requirements vary based on test requested; please see our website for more details. -Blood: 3-6ml EDTA (must arrive within 60-72 hours of collection for RNA-based tests) -DNA: extracted from lymphocyte cells, a minimum of 25ul at 3µg, O.D. value at 260:280nm ≥1.6 (must be extracted in a CLIA or equivalent certified lab) -Sperm (for KT2-NG only): Fresh, sterile semen collection using a local sperm bank/cryobank facility	<input type="checkbox"/> Peripheral Blood (EDTA); # Tubes: <input type="checkbox"/> Extracted DNA; Source: <input type="checkbox"/> Other, please describe: _____ <u>Please note: failure to provide a date of collection can delay release of results</u> Sample Collected Date (required):

UAB MEDICAL GENOMICS LABORATORY

720 Twentieth Street South, Suite 330 Phone: (205) 934-5562
 Birmingham, Alabama 35294-0005 Fax: (205) 996-2929
www.uab.edu/medicine/genetics/medical-genomics-laboratory

UAB MGL
 Accession

Name: (First) (MI) (Last)	DOB: (MM/DD/YY)
---------------------------	-----------------

Billing

Please hold sample until further notice from the ordering facility.

Important Information

By completing this form, you agree that you have discussed the MGL's billing policies with your patient.

Credit card information **MUST** be provided with sample submission for self-pay clients. Please note: If you are paying via self-payment or requesting a benefits investigation, there will be a 3-5 working day delay on the initiation of your test. Requests for cancellation, test change, or billing method change of ongoing testing must be submitted to the laboratory within three working days of specimen arrival. Individuals or institutions submitting requests after the three working day window may still incur charges for the cost of testing. Full information on the billing policies is available at www.uab.edu/medicine/genetics/medical-genomics-laboratory

 Institutional Bill

Please check box if billing institution should receive report directly

Institution:	PO# (if applicable):
--------------	----------------------

Address:		
----------	--	--

City:	State:	Zip:
-------	--------	------

Contact (Name and Title):	Preferred method of contact: <input type="checkbox"/> Email <input type="checkbox"/> Phone
---------------------------	---

Email:	Phone:	Fax:
--------	--------	------

 Self-Payment Enclosed *PLEASE ENSURE ALL INFORMATION IS LEGIBLE*

Visa MasterCard Discover American Express

Name as it appears on card:

Card Number:	Expiration: (MM/YY)	3-digit Security Code:
--------------	---------------------	------------------------

Cardholder's Signature:	Preferred method of contact: <input type="checkbox"/> Email <input type="checkbox"/> Phone
-------------------------	---

Email:	Phone:
--------	--------

 Bill Third Party Insurance Company

Please include a copy of the pre-approval statement or provide the approval number if payment has been pre-authorized in advance of shipment.

Insurance Carrier: _____
Insurance pre-verification/authorization previously performed? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, approval number is required: _____

Please check box if you would not like insurance pre-verification/authorization to be performed by the MGL.

Please send a legible copy of the patient's insurance card, front and back.

ICD-10 Codes (required):

Important Considerations for Insurance Billing

For a list of contracted insurance companies, please visit our website or call our billing coordinator at 205-934-5523. As insurance prices are not listed, please call the billing coordinator to request a quote, if needed.

The MGL will contact the insurance provider to inquire regarding the CPT code coverage for all samples submitted for insurance payment. The healthcare provider will be contacted with the copay/deductible and also in cases where the insurance provider denies coverage of the requested codes or supporting documents are required from the provider to confirm coverage. The ordering provider/clinician's office is responsible for obtaining prior authorization, if it is required. This service is not offered for prenatal samples.

Please note: An insurance verification is not a guarantee of payment. Out of State Medicaid is not accepted under any circumstances. All RUSH fees must be paid up front. By completing this form, you agree that you have discussed the MGL's billing policies with your patient.