

# MUSCLE / NERVE / SKIN BIOPSY REQUEST FORM

Neuromuscular Clinical Laboratory: Alan Pestronk, M.D., Director  
Washington University School of Medicine – Neurology Department  
Web Page: <https://neuromuscular.wustl.edu/over/labdis.html>

<b>Referring Institution</b>	<b>PATIENT NAME</b>		
<b>Requesting physician: Name</b> Signature	Sex	Age	Birth date
<b>Address: Report to</b> NAME ADDRESS CITY, STATE, ZIP PHONE & FAX #	<b>Dates: Biopsy performed</b>		
	Biopsy received		
	<b>WU-NM Lab: Accession #</b>		
<b>PATIENT BILLING INFORMATION: Attach copy of insurance card or data page (If not available, please provide):</b>			
<b>Insurance Company: Name:</b>		Phone #:	ID & Group #:
<b>Policyholder: Name:</b>		Date of Birth:	Relationship to Patient:
<b>Patient location:</b> <input type="checkbox"/> Inpatient; <input type="checkbox"/> Outpatient		<b>Insurance authorization #</b> _____	<b>Account #</b> _____
<b>Institutional Billing:</b> Provide billing contact name & phone number			

**Clinical Data:** Diagnosis, History, Indication

**Procedure Data:** Specimens & Site biopsied

Surgeon

**TESTS REQUESTED:** Histochemical & Immunocytochemical stains are usually performed on frozen, unfixed tissue.

**Standard Histochemistry:** Performed on all biopsies

**MUSCLE:** H&E X 2, NADH, GT, ATPase pH 9.4 4.6 & 4.3, VvG, Congo Red, Sudan Black, Alkaline & Acid Phosphatase, Esterase  
Periodic Acid Schiff, Cytochrome Oxidase, Succinic Dehydrogenase, Amylo-phosphorylase, AMPDA, Morphometry

**NERVE** Frozen sections: H&E, GT, Congo Red, Alkaline & Acid Phosphatase, VvG, ATPase pH4.3, Neurofilament, NCAM, PO, MBP, Toluidine blue (fixed tissue)  
NEUROPATHOLOGY provides additional nerve biopsy information in a separate report.

**SKIN** Frozen sections: H&E, PGP 9.5, CD3;  Congo Red;  Sweat Glands, if present

**Dystrophies** (Methods: Immunocytochemistry (IHC) or Western blot (WB))

**Dystrophy panel:** Dystrophin (4 epitopes); Sarcoglycans (α,β,δ,γ); Desmin; Emerin; Caveolin-3; Laminin-α2; α-Dystroglycan; Dysferlin; Phalloidin; LAMP2

**Individual tests:**  Sarcoglycans (α, β, δ, γ) (IHC);  Sarcoglycans (WB);  Caveolin-3 (IHC);  
 Dystrophin (N terminus; Rod (Exons 46 & 50); C-terminus) (IHC);  Dystrophin (WB + IHC);  α-Dystroglycan (IHC);  
 Desmin (IHC);  Laminin α2 (IHC);  Collagen VI & IV (IHC);  MYH2 (IHC);  Myosin types (IHC x3);  Emerin (IHC);  Phalloidin (IHC);  
 Dysferlin (IHC & WB);  Calpain-3 (WB);  VCP (IHC);  LAMP-2 (IHC);  Lamin A/C & Sun-2 (IHC);  SMI-31 (IHC);  α-Actinin

**Immune myopathy panel:**  MHC Class I; Ulex; Decorin; SMI-31; C5b-9 (MAC); CD4; CD8; CD20; CD163; HAM56; LC3; CA9; Alcian blue; MxA

**Aggregate panel:**  Desmin; VCP; TDP-43; Caveolin-3; Ubiquitin proteins (FK2); SMI-31; p62 **Perineurioma**  Epithelial Membrane Antigen (EMA)

**Biochemistry** Performed at Washington University Neuromuscular Lab EXTRA SPECIMEN may be required (> 0.5 cm<sup>3</sup>, 100 mg)

**Mitochondrial oxidative enzymes**  Activity (Complexes I, II, III, IV, Citrate synthase) + Coenzyme Q10;  Complex I-V Western blot

**Glycogen pathways:**  Glycogen + Acid Maltase;  Glycogen degradation (PFK, Phosphorylase, PGK, PGM1, PGAM1, LDH, PBK);  PFK stain

## INSTRUCTIONS

**Hand carried fresh tissue:** Wrap in moist (saline) gauze; **Do not** immerse in saline or fixative

**Mailed tissue:** NOTES - Laboratory only open Monday through Friday; Send by overnight mail for early next day delivery

**Method A.** Freeze one piece of tissue in isopentane cooled with liquid nitrogen; Fix a 2nd piece, **or**

**Method B.** Wrap biopsy specimens in moist (saline) gauze. Place in sealed plastic container. Send on cold packs. Do not freeze.

**Requirements for forwarding tissue to from our Neuromuscular lab to other labs:** Extra specimen (200 mg); Clinical & Billing information; Approval #; Patient release, signed; Completed requisition from testing lab; Amount of tissue needed for testing; Shipping address, information & form

<b>SHIPPING ADDRESSES</b>	
<b>FedEx or UPS overnight:</b> Frozen (on dry ice) or Fresh biopsy (with ice pack)	<b>Local Hand Delivery:</b> Fresh or Frozen
<b>SHIPPING/MAILING ADDRESS</b> Neuromuscular Laboratory IWJ 404; Box 8111 660 South Euclid Avenue St. Louis, MO 63110 USA	<b>STREET LOCATION</b> Neuromuscular Laboratory Irene Walter Johnson Institute, Room 404 509 South Euclid Avenue St. Louis, MO 63110 USA
<b>Phone:</b> 314-362-2406; <b>FAX:</b> 314-362-3413; <b>e-mail</b> nmlab@wustl.edu	CAP# 19233-16 : CLIA ID# 26D0652044 : Medicare Provider # 26-8235
Turn around time: ~3 to 4 weeks; Call for urgent preliminary interpretation	pestronka@neuro.wustl.edu Revised 10/17/2022 AP