

## MUSCLE / NERVE / SKIN BIOPSY REQUEST FORM

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

<b>REFERRING INSTITUTION</b>	<b>PATIENT NAME</b>
<b>Requesting physician</b>	Sex      Age      Birth date
<b>Address:</b> Report to NAME ADDRESS CITY, STATE, ZIP PHONE & FAX #	<b>Dates:</b> Biopsy performed
	Biopsy received
<b>WU-NM Lab:</b> Accession #	
<b>PATIENT BILLING INFORMATION: Attach copy of insurance card or data page</b> (If not available, please provide):	
<b>Insurance Company:</b> Name:	Phone #:      ID & Group #:
<b>Policyholder:</b> Name:	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 X2, 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, Neurofilament, NCAM, P0, MBP Plastic sections: Toluidine blue  
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; HAM56; LC3; Caveolin-3; CA9

**Aggregate panel:**  Desmin; VCP; TDP-43; Caveolin-3; Ubiquitinated proteins (FK2); SMI-31

**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> ALAN PESTRONK, M.D. Washington University - Neurology, Box 8111 660 S. Euclid Ave. St. Louis, MO 63110	<b>STREET LOCATION:</b> NEUROMUSCULAR LABORATORY Irene Walter Johnson Institute 509 S. Euclid, Room 404 St. Louis, MO 63110
Phone: 314-362-2406 (Lab); FAX: 314-362-3413	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 1/26/2018 AP