



# UNIVERSITÄTS KLINIKUM HEIDELBERG

Center for Metabolic Diseases Heidelberg – Metabolic Laboratory  
Im Neuenheimer Feld 669 | 69120 Heidelberg Germany

**Center for Metabolic Diseases  
Heidelberg  
Metabolic Laboratory**

## Protocol of performing a skin biopsy for cultivation of fibroblasts

### Information of sampling, storeage and shipment of sample

Department of Pediatrics I  
(General Pediatrics, Metabolism,  
Gastroenterology, Nephrology, Neurology)

Head of Department of General  
Pediatrics  
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University Children's Hospital

#### **1. Protocol for performing a skin biopsy under sterile conditions:**

- You may anesthetize locally if the patient is highly sensitive to pain.  
For local anesthesia use either Emla-band-aid 1.5 hours before planned skin biopsy or after disinfection (see point 2) has been performed (directly before skin biopsy) Scandicain 0.5% (please make sure to use the correct dose for the body weight!).
- The biopsy has to be performed under sterile conditions (also in case of post-mortem)! The site of biopsy (underarm or inner side of the thigh) has to be disinfected with ethanol for 10 to 15 minutes. For disinfection wipe the site of biopsy from the center in circular movements to the outer site using a sterile pad soaked with 70% ethanol. Take 30 seconds for this procedure and repeat it 10 times using a new ethanolicpad each time. Applying ethanol just once is not sufficient in terms of disinfection and for removal of skin lipids.

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- Skin biopsy is performed with a sterile skin punch. A pair of tweezers and a scalpel may help during biopsy. Caution: do no punch too deep into the subcutaneous tissue, since you do not want too much of the subcutaneous fatty tissue. If you perform a deep skin biopsy make sure that the epithelial cover does not remain in the punch (frequent mistake!). After biopsy adapt the edges of the wound carefully.
- Transfer the skin biopsy immediately into a sterile 15 ml plastic tube containing 15 ml of fresh sterile physiologic sodium chloride solution (0.9% NaCl) or fresh sterile tissue culture medium (DMEM or RPMI 1640) at room temperature (not cooled solutions). Please make sure that the tube is filled up completely and sealed tightly. Label the tube with the date of biopsy, the name and DOB of the patient.

## **2. Storage of sample:**

- The sample should arrive in our lab in less than 48 hours after the biopsy has been taken. Make sure that the sample does not freeze during transport (cover/wrap tube with the skin biopsy using insulation material). If you need to perform a skin biopsy post mortem, please take 3-4 skin biopsies to make sure that at least one will be of optimal quality.

## **3. Shipment of skin biopsy:**

- The sample should arrive in our lab in less than 48 hours after the biopsy has been taken.
- Make sure that the sample does not freeze during transport (cover/wrap tube with the skin biopsy using insulation material).
- If you need to perform a skin biopsy post mortem, please take 3-4 skin biopsies to make sure that at least one will be of optimal quality.

Send the skin biopsy immediately to the following address:

**Center for Metabolic Diseases Heidelberg  
Metabolic Laboratory  
Im Neuenheimer Feld 669  
D-69120 Heidelberg**



**Germany**

