



## PerkinElmer Genomics Specimen Requirements for Molecular Genetics

SAMPLE TYPES	CODE	REQUIREMENTS
DRIED BLOOD SPOTS PREFERRED SAMPLE TYPE	DBS	Collection Container(s): Dried blood spot card Collection and Processing Instructions: Follow kit instructions. Briefly, allow blood to saturate card until indicated areas are filled and blood has soaked through card. Air dry card at ambient temperature for at least 3 hours.  • NBS: Please contact PKIG to request the StepOne® kit.  • Gene Sequencing: Please contact PKIG to request the DBS collection kit.  Preferred Sample Condition: Follow kit instructions. Store at ambient temperature.  Shipping Instructions: Follow kit instructions. Double bag and ship overnight at ambient temperature.
SALIVA PREFERRED SAMPLE TYPE	SV	Collection Container(s): Oragene™ Saliva Collection Kit Collection and Processing Instructions: Collect saliva on an Oragene™ Saliva Collection Kit according to the manufacturer's instructions. Please contact PKIG to request the saliva collection kit for patients that cannot provide a blood sample as whole blood is the preferred sample.  Preferred Sample Condition: Store at ambient temperature. Do not refrigerate or freeze.  Shipping Instructions: Ship overnight at ambient temperature.
WHOLE BLOOD (EDTA) PREFERRED SAMPLE TYPE	WB	Collection Container(s): EDTA (purple top) Collection and Processing Instructions: Infants (< 2-years): 2 to 3 mL; Children (>2-years): 3 to 5 mL; Older children and adults: 5 to 10 mL Southern Blot Analysis requires 3 mL blood. Preferred Sample Condition: Store at ambient temperature. Do not refrigerate or freeze. Shipping Instructions: Ship overnight at ambient temperature ensuring receipt within 5-days of collection. Comments: Clotted or hemolyzed samples are not accepted.
AMNIOTIC FLUID	AF	Please contact a PKIG Laboratory genetic counselor for these requests.
BONE MARROW	ВМ	Collection Container(s): EDTA (Purple Top) or ACD (Yellow Top) Collection and Processing Instructions: Collect 2 to 3 mL of bone marrow. Preferred Sample Condition: Store at ambient temperature. Do not refrigerate or freeze. Shipping Instructions: Ship overnight at ambient temperature ensuring receipt within 5-days of collection.
CHORIONIC VILLI	CV	Please contact a PKIG Laboratory genetic counselor for these requests.
CORD BLOOD	СВ	Collection Container(s): EDTA (Purple Top) or ACD (Yellow Top) Collection and Processing Instructions: Collect 1 to 3 mL of fetal blood. Preferred Sample Condition: Store at ambient temperature. Do not refrigerate or freeze. Shipping Instructions: Ship overnight at ambient temperature ensuring receipt within 5-days of collection.
CULTURED AMNIOCYTES	CAF	Please contact a PKIG Laboratory genetic counselor for these requests.





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CULTURED CHORIONIC VILLI	ccv	Please contact a PKIG Laboratory genetic counselor for these requests.
CULTURED FIBROBLASTS	CF	Collection Container(s): T25 or T75 flask Collection and Processing Instructions: Collect at least 1-T25 (or T75) with a confluency of 75 to 80%. Preferred Sample Condition: Store at ambient temperature. Do not refrigerate or freeze. Shipping Instructions: Ship overnight at ambient temperature.
DNA, ISOLATED	DNA	Required DNA Quantity by Test Type*:  Next Generation Sequencing (NGS): Send >500ng total gDNA @ > 15ng/μL. Please ship samples in 10mM Tris. No EDTA.  • Sanger Sequencing: Send 5 to 25 μg (varies by size of gene). Please contact the laboratory for specific amounts.  • Non-Sequencing Tests: Send 20 μg  • Array-based Tests: Send 10 μg  *Required DNA Quality: High molecular weight DNA (>12kb). A260/A280 reading should be ≥ 1.8.  Shipping Instructions: Ship overnight at ambient temperature.  Comments:  • Research Laboratories: DNA extracted in research laboratories is not acceptable. Only under exceptional circumstances (e.g. proband not available) will DNA extracted in a research laboratory be accepted for clinical testing. Additional testing (e.g. of other family members) may be required to confirm results.  • Laboratories outside the United States: Non-US laboratories are not subject to CLIA regulations and will be reviewed on a case-by-case basis. Please call to speak with a laboratory genetic counselor prior to submitting a DNA sample from any non-CLIA certified laboratory.  • Special Notes: If extracted DNA is submitted, information regarding the method used for extraction should be sent along with the sample.
FORMULIN-FIXED PARAFFIN EMEDDED (FFPE) TISSUE	PE	Collection Container(s): Block or slides Collection and Processing Instructions: Submit FFPE block and H&E stained slide OR submit two 15µm scrolls and H&E stained slide OR submit FFPE unstained slides (15 µm x 3) and H&E stained slide.  Preferred Sample Condition: Store at ambient temperature. Do not refrigerate or freeze. Shipping Instructions: Ship overnight at ambient temperature in an insulated container. Do not heat or freeze. Comments: Full strength liquid formaldehyde fixed tissue is NOT acceptable.
Muscle Biopsy	МВ	Collection Container(s): Sterile container Collection and Processing Instructions: 1 to 2 mm in length or 100 mg is acceptable. Flash freeze sample upon collection using liquid nitrogen. Preferred Sample Condition: Store flash frozen sample at -20°C or colder. Shipping Instructions: Ship frozen sample overnight on dry ice. Not accepted on Saturdays.





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PRODUCTS OF CONCEPTION	POC	Collection and Processing Instructions: Specific tissue of origin; Contact laboratory genetic counselor for further instructions.  Preferred Sample Condition: Store at ambient temperature. Do not refrigerate or freeze.  Shipping Instructions: Ship same day or next day at ambient temperature.  Comments: Please speak with a laboratory genetic counselor for these requests, as director approval is required. Specimen requirements are similar to cytogenetics requirements.
SKIN BIOPSY	SK	Collection Container(s): Sterile container with PKIG transport media or other sterile culture media (RPMI, Hanks Solution). Collection and Processing Instructions: Collect 1 to 2 cm pieces of tissue from a central location rather than a distal location to enhance cell viability and growth. Place in a sterile container with PKIG transport media or other sterile culture media. Use sterile dissection (no prep) for internal tissue. Tissue fixed in formalin cannot be used.  Preferred Sample Condition: Store at ambient temperature. Do not refrigerate or freeze. In the absence of media, place in a sterile container with a small amount of sterile saline.  Shipping Instructions: Ship same day or next day at ambient temperature.