

# UPMC Cytogenetics Laboratory

## Sample Requirements

Label all tubes/flasks with patient name and date of birth, enclose a fully completed **Cytogenetics Test Requisition** form. Containers can be wrapped with Parafilm to prevent leakage during transport. Samples should be shipped at room temperature. Delayed shipment of sample or inappropriate temperatures may result in longer processing time or cell growth failure. Please contact the laboratory at [PittCytogenetics@upmc.edu](mailto:PittCytogenetics@upmc.edu) or at 412-641-5558 for further clarification or other questions.

### SAMPLE REQUIREMENTS

#### PRENATAL DIAGNOSIS- KARYOTYPE with or w/o AneuVysion FISH

Specimen Types	Sample Volume	Collection Instructions
<b>Chorionic Villi</b>	Min. 10-15mg of chorionic villus	Collect tissue in a sterile tube containing culture medium, sterile saline or balanced salt solution.
<b>Amniotic Fluid</b>	Min. 15–20cc of fluid	Discard 1 <sup>st</sup> few cc's of fluid drawn to avoid maternal cells. With a 2 <sup>nd</sup> syringe withdraw fluid and place in sterile tube with screw top lid.

#### PRENATAL DIAGNOSIS- KARYOTYPE, FISH, AND MICROARRAY (aCGH)

Specimen Types	Sample Volume	Collection Instructions
<b>Chorionic Villi</b>	Min. 15-2 mg of chorionic villus (dependent on # of tests ordered, please contact the lab for amount required)	Collect tissue in a sterile tube containing culture medium, sterile saline or balanced salt solution.
<b>Amniotic Fluid</b>	Min. 25-30cc of fluid	Discard 1 <sup>st</sup> few cc's of fluid drawn to avoid maternal cells. With a 2 <sup>nd</sup> syringe withdraw fluid and place in sterile tube(s) with screw top lid.

#### POSTNATAL/ADULT KARYOTYPING AND FISH

Specimen Types	Sample Volume	Collection Instructions
<b>Peripheral Blood</b>	For adults and older children: 5cc whole blood  For infants and young children: 1-3cc whole blood	One green top (sodium heparin) tube is required for karyotyping and/or FISH.  <b>Do NOT collect in lithium heparin tubes!</b>

#### POSTNATAL/ADULT FISH

Specimen Types	Sample Volume	Collection Instructions
<b>Urine</b>	For adults and older children: 20-50mL  For infants and young children: 5-10mL	Collect in a sterile plastic urine collection container with a secure lid. Do not do multiple collections or pool samples. Containers can be wrapped with Parafilm to prevent leakage during transport. Fluids should be sent to the laboratory by same day or overnight courier. <b>Urine specimens need to be processed within 24 hours of collection. If not transported immediately after collection, specimens should be refrigerated until transport. Please call the laboratory when planning to send urine specimens!</b>

# UPMC Cytogenetics Laboratory Sample Requirements

CONSTITUTIONAL KARYOTYPING, FISH AND MICROARRAY (aCGH)		
Specimen Types	Sample Volume	Collection Instructions
<b>Peripheral Blood</b>	For adults and older children: 5cc whole blood  For infants and young children: 1-3cc whole blood	One green top tube (sodium heparin) and one purple top tube (1X EDTA) each containing amount listed in sample volume. <b>Do not use lithium heparin tubes!</b> (NOTE: Green top tube is required even if microarray is the only test being ordered in case follow-up FISH testing is required)
<b>Fetal Tissue, Placental Villi, or Skin Biopsy</b>	1-2cm <sup>3</sup> biopsy. Send larger samples of placental tissue if possible as this often contains maternal tissue that requires separation from fetal tissue.	Tissue should be obtained in an aseptic manner using sterile instruments and placed in a sterile tube or container with physiological saline or balanced salt solution to keep the sample moist. <b>Do not place tissues in formalin or water! If storing overnight prior to shipping, please refrigerate.</b>
ONCOLOGY KARYOTYPE with or w/o FISH		
Specimen Types	Sample Requirements	Collection Instructions
<b>Bone Marrow or Peripheral Blood</b>	Min. 3cc preferred, if possible (min. 1cc)	Specimen should be drawn in a heparinized syringe and placed in a green top (sodium heparin) tube. <b>Do NOT collect in lithium heparin tubes!</b>
<b>Solid Tumors</b>	1-2cm <sup>3</sup> biopsy sample (a smaller piece will be used if this is not possible)	Tissue should be obtained in an aseptic manner using sterile instruments and placed in a <b>sterile</b> tube or container with <b>physiological saline or balanced salt solution</b> to keep the sample moist. <b>Do not place tissues in formalin or water!</b>
ONCOLOGY INTEGRATED PACKAGE (karyotype, onc array, and/or FISH)		
Specimen Types	Sample Requirements	Collection Instructions
<b>Bone Marrow or Peripheral Blood</b>	Min. 3cc preferred, if possible (min. 1cc)	Specimen should be drawn in a heparinized syringe and placed in a green top (sodium heparin) tube. An additional purple top (EDTA) tube is also preferred. <b>Do NOT collect in lithium heparin tubes!</b>