

Order: Choose one primary test

Chromosome FISH, **Amniotic Fluid** with Reflex to Chromosome Analysis or Genomic Microarray (2011130)

OR

Chromosome FISH, **Chorionic Villus** with Reflex to Chromosome Analysis or Genomic Microarray (2011131)

Option 1: MCC test performed for microarray only

MCC analysis is requested only if FISH result is normal and reflexes to microarray on prenatal sample

Order the following MCC test:

1. Maternal Cell Contamination, Maternal Specimen (MCC MAT, 0050608)* on maternal whole blood

Option 2: MCC test performed regardless of FISH test result

MCC analysis is requested when FISH result is normal and test reflexes to microarray or if FISH result is abnormal and test reflexes to chromosome analysis

Order BOTH of the following MCC tests:

1. Maternal Cell Contamination, Fetal Specimen (MCC-FETAL, 0051596) on the fetal specimen
2. Maternal Cell Contamination, Maternal Specimen (MCC MAT, 0050608)* on maternal whole blood

Notes:

1. If FISH does not reflex to microarray, the MCC MAT (0050608)* order will be canceled and MCC analysis will not be performed.
2. If FISH does reflex to microarray, MCC testing will be performed for genomic microarray.

Notes:

1. Fetal STR markers (MCC-FETAL, 0051596) are not a standard component of chromosome analysis and must be ordered for MCC analysis to be performed.
2. Fetal STR markers are a standard component of prenatal microarray testing. If the sample reflexes to microarray, the MCC-FETAL (0051596) order will be placed on Except to cancel the duplicate order.

* When fetal cytogenetic and fetal molecular testing are ordered concurrently at ARUP only one maternal specimen with one MCC MAT order is required.

Maternal Cell Contamination (MCC) Analysis Guide

Maternal cell contamination (MCC) is a potential risk associated with testing on prenatal, products of conception (POC), or cord blood specimens. MCC can occur if maternal blood or tissue comes into contact with a prenatal, POC, or cord blood specimen, such as during prenatal diagnostic procedures such as chorionic villus sampling or amniocentesis, during collection of POC samples, or extraction of fetal blood from the umbilical cord (cord blood). If significant MCC is present in a fetal or cord blood specimen, the maternal DNA may interfere with the interpretation of diagnostic genetic testing. Therefore, the results of genetic testing on prenatal or cord blood specimens may be compromised.

Maternal cell contamination (MCC) testing is used to determine if contamination has occurred and is ideally performed by obtaining both fetal and maternal specimens for genotyping using short tandem repeat (STR) markers. The STR patterns from the maternal and fetal specimens are compared to assess for the presence of maternal cells.

0050608 Maternal Cell Contamination, Maternal Specimen

This test is used to submit a MATERNAL whole blood specimen when maternal cell contamination (MCC) testing is requested on a fetal, POC, or cord blood specimen. This is not a standalone test and must be ordered in conjunction with one or more fetal diagnostic test.

0051596 Maternal Cell Contamination, Fetal Specimen

This test is used to rule out the presence of maternal cell contamination (MCC) within a FETAL, POC, or CORD BLOOD specimen when contamination testing is NOT included as a component of diagnostic testing performed at ARUP.

Fetal tests that include fetal STR markers as a test component are noted in ARUP Test directory under Components.