Chromosome Analysis: Peripheral Blood (Age: 6 months and above)

**Test Code:** CA  
**Turnaround time:** 10 days - 14 days  (Preliminary Report: 2-3 days by request)  
**CPT Codes:** 88230 x1, 88262 x1, 88291 x1

### Condition Description

This test will detect abnormalities in chromosome number and large deletions/duplications of chromosome material as well as balanced chromosomal rearrangements.

For most indications for cytogenetic testing (intellectual disability, developmental delays, autism spectrum disorders, multiple congenital anomalies, etc.) a chromosomal microarray has replaced the G-banded karyotype as the first-tier diagnostic test. For more information about the benefits of the microarray, please click [here](#).

### Indications

This test is indicated for patients with:

- a known or suspected family history of a chromosome abnormality  
- recurrent miscarriage or infertility (ACOG Practice Bulletin)  
- suspected trisomy 13, 18, or 21  
- congenital abnormalities and/or developmental delay present (chromosomal microarray analysis is recommended as a first-tier test)

### Methodology

PHA stimulated cultures are used for G-banded analysis. ISCN nomenclature is followed.

### Detection

ISCN Nomenclature, minimum band resolution of 550.

### Specimen Requirements

**Type:** Whole Blood (Sodium heparin)

**Specimen Requirements:**  
Sodium Heparin (Green Top)  
Infants and Young Children (2 years of age to 10 years old): 3-5 ml  
Older Children & Adults: 5-10 ml  
Autopsy: 2-3 ml unclotted cord or cardiac blood

**Specimen Collection and Shipping:**  
Ship sample at room temperature for receipt at EGL within 24 hours of collection. Do not refrigerate or freeze. Not accepted on Saturday.

### Related Tests

- The EmArray Cyto (VA) may detect microdeletions/duplications that are not visible on a peripheral blood chromosome analysis and is recommended as a first tier test for patients with congenital abnormalities and/or developmental delay.  
- When mosaicism is suspected but not detected on a standard peripheral blood chromosome analysis, a chromosome analysis for mosaicism (MM) in peripheral blood or a chromosome analysis on skin fibroblasts (CSKNC) may be warranted.  
- If there is a known chromosome abnormality in the family, such as a translocation, a targeted, family member chromosome study (FS) may be indicated.