Prenatal Rapid Screen by FISH for 13, 18, 21, X and Y

Test Code: RS
Turnaround time: 1 day - 3 days. (All abnormal findings are called out immediately.)
CPT Codes: 88271 x2, 88275 x1, 88291 x1

Condition Description

Chromosome disorders due to non-disjunction of chromosomes 13, 18, 21, X and Y together comprise the majority of the microscopically detectable chromosome disorders. Aneuploidy of the non-sex chromosomes increases in frequency as maternal age increases.

Analysis by Fluorescence In Situ Hybridization (FISH) allows for the most rapid detection of the most common chromosome disorders. Results can typically be reported in 24-48 hours from the time of receipt.

Concurrent G-banded chromosome analysis with or without chromosomal microarray is required.

Indications

- FISH for aneuploidy is appropriate for the following indications:
  - Parental concern
  - Abnormal ultrasound
  - Abnormal maternal serum screen
  - Increased nuchal translucency or nuchal fold
  - Advanced maternal age
  - Family history

Methodology

Interphase FISH is performed on direct amniotic fluid and chorionic villi samples using commercially available probes.

Detection

FISH is very sensitive in the detection of aneuploidy. This probe set is specific to chromosomes 13, 18, 21, X and Y. Only numerical abnormalities of these chromosomes will be detected. Validation for specificity and sensitivity are performed on each probe. Control probes are present in all probe sets.

Specimen Requirements

Submit only 1 of the following specimen types

Type: Amniotic Fluid

Specimen Requirements:
15 ml Sterile Conical Centrifuge tube
20-30 ml fluid, discarding the first 1-2 ml. Place in 2-3 Specimen tubes. Preferred gestational age > 15 weeks.

Specimen Collection and Shipping:
Must be received in a securely closed, sterile container. Ship sample at room temperature for receipt at EGL within 24 hours of collection. Do not refrigerate or freeze.

Type: Chorionic Villi

Specimen Requirements:
Sterile container with EGL transport media. If EGL media is not available, other sterile culture media can be used (RPMI, Hanks Solution) 15-30 mg chorionic villi/placental tissue using sterile technique. Place in sterile tube(s) with transport media. If ordering multiple tests, 30 mg is recommended. Preferred gestational age > 10-12 weeks.

Specimen Collection and Shipping:
Must be received in a securely closed, sterile container. Ship sample at room temperature for receipt at EGL within 24 hours of collection. Do not refrigerate or freeze.

Special Instructions

Concurrent G-banded chromosome analysis with or without chromosomal microarray is required.

Related Tests

- Prenatal Chromosomal Microarray, EmArray Cyto (CMPRE)
- Prenatal Chromosome Analysis (CV/AD)