Lab Dept: Hematology

Test Name: HEMOGLOBIN F BY FLOW CYTOMETRY

**General Information**

Lab Order Codes: HGBFF

Synonyms: Hgb F by Flow Cytometry; Hemoglobin F, Red Cell Distribution, Blood

CPT Codes: 88184 – Flow cytometry, cell surface, cytoplasmic, or nuclear marker, technical component only; first marker

Test Includes: The presence of hemoglobin F reported as heterocellular or homocellular.

**Logistics**

Test Indications: Useful in distinguishing hereditary persistence of fetal hemoglobin from other conditions with increased amounts of fetal hemoglobin.

Lab Testing Sections: Hematology - Sendouts

Referred to: Mayo Medical Laboratories (Test:HPFH/8270)

Phone Numbers: MIN Lab: 812-813-6280
              STP Lab: 651-220-6550

Test Availability: Daily, 24 hours

Turnaround Time: 2 – 5 days, test set up Monday - Saturday

Special Instructions: A current Hemoglobin F% **must** be submitted with an order for this test. If a current Hemoglobin F value is not available, Hemoglobin F, Blood should be ordered first or in conjunction with this test. This test is not to be ordered for fetal-maternal bleed.

**Specimen**

Specimen Type: Whole blood

Container: Lavender top (EDTA) tube

Draw Volume: 3 mL (Minimum: 0.5 mL) blood

Processed Volume: Same as Draw Volume
**Collection:** Routine venipuncture A Hemoglobin F% for the patient should be submitted with an order for this test. If a current Hemoglobin F value is not available, Hemoglobin F, Blood should be ordered first or in conjunction with this test. This test is not to be ordered for fetal-maternal bleed.

**Special Processing:** Lab Staff: Do Not Centrifuge. Send specimen in original collection container. Store and ship at refrigerated temperatures. Do Not freeze. Indicate the % of Hemoglobin F patient age and sex. Forward promptly.

**Patient Preparation:** None

**Sample Rejection:** Specimens other than whole blood, frozen specimens, anticoagulants other than EDTA or heparin, hemolyzed specimens, mislabeled or unlabeled specimens

### Interpretive

**Reference Range:** Reported as heterocellular or hepatocellular

Note: In the common form of the genetic trait, hereditary persistence of fetal hemoglobin (HPFH), all of the erythrocytes contain hemoglobin F.

More than 75% of the hemoglobin of the newborn is hemoglobin F, it diminishes over a period of several months to adult levels, becoming <2% by 1 year of age.

Hemoglobin F may constitute 90% of the total hemoglobin in patients with beta-thalassemia major.

Hemoglobin F is often moderately elevated in sickle cell disease, aplastic anemia, acute leukemia, myelo-proliferative disorders, hereditary spherocytosis, and alpha-thalassemia minor. It is commonly increased in all hemoglobinopathies associated with hemolysis. Hemoglobin F increases to as high as 10% during normal pregnancy.

**Critical Values:** N/A

**Limitations:** Indication for test must be stated.

**Methodology:** Flow cytometry

**References:** Mayo Medical Laboratories Web Page February 2007