## Lab Dept: Hematology

## Test Name: HEMOGLOBIN F BY FLOW CYTOMETRY

### *General Information*

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| **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*

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| **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<br>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*

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| **Specimen Type:** | Whole blood |
| **Container:** | Lavender top (EDTA) tube |
| **Draw Volume:** | 3 mL (Minimum: 0.5 mL) blood |
| **Processed Volume:** | Same as Draw Volume |

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| **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*

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| **Reference Range:** | Reported as heterocellular or hepatocellular<br><br>Note: In the common form of the genetic trait, hereditary persistence of fetal hemoglobin (HPFH), all of the erythrocytes contain hemoglobin F.<br><br>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.<br><br>Hemoglobin F may constitute 90% of the total hemoglobin in patients with beta-thalassemia major.<br><br>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 |
| **Updates:** | 2/28/2007: CPT previously listed as 88180. Update for CPT 2007. |