**Test Code:** 4206

**Department:** Molecular Oncology

**Test Synonyms:**

- KIT Mutation Screening for Acute Myelogenous Leukemia (exons 8 & 17)

**CPT Code(s):**

- 83890
- 83892
- 83898 x 2
- 83903 x 2
- 83907

**Background:**

Oncogenic *KIT* gene mutations are present in a subset of acute myelogenous leukemias with inv16 or a translocation involving *AML-1* (e.g. t[8;21]).\(^1,^2\) The mutations occur most commonly in exons 17 and 8 of the *KIT* gene, but the relative frequency varies somewhat among different studies. Cases with exon 17 mutations have a significantly worse prognosis.

**Methodology:**

DNA is extracted and purified from either fresh marrow aspirate or paraffin-embedded tissue. *KIT* gene exons 8 and 17 are screened by a combination of real-time PCR and high resolution melting curve analysis. All suspected mutations are confirmed by direct DNA sequencing. It should be noted that samples in which the tumor cells represent less than 30% of the total cell population may yield false negative results.

**Specimen Requirements:**

- 5-10 mL of blood or bone marrow in purple (EDTA) tube; or
- formalin-fixed paraffin-embedded (FFPE) tissue blocks or
- 10 unstained slides.

**A REQUISITION FORM MUST ACCOMPANY ALL SAMPLES. Please include detailed clinical information.**

**Test Performed (Days):**

Mon – Fri

**Turn Around Time:**

7-10 days

**Shipment Sensitivity Requirements:**

Package and ship specimen to remain cold, but not frozen. Ship via overnight express, using the FedEx priority overnight label provided. Contact Client Services for shipping kits and instructions at (855) 535-1522.

**References**

cKIT - AML
