FIP1L1-PDGFRA Fusion Transcript Detection

RNA-PCR

Indication
For determining the presence or absence of the FIP1L1-PDGFRA fusion transcript produced by an interstitial deletion at chromosome 4q21 that is seen in some cases of hypereosinophilic syndrome and systemic mast cell disease. This test can be used for residual disease detection following therapy.

Methodology
RNA is analyzed for FIP1L1-PDGFRA fusions by reverse transcription nested PCR.

Test Parameters
A control RNA sequence is amplified in parallel as a control for sample quality.

Turnaround Time
Five to 10 working days

Sample Requirements
- 10 ml peripheral blood in purple top tube (EDTA Vacutainer), sent by overnight express mail or
- 2-5 ml of bone marrow aspirate in purple top tube (EDTA Vacutainer), sent by overnight express mail or
- 10 µg of purified RNA or cDNA, sent by overnight express mail on dry ice

CPT Codes
83891 (RNA isolation), 83902, 83898, 83909, 83912
FISH, HES/Leukemia, 4q12 Rearrangement (FIP1L1-PDGFRA)

CPT Code(s): 88271 (x3), 88275, 88291

This test was developed and its performance characteristics have been determined by Quest Diagnostics. It has not been cleared or approved by the U.S. Food and Drug Administration. The FDA has determined that such clearance or approval is not necessary. Performance characteristics refer to the analytical performance of the test.

Preferred Specimen(s)
3 mL bone marrow in transport media

Minimum Volume
1 mL

Alternate Specimen(s)
Bone marrow or whole blood collected in a sodium heparin (green-top), sodium heparin blue-top) or sodium heparin lead-free (tan-top) tube

Instructions
Bone marrow: 1-3 mL in transport medium (preferred) or sodium heparin (green-top) whole blood: 3-5 mL collected in a sodium heparin (green-top) tube

Ship at room temperature. Do not freeze.
Specimen viability decreases during transit. Send specimen to testing lab for viability determination. Do not reject.

Transport Container
Transport media

Transport Temperature
Room temperature

Specimen Stability
Room temperature: See Instructions Refrigerated: See Instructions Frozen: Unacceptable

Methodology
Fluorescence in situ Hybridization (FISH)

Performing Laboratory
FIP1L1-PDGFRA fusion (rearrangement of 4q12; interstitial deletion of CHIC2 region) observed in diverse eosinophilia-associated hematologic disorders. The cases with FIP1L1-PDGFRA fusion show an excellent response to the tyrosine kinase inhibitor imatinib mesylate (Metzgeroth et al, 2007)

(The CPT codes provided are based on AMA guidelines and are for informational purposes only. Coding is the sole responsibility of the billing party. Please direct any questions regarding coding to the payer being billed.)