

UCLA DIAGNOSTIC MOLECULAR PATHOLOGY LABORATORY
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PML/RAR Alpha t(15;17) Translocation

↑CPT

83890; 84311; 83902; 83898 (x4); 83909 (x3); 83912

↑Laboratory

Molecular Pathology

↑Availability

Monday-Friday, 0700-1700

↑Turnaround Time

3-14 days

↑Specimen

Whole blood, bone marrow and body fluid

↑Volume

4 mL

↑Minimum Volume

1 mL

↑Container

Lavender top (EDTA) tube

↑Storage Instructions

All specimens should be sent to the Laboratory immediately after collection, preferably by overnight delivery. Specimens should be kept at room temperature or refrigerate but not frozen.

↑Causes for Rejection

Specimens inadequately identified; sample older than 48 hours

↑Reference Range

No rearrangement observed

↑Use

APL often express PML/RAR α transcripts from t(15;17) chromosomal translocations that fuse the PML gene on chromosome 15 with the retinoic acid receptor α (RAR α) gene on chromosome 17. The diagnosis of APL is typically based upon identification of promyelocytes with distinctive morphology plus detection of t(15;17) translocation. A positive test result also identifies those patients who are candidates for retinoic acid therapy.

↑Limitations

Absence of these mutations does not exclude a diagnosis of APL.

↑Methodology

The RNA is reverse transcribed to generate cDNA. Then, the cDNA is amplified with specific primers to amplify the fusion transcripts. Those PCR products are detected by capillary electrophoresis on an ABI 3130xl genetic analyzer.
