

**TEST: DETECTION OF THE FACTOR XIII V34L GENE
POLYMORPHISM BY PCR**

PRINCIPLE

Factor XIII plays an essential role in the coagulation cascade. It is a transglutaminase which cross-links the fibrin and stabilizes the clot in the final stages of clot formation. Low levels of Factor XIII are found in Crohn's disease and ulcerative colitis, whereas elevated levels are found in Alzheimer's disease.

Factor XIII V34L gene polymorphism has been associated with myocardial infarction (protective effect) and has also been shown to correlate with the disease progress of patients with venous leg ulcers.

The Factor XIII V34L gene polymorphism can be identified by specific amplification of a 76-bp DNA fragment of *Factor XIII* gene, by PCR. The amplification product can be visualized by gel electrophoresis.

SPECIMEN COLLECTION AND PREPARATION:

Collect 10ml blood by standard venipuncture techniques in lavender top EDTA tubes. Specimens should be delivered to the lab immediately or stored overnight at room temperature. Shipment to the laboratory should be by the same day or overnight, at room temperature. Peripheral blood specimens that are clotted, frozen or have not been collected in EDTA tubes are not acceptable.

METHOD: Polymerase chain reaction (PCR)

REFERENCES:

1. Juhan-Vague, I. *Thromb Haemost* 1999;81:463
2. Anwar, R et al. *Blood* 1999;93:897-905

REPORTING RESULTS:

<u>Results</u>	<u>Base Pairs</u>
Normal (GG)	183, 76 (G-specific)
Heterozygous (GT)	183, 76 (G-specific and T-specific)
Homozygous (TT)	183, 76 (T-specific)

Turnaround time: Two Weeks