TEST: DETECTION OF β-FIBRINOGEN G455A GENE POLYMORPHISM BY PCR

PRINCIPLE:

Fibrinogen (Factor I) is a glycoprotein, synthesized in the liver, that participates in the coagulation cascade. Fibrinogen converts to fibrin in the presence of thrombin. Elevated fibrinogen levels have been associated with increased risk for atherosclerosis and deep venous thrombosis as well as cardiovascular diseases. Fibrinogen is composed of three pairs of polypeptide chains (named α, β and γ) which are linked by disulfide bonds. These three chains are encoded by three different genes (α, β and γ, respectively), that are located on chromosome 4. A common G → A polymorphism at position -455 in the promoter region of the β-fibrinogen gene has been associated with elevated fibrinogen levels (for the AA homozygous carriers).

SPECIMEN COLLECTION AND PREPARATION:

10mL whole blood collected in lavender top EDTA tubes (two 5ml tubes). Specimen should be delivered to the laboratory within 72 hours at room temperature. Peripheral blood specimens that are clotted, have not been collected in EDTA, or frozen are not acceptable.

METHOD:

Polymerase chain reaction (PCR) and reverse hybridization.

REFERENCES:

van't Hooft F et al. *Arteriosler Thromb Vasc Biol* 1999;19:3063-3070

Normal Range: Reported as Normal (G/G), Heterozygous Mutated (G/A) or Homozygous Mutated (A/A)

Turnaround time: 10 business days