DETECTION OF -455 G/A POLYMORHISM OF GENE CODING β-FIBRINOGEN

AMPLI-set- β-Fibrinogeno Real Time Cat. n. 1.352RT

The development of thrombotic pathologies is one of the major cause of morbidity and mortality .The alteration of haemostatic system is the central mechanism of the thrombotic events. The causes of this alterations may be also genetic. It underlines the importance of the interaction between genes and environment in the thrombotic pathologies.

The fibrinogen s a glycoproteic dimerous in which every chain is constituted by three polypeptide chains α, β and γ for a molecular weight of 340000 D. the coding genes for the three chains are located in a cluster of 50kb on the long arm of chromosome 4 (q23-q32). Many polymorphisms have been detected charged to the promoter of the gene coding the β chain of fibrinogen. The synthesis of this chain seems to be the limiting step in the assembly or the entire proteic complex of the fibrinogen. For this reason the scientific interest is focalized on genetic polymorphisms able to regulate the synthesis of the β chain. Particularly the presence of –455 G/A polymorphism induces an increasing of fibrinogen in the plasmatic levels.

The research of the polymorphism is carried out by Real Time PCR using specific primers and a probe able to recognized the polymorphism.

The kit used for the –455 G/A polymorphism detection, the probe recognizes the wild type sequence is bound to the reporter FAM, while the one recognizing the polymorphic sequence is bound to reporter VIC.

Principle of method: A) extraction of genomic DNA B) amplification C) detection using real time PCR instrument

Applicability: Genomic DNA extracted and purified from whole blood samples

Number of reactions: 50.

Stability: over 18 months if correctly stored

REAGENTS AND STORAGE

REAGENTS	STORAGE
Mix PCR β-fibrinogeno 20 X	-20°C
H_2O RNase/DNase Free	+4°C
Taq Polymerase 2X	+4°C
Wilde Type CONTROL	+4°C
Heterozygous control	+4°C

References:

-Genetic association between FXIII and β-fibrinogen genes and women with recurrent spontaneous abortion: a meta- analysis. Li J, Wu H, Chen Y, Wu H, Xu H, Li L., J Assist Reprod Genet. 2015 May;32(5):817-25. doi: 10.1007/s10815-015-0471-9. Epub 2015 Apr 11.

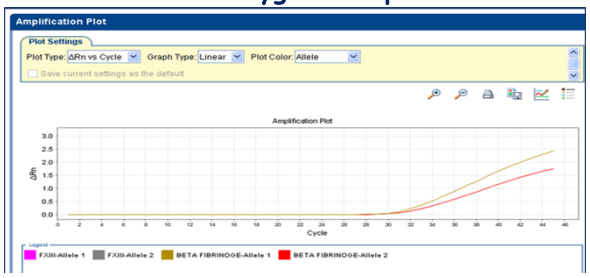
-Zinc Finger 259 Gene Polymorphism rs964184 is Associated with Serum Triglyceride Levels and Metabolic Syndrome. Mirhafez SR, Avan A, Pasdar A, Khatamianfar S, Hosseinzadeh L, Ganjali S, Movahedi A, Pirhoushiaran M, Mellado VG, Rosace D, van Krieken A, Nohtani M, Ferns GA, Ghayour-Mobarhan M. Int J Mol Cell Med. 2016 Winter;5(1):8-18.

ANALYSIS OF RESULTS

The results analysis will be carried out by a specific program (ALLELIC DISCRIMINATION) previously set. Anywhere it is useful analyzing the amplification plots, in order to check the amplification reaction.

Below an exemplification of an ALLELIC DISCRIMINATION graph of an heterozygous and a wild type sample.

Heterozygous sample



Wild type sample