

Risk factors for cardiovascular diseases or venous thrombosis involve both acquired and hereditary conditions. Mutations on genes of coagulation **factors II & V and methylenetetrahydrofolate reductase (MTHFR)** gene are responsible for this susceptibility to venous thrombosis. The mutation **G1691A** on factor's V gene cause the synthesis of the protein called "Leiden factor V" with the substitution of Arginine 506 with a glutamine; this substitution obstacles the cutting by activated C protein.

The result is a Resistance to activate C protein with increase of inherited risk in venous thrombosis.

Also the genetic mutation **G20210A** on prothrombin gene (factor II) is associated higher risk of venous thrombosis caused by an increase of prothrombin in blood.

The genetic mutations **C677T & A1298C** ON Gene MTHFR caused an increase of blood homocystein determining higher risk of vascular diseases.

Containing of the kits

Factor V Coagulation kit-RQ (cod. FC.02RQ)	
FV-RQ Master Mix	Mix for amplification of factor V gene
FV Pr wt-VIC	Complementary probe to wild- type sequence
FV Pr mut-FAM	Complementary probe to mutated sequence

Factor II Coagulation kit-RQ (cod. FC.01RQ)	
FII-RQ Master Mix	Mix for amplification of factor II gene
FII Pr wt-VIC	Complementary probe to wild- type sequence
FII Pr mut-FAM	Complementary probe to mutated sequence

MTHFR kit-RQ (cod. FC.04RQ)	
MTHFR-RQ Master Mix	Mix for amplification of MTHFR gene
MTHFR Pr wt-VIC	Complementary probe to wild- type sequence
MTHFR Pr mut-FAM	Complementary probe to mutated sequence

How does the kit work?

The Coagulation Factor V kit-RQ, the Coagulation Factor II kit-RQ and the MTHFR kit-RQ permit to make the discrimination of, respectively: Genetic variants G1691A on factor V gene, G. variants G20210A on factor II gene and G. variants C677T & A1289C on gene MTHFR. All of this is possible by Real Time PCR. All the kits contains: the primers for the amplification of mutated genes regions and 2 fluorescent probes marked in 5'; VIC and FAM reporter dyes are used for the WT and mutant probes, respectively

Why Real Time PCR?

The Real Time PCR combines amplification of cDNA and detection of amplification products in a single tube by measuring the fluorescence. Monitoring of fluorescence intensity during PCR reaction (Real time detection) **permit the direct quantification of amplification products**. Avoiding the post-PCR manipulation we can almost totally avoid any possible risk of **contamination**.

Product	Unit	Cat.-No.
Factor V Coagulation Kit-RQ	40 tests	FC.02RQ
Factor II Coagulation Kit-RQ	40 tests	FC.01RQ
MTHFR Kit-RQ	40 tests	FC.04RQ

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