gb HEMO FV (G1691A)

Clinical implications

Coagulation factor V is a plasmatic glycoprotein involved in the process of blood coagulation. In its activated form, factor V participates in the conversion of prothrombin to thrombin which contributes to the creation of blood clots. Mutation G1691A (so-called Leiden mutation) causes replacement of amino acid arginine by glutamine in the position 506 of the factor V protein chain. The frequency of the Leiden mutation in the healthy European population ranges between 3–5 %, whereas in patients who suffer from thromboembolic events (TEN) this frequency is about 20–40 %. The risk of venous thrombosis increases 3–10× in patients with heterozygote genotype and 20–80× in mutated homozygotes.

Principle of detection

The kit is intended for detection of mutation G1691A (Leiden) in coagulation factor V in human genomic DNA. Detection is based on **real-time polymerase chain reaction (qPCR) using fluorescently labelled probes (allelic discrimination)**.

Available products

Cat. No.	Product	rxn
3200-025	gb HEMO FV (G1691A)	25
3200-100	gb HEMO FV (G1691A)	100

1 kit contains reagents to provide 25 or 100 PCR reactions (20 µl volume of each reaction).

Parameters of the diagnostic kit

- ***in vitro* diagnostics**
- **CE IVD, IVDR certified**
- **ready-to-use assay**
- **sample concentration 10-100 ng/µl**
- **positive and negative controls included**
- **FAM and HEX channels detection**
- **identical amplification profile as gb HEMO, gb GENETIC, gb PHARM kits**

Content of the diagnostic kit

*	Component	Conc.	Purpose
🟢	Assay qPCR F5 (G1691A)	1.25×	Detection assay
⚪	Deionized Water		Negative Control
🟡	Standard WT F5 (G1691A)	10^4 cop/µl	Positive Control
🔴	Standard MUT F5 (G1691A)	10^4 cop/µl	Positive Control
🟣	Standard HET F5 (G1691A)	10^4 cop/µl	Positive Control

** Lid colour*



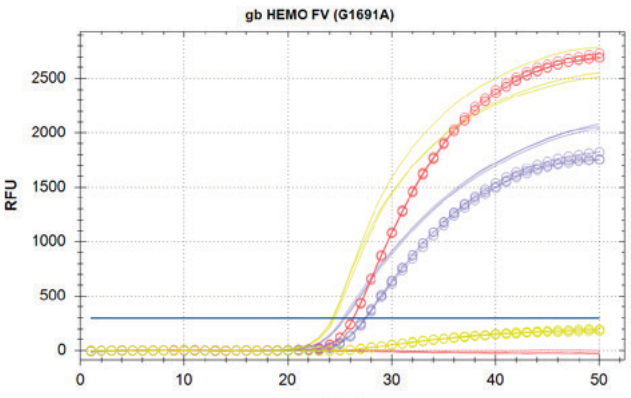


Fig. 1 – Detection of FV (G1691A) standards on CFX96 device; yellow line – wild type; red line – mutant; violet line – heterozygote; smooth line – FAM channel; dotted line – HEX channel

Validated for cyclers

- **Rotor-Gene 3000/6000/Q (Corbett Research, Qiagen)**
- **iCycler iQ5/CFX96/CFX96 Touch (Bio-Rad)**
- **ABI 7500/7500 Fast/7900HT (Applied Biosystems)**
- **SmartCycler (Cepheid)**
- **MIC (Bio Molecular Systems)**
- **AriaMx (Agilent Technologies)**
- **Stratagene Mx3000P/Mx3005P (Agilent Technologies)**
- **Light Cycler 480/Cobas z480 (Roche Diagnostics)**
- **QuantStudio 5 (Applied Biosystems)**