Clinical implications

Platelet glycoprotein GPIa forms a complex GPIa/IIa with glycoprotein GPIIa on the surface of blood platelets. One-nucleotide C807T mutation is one of the "silent" polymorphisms that do not change the amino acid sequence. However, the presence of the mutated form increases the gene expression. Both, heterozygous and homozygous carriers of the mutated allele, have twice as many receptors on the platelet surface as compared to the wild type homozygotes, which causes an increased thrombocyte adhesivity to type 1 collagen. Under high shear stress in the arterial bed, increased thrombocyte adhesivity has thrombogenic potential. Both, heterozygous and homozygous carriage of the mutated allele, is considered to be a mild risk factor of myocardial infarction and stroke in younger people.

Principle of detection

The kit is intended for detection of C807T mutation in GPIa gene 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
3211-025	gb HEMO GPIa (C807T)	25
3211-100	gb HEMO GPIa (C807T)	100

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

Parameters of the diagnostic kit

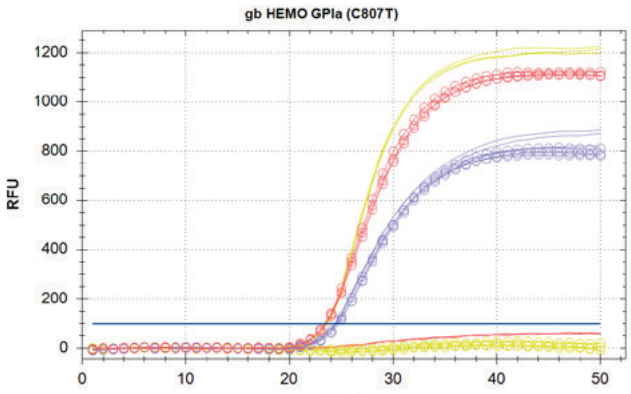
- ***in vitro* diagnostics**
- **CE IVD, IVDR certified**
- **ready-to-use assay**
- **sample concentration 10-100 ng/µl**
- **positive and negative controls included**
- **FAM and HEX channels detection**
- **identical amplification profile as gb HEMO, gb GENETIC, gb PHARM kits**

Content of the diagnostic kit

*	Component	Conc.	Purpose
●	Assay qPCR GPIa (C807T)	1.25×	Detection assay
●	Deionized Water		Negative Control
●	Standard WT GPIa (C807T)	10^4 cop/µl	Positive Control
●	Standard MUT GPIa (C807T))	10^4 cop/µl	Positive Control
●	Standard HET GPIa (C807T)	10^4 cop/µl	Positive Control

** Lid colour*





Validated for cyclers

- **Rotor-Gene 3000/6000/Q (Corbett Research, Qiagen)**
- **iCycler iQ5/CFX96/CFX96 Touch (Bio-Rad)**
- **ABI 7300/7500/7500 Fast (Applied Biosystems)**
- **AriaMx (Agilent Technologies)**
- **MIC (Bio Molecular Systems)**
- **Light Cycler 480/Cobas z480 (Roche Diagnostics)**
- **QuantStudio 5 (Applied Biosystems)**

Fig. 1 – Detection of GPIa (C807T) standards on CFX96 device; yellow line – wild type; red line – mutant; violet line – heterozygote; smooth line – FAM channel; dotted line – HEX channel