gb HEMO GPIIIa (L33P)

Clinical implications

Platelet glycoprotein GPIIIa can be found on the surface of blood platelets in form of a complex GPIIb/IIIa. It belongs to the family of adhesive receptors. The interaction of the said complex with fibrinogen plays a key role in thrombocyte adhesion to the surfaces and each other. L33P polymorphism is the most common and clinically most significant polymorphism of the said gene. One-nucleotide T>C transition leads to a substitution of the amino acid leucine for proline at nucleotide 33. Mutated allele called PLA2 leads to an increase of thrombocyte aggregability. The carriage of the mutated allele is considered to be a mild risk factor of the coronary artery disease and myocardial infarction in younger people and preeclampsia in pregnant women. The level of risk is increased at concurrent occurrence of other polymorphisms (eNOS, PAI-1). The homozygous carriers of the mutated allele show more frequently reduced susceptibility to antiplatelet therapy by clopidogrel or acetylsalicylic acid (aspirin resistance).

Principle of detection

The kit is intended for detection of L33P mutation in GPIIIa (ITGB3) 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
3212-025	gb HEMO GPIIIa (L33P)	25
3212	gb HEMO GPIIIa (L33P)	100

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

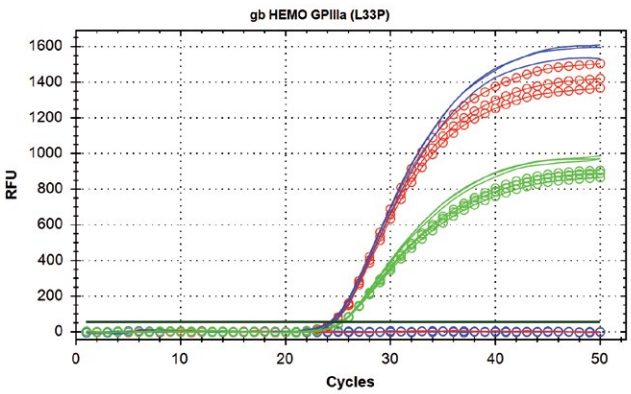
Parameters of the diagnostic kit

- ***in vitro* diagnostics**
- **CE IVD marked**
- **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 GPIIIa (L33P)	1.25×	Detection assay
⚪	Deionized Water		Negative Control
🟡	Standard WT GPIIIa (L33P)	10^4 cop/µl	Positive Control
🔴	Standard MUT GPIIIa (L33P)	10^4 cop/µl	Positive Control
🟣	Standard HET GPIIIa (L33P)	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 GPIIIa (L33P) standards on CFX96 device; blue line – wild type; red line – mutant; green line – heterozygote; smooth line – FAM channel; dotted line – HEX channel