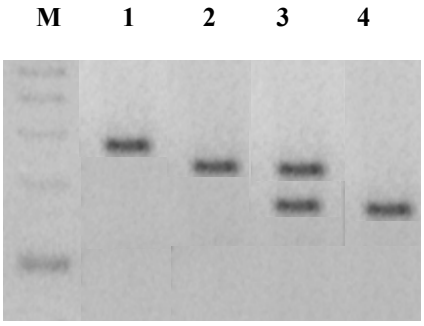
ampli set GpIIb/IIIa CE IVD 45 tests cat 1340

detection of platelet glycoprotein receptor IIIa polymorphism

Platelet membrane glycoprotein IIb/IIIa (GpIIb-IIIa) is platelet membrane receptor and member of the integrin family of adhesive molecules that, when activated, binds fibrinogen and von Willebrand factor, thereby promoting platelet aggregation and clotting. The gene encoding the GpIIIa arm of the integrin molecule is polymorphic (substitution C-T) at exon 2. This single base change results in a leucine/ proline polymorphism at amino acid 33 of mature glycoprotein IIIa. The more common allele encodes a leucine (P1A1), and the less common allele encodes a proline (P1A2).
The GpIIb-IIIa is involved in the pathogenesis of acute coronary syndromes. In different studies the P1A2 allele of GpIIb-IIIa was reported to be an inherited risk factor for acute coronary artery events. In this Kit the detection of the polymorphism C-T is performed starting with an amplification (PCR) using specific primers of a fragment 266 bp, followed by the digestion with the restriction enzyme *MspI.* The polymorphism C-T (P1A2 allele) is confirmed by the detection of an additional cleavage site for the restriction enzyme MspI.

Principle of method: A) extraction of genomic DNA; B) amplification; C) enzymatic digestion; D) detection on agarose gel
Applicability: on extracted and purified genomic DNA from whole blood samples.

ANALYSIS OF RESULTS



Agarose gel:

M) Marker 100 bp ladder
1) undigested PCR product 266 bp
2) Normal subject P1A1/P1A1
3) Heterozygote subject P1A1/P1A2
4) Homozygote subject P1A2/P1A2

Homozygous P1A1/P1A1	Heterozygous P1A1/P1A2	Homozygous P1A2/P1A2
221 bp	**221 bp**	**177 bp**
45 bp	**177 bp**	50 bp
	50 bp	45 pb
	45 bp	

REFERENCES
The New England Journal of Medicine, 334(17):1090-1095 (1996)
J. Clin. Invest. 83:1778-1781 (1989)