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KIT FOR THE DETECTION OF M235T POLYMORPHISM OF THE ANGIOTENSINOGEN (AGT) GENE

AMPLI-SET-AGT M235T Cat. n. 1.354

Products encoded by genes involved in renine-angiotensin-aldosterone system (RAAS) are the natural candidates for the maintenance of sodium homeostasis and regulation of blood pressure. The RASS system has been shown to be involved in many cardiovascular diseases , including myocardiacal fibrosis and hypertrophy in hypertensive hearth disease, congestive hearth failure, myocardial infarction and cardiomyopathy.
Many polymorphisms have been detected in genes of the renine-angiotensin-aldosterone system , as insertion/deletion (I/D) of the ACE gene, the polymorphisms G-217A, G-152A, A-20C, G-6A, M235T and T174M of the angiotensinogen (AGT) gene and the A1166C polymorphism of the angiotensin II type I receptor gene .
The kit allows the detection of the M235T of the AGT gene. The detection of the polymorphism is performed with the amplification with specific primers of a fragment of 303 bp, followed by restriction section due to Lwe I. The polymorphism of a single nucleotide (SNP) in exon 2 causes the substitution of methionine with threonine. In a control population , the frequencies of allele M is 64%, whereas the frequencies of allele T is 36%. In many studies the variant TT has been associated to development of hypertension . Moreover the study of the association of polymorphisms of many genes involved in the RAAS system is very important.

Principle of Assay: 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.
Tests: 45.

REAGENTS AND STORAGE

AMPLIFICATION and DIGESTION	
PCR mix	-20°C
H_2O sterile	-20°C
Taq Polymerase (5U/µl)	-20°C
Lwe I enzyme (10U/µl)	-20°C
Digestion buffer 10X	-20°C
Positive Heterozigous control	-20°C

Stability: over 12 months if correctly stored.

ANALYSIS OF RESULTS

The amplified product is a fragment of 303 bp; digested product of the normal allele MM gives two fragments of 266 bp and 37 bp, whereas the mutant allele TT gives a fragment of 303 bp.

1 **Wild Type subject MM**	2 **Heterozigous subject MT**	3 **Homozigous mutant subject TT**
2 bands	3 bands	1 band
266 bp **37 bp**	**303 bp** **266 bp** **37 bp**	**303 bp**

References:
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