

## Identification of A1082G and -592AC of interleukin-10 (IL10) by Real-Time PCR

**AMPLI-set-IL10 Real Time**

**Cat. n. 1.801RT**

The interleukin 10 (IL-10) is an anti-inflammatory molecule that inhibits the cytokines release during the development of inflammatory response. It is secreted by lymphocyte T, monocytes and macrophages and it regulates the inflammatory responses and it has an immunosuppressive activity.

The presence of a poorly controlled inflammatory response promotes the cardio-vascular diseases and IL-10 plays an important role in the pathogenesis and in the protection from cardio-vascular diseases.

Many studies investigated the polymorphism at the site -1084 A>G in the gene promoter. The presence of A allele is associated with a lower production of IL-10 molecule. It has been shown that the presence of the genotype AA increases the risk of stroke and cardiovascular diseases risk compared to the genotype GG.

Recently, the haplotype AA has been associated with an increased risk of periodontal conditions. It has been hypothesized that IL-10 could slow down the destruction of the periodontal tissue through the induction of tissue inhibitors of the metalloproteinases and osteoprotegerin, known as osteoclastogenesis inhibitor.

It was observed an association between the developing of inflammatory conditions and the presence of A variant of 592AC (rs1800872) polymorphism.

The kit allows the identification of A1082G and A592C polymorphisms of interleukin-10 gene by Real-Time PCR. The research of the polymorphism is carried out by amplification with specific primers and hybridisation with a probe able to recognize an internal sequence. In the assay the probe detecting the A allele is labelled with fluorochrome FAM and the one detecting the C allele is conjugated with a reporter VIC/JOE.

**Principle of method:** A) genomic DNA extraction  
B) amplification C) revelation by Real-Time PCR

**Applicability:** on extracted and purified genomic DNA from whole blood, mouth swab.

**Number of test:** 25.

**Stability:** more than 18 months if properly stored.

### Allelic discrimination -G174C

#### KIT CONTENTS AND STORAGE

AMPLIFICATION	
PCR mix 2X	-20°C
Primers-Probe mix 20X	-20°C
H <sub>2</sub> O sterile	-20°C
ControlGG	-20°C
Heterozygous GC	-20°C

#### References :

*Fishman (1998) J Clin Invest 102, 1369;*  
*Sen Un Mol Vis. 2011; 17: 2552-63. Epub 2011 1 ott.*

#### ANALYSIS OF RESULTS

The analysis of results will be carried out using a specific program (ALLELIC DISCRIMINATION) on the real-time instrument. Anywhere it is useful analyzing the amplification plots, in order to check the amplification reaction

