VIENNA LAB
ESTABLISHED INNOVATIONS IN DIAGNOSTICS

α- and β-Thalassemia StripAssays®

The easy way to optimize thalassemia screening using established innovations in diagnostics

Thalassemia Assays.
Key to efficient screening.

Thalassemias are a major public health problem, particularly in Mediterranean countries, the Middle East, India, Asia and parts of Africa. For the majority of affected individuals there is only supportive management but no ultimate cure. Health authorities therefore focus on prevention programs based on heterozygous carrier screening and prenatal diagnosis. Since only a few α- and β-globin alleles are prevalent in each at-risk population, large-scale screening programs are feasible based on simple and automated test procedures.

Normal hemoglobin consists of four protein chains: 2 x alpha globin and 2 x beta globin. Defects in these protein chains cause the two major types of thalassemia that are accordingly named alpha or beta.
Alpha globin: The production of enough alpha globin protein chains requires four genes. If one or more of the four genes is missing it results in alpha thalassemia.
Beta globin: Two genes are necessary to make sufficient beta globin protein. Defects in one or both genes cause beta thalassemia.

The α- and β-Thalassemia StripAssays® offer an easy way to identify the most relevant mutations in the alpha and beta globin genes. Especially the β-Thalassemia StripAssay® has been designed to fit the regional prevalence of specific mutations (MED, IME, SEA). Established innovations in diagnostics by ViennaLab thus help to optimize screening for thalassemias.

Thalassemia	Genes affected	StripAssays®	Geographical focus
α-Thalassemia	Alpha globin	> 90% of all relevant mutations	Mediterranean, Middle East and Southeast Asia
β-Thalassemia	Beta globin	> 90% of all relevant mutations	StripAssay® MED: Mediterranean StripAssay® IME: India & Middle East StripAssay® SEA: Southeast Asia

The Assay

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The ViennaLab α- and β-Thalassemia StripAssays® meet customer requirements

Requirement	ViennaLab's offer
Easy	Three simple steps. 6 h. Done.
Reliable	Can be automated. Probes for mutations and controls combined on one teststrip.
Versatile	Effective genotyping of DNA from various sample types.
Affordable	Reagents. Thermocycler. Incubator. That is all you need. A software is optional.

The ViennaLab α- and β-Thalassemia StripAssays® combine all these requirements. Better than any other assay currently on the market.

The ViennaLab α- and β-Thalassemia StripAssays®

- are based on reverse-hybridization of biotinylated PCR products
- combine probes for mutations and controls in a parallel array of allele-specific oligonucleotides
- work with immobilized oligos on a teststrip
- show mutations by enzymatic color reaction already visible to the naked eye

Mutations detected

α-Thalassemia StripAssay®: 21 mutations covering > 90 % of relevant mutations

β-Thalassemia StripAssay®: 22 mutations covering > 90 % of relevant mutations (optimized for Mediterranean countries, Middle East and India, Southeast Asia)

The three steps of the ViennaLab α- and β-Thalassemia StripAssays®

Step	Requirement
1. Amplification: Multiplex PCR-amplification. Simultaneous biotin-labeling	Thermocycler
2. Hybridization: Directly on the StripAssay® teststrips	Incubator
3. Identification: Labeled products detected by streptavidin-alkaline phosphatase	Naked eye or scanner & software

Cat.no.: α-Globin StripAssay®: 4-160 (10 tests/kit)

β-Globin StripAssay® MED: 4-130 (20 tests/kit)
β-Globin StripAssay® IME: 4-140 (20 tests/kit)
β-Globin StripAssay® SEA: 4-150 (20 tests/kit)

ViennaLab offers StripAssays® for a wide range of diagnostic applications. Visit www.viennalab.com

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