

β-Globin StripAssay:

ViennaLab offers reliable and convenient reverse-hybridization assays tailored to population-specific mutations in the Mediterranean region (MED), the Middle East and India (IME) and Southeast Asia (SEA).

β-Globin StripAssay MED: 22 mutations covering >90% of β-globin defects found in Mediterranean countries

β-Globin StripAssay IME: 22 mutations covering >90% of β-globin defects found in the Middle East and India

β-Globin StripAssay SEA: 22 mutations covering >90% of β-globin defects found in Southeast Asia

Each β-Globin StripAssay provides ready-to-use reagents for 20 tests. The entire assay can be accomplished in less than 6 hours, and may be carried out manually or largely automated.

Principle of the assay:

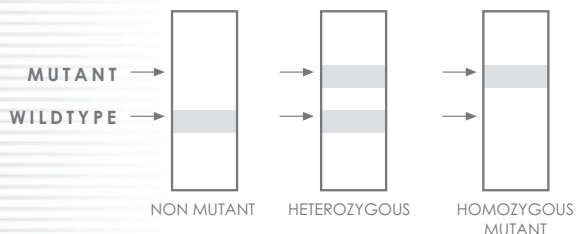
The β-Globin StripAssay is based on reverse-hybridization of biotinylated PCR products to a parallel array of allele-specific oligonucleotides immobilized on membrane teststrips. The StripAssay provides ready-to-use reagents for completion in four easy steps:

- Rapid and convenient isolation of genomic DNA from anticoagulated blood.
- Single multiplex PCR for the amplification of relevant β-globin gene sequences.
- Hybridization of biotinylated amplification products to oligonucleotide probes on the teststrip.
- Detection of specifically bound mutant and wild-type alleles by visible enzymatic color reaction.

Interpretation of results:

For each polymorphic position, one of three possible staining patterns may be obtained:

1. wild-type probe positive: normal genotype
2. wild-type and mutant probe positive: heterozygous genotype (carrier individual)
3. mutant probe positive: homozygous mutant genotype (affected individual)



Local contact:

Mutations covered by the ViennaLab β-Globin StripAssays:

Position	Sequence alteration	β-thal type	MED	IME	SEA
- 101	C>T	+	x		
- 87	C>G	+	x		
- 31	A>G	+			x
- 30	T>A	+	x		
- 29	A>G	+			x
- 28	A>G	+			x
cap+1	A>C	+		x	x
initiation cd	ATG>AGG	0			x
cd 5	-CT	0	x	x	
cd 6	G>A (HbC)	-	x		
cd 6	A>T (HbS)	-	x	x	
cd 6	-A	0	x		
cd 8	-AA	0	x	x	
cd 8/9	+G	0	x	x	x
cd 15	TGG>TGA	0	x		
cd 15	TGG>TAG	0		x	x
cd 16	-C	0		x	
cd 17	A>T	0			x
cd 19	A>G (Hb Malay)	+			x
cd 22	7bp deletion	0		x	
cd 26 HbE	G>A	-			x
cd 27	G>T (Hb Knossos)	+	x		
cd 27/28	+C	0			x
cd 30	G>C	0		x	
IVS 1.1	G>A	0	x	x	
IVS 1.1	G>T	0		x	x
IVS 1.5	G>C	+	x	x	x
IVS 1.6	T>C	+	x	x	
IVS 1.110	G>A	+	x	x	
IVS 1.116	T>G	0	x		
IVS 1.130	G>C	0	x		
IVS 1-25	25bp deletion	0		x	
cd 36/37	-T	0		x	
cd 39	C>T	0	x	x	
cd 41/42	-TTCT	0		x	x
cd 43	G>T	0			x
cd 44	-C	0	x	x	
cd 71/72	+A	0			x
cd 89/90	-GT	0			x
cd 90	G>T	0			x
cd 95	+A	0			x
IVS 2.1	G>A	0	x	x	x
IVS 2.654	C>T	+			x
IVS 2.745	C>G	+	x	x	
IVS 2.848	C>A	+	x		
cd 121	G>T	0			x
619bp del	exon 3 deletion	0		x	

β-Globin StripAssay MED

Cat.no.: 4-130

β-Globin StripAssay IME

Cat.no.: 4-140

β-Globin StripAssay SEA

Cat.no.: 4-150

Further StripAssays are available or under development for: α-Globin (thalassemia), Cardiovascular Disease (CVD), Familial Mediterranean Fever (FMF), Gaucher Disease, Haemochromatosis, Sugar Intolerance (lactose, fructose), Pharmacogenetics, Cancer.

**VIENNA
LAB**
ViennaLab Diagnostics GmbH

Gaudenzdorfer Gürtel 43-45, A-1120 Vienna, Austria
Phone (+43-1) 8120156-0, Fax (+43-1) 8120156-19
info@viennalab.co.at, www.viennalab.com