VIENNA LAB
ESTABLISHED INNOVATIONS IN DIAGNOSTICS

Sugar Intolerance StripAssays®

The easy way to test for Sugar Intolerance using established innovations in diagnostics

Sugar Intolerance Assays. Key to a personalized diet.

Lactose and fructose are among the most common sugars in human diet, but not all people have the necessary enzymes in sufficient quantities to completely digest them. Mutations in the genes for metabolic enzymes or transporters can cause hereditary sugar intolerance. People who suffer from this intolerance may experience severe discomfort when eating lactose or fructose. Common symptoms include abdominal bloating and pain, vomiting, diarrhea, nausea, flatulence, and hypoglycemia. Fructose intolerance may ultimately cause death due to liver and kidney damage.

Two variants (-13910 T/C, -22018 A/G) in an upstream regulatory region of the LCT gene correlate with the age-related decline of lactase activity. Lactase non-persistence (adult-type hypolactasia) causes intolerance to dietary lactose in the majority of people worldwide. Hereditary fructose intolerance (HFI) is caused by mutations within the coding region of aldolase B, a key enzyme in the metabolism of dietary fructose. Four mutations (del4E4, A149P, A174D, N334K) cover >85% of known aldolase B gene variations.

The Sugar Intolerance StripAssays® offer an easy way to identify the most frequent genetic variants in the genes that contribute to lactose or fructose intolerance.

Gene	Function	Status	Dietary restriction	Quality of Life
LCT	Breakdown of lactose	Variant 1		+++
		Variant 2	☒	++
ALDO B	Breakdown of fructose	wildtype		+++
		mutated	☒	++

The Assays

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The ViennaLab Sugar Intolerance StripAssays® meet customer requirements

Requirement	ViennaLab's offer
Easy	Three simple steps. 6 h. Done.
Reliable	Can be automated. Probes for variants 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 Sugar Intolerance StripAssays® combine all these requirements. Better than any other assay currently on the market.

The ViennaLab Sugar Intolerance StripAssays®

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

Genetic variants detected

Lactose Intolerance StripAssay®:
2 LCT polymorphisms: -13910T >C, -22018A >G
Sugar Intolerance StripAssay®:
2 LCT polymorphisms and 4 ALDO B mutations: del 4E4, A149P, A174D, N334K

The three steps of the ViennaLab Sugar Intolerance 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

ViennaLab offers StripAssays® for a wide range of diagnostic applications. These include Cancer, Cardiovascular Disease, Familial Mediterranean Fever, Gaucher Disease, Haemochromatosis, Pharmacogenetics, and Thalassemia. See the full and most recent range of products at our website.

Cat.no.:
Lactose Intolerance StripAssay®: 4-300 (20 tests/kit)
Sugar Intolerance StripAssay®: 4-310 (20 tests/kit)

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