



PGX – Thrombo StripAssay®

The easy way to optimize coumarin anticoagulant therapy using established innovations in diagnostics

**PGX-Thrombo Assay.
Key to efficient therapy.**

Stroke, myocardial infarction and venous thromboembolism are commonly treated and prevented by oral anticoagulants. Vitamin K antagonists (coumarins) are highly effective for that purpose. However, their narrow therapeutic range in combination with a wide variability in dose response poses a considerable risk to patients. Consequences of an inappropriate coumarin dose include life-threatening bleeding

(overdose) or lack of therapeutic effect (insufficient dose). Hence, an individualized anticoagulation treatment is of paramount importance for the safety and health of patients.

Coumarin derivatives inhibit the enzyme vitamin K epoxide reductase. Gene variants coding for its subunit 1 (VKORC1) affect the sensitivity to coumarins. Moreover, variants in the metabolizing cytochrome P450 isozyme CYP2C9 influence the coumarin turnover and thus the therapeutic effect of the drug.

The PGX-Thrombo StripAssay® offers an easy way to identify the most relevant genetic variations influencing coumarin anticoagulation therapy.

Gene	Anticoagulation Relevance	Status	Effect
VKORC1	Coumarin sensitivity	Wild type	Normal sensitivity
		Variant	Increased sensitivity
CYP2C9	Coumarin metabolism	Wild type	Normal drug turnover
		Variant	Slow drug turnover

The Assay

The ViennaLab PGX-Thrombo StripAssay® meets customer requirements

Requirement	ViennaLab's offer
Easy	Three simple steps. 6 h. Done.
Reliable	Probes for variants and controls combined on one teststrip.
Versatile	Automated or manual processing.
Affordable	Incubator. Thermocycler. Shaker. That is all you need. Software for interpretation of results is optional.

The ViennaLab PGX-Thrombo StripAssay® combines all these requirements.

The ViennaLab PGX-Thrombo StripAssay®

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

Genetic variants detected

A common variation (-1639 G>A) in the VKORC1 promoter and CYP2C9 alleles *1, *2 and *3.

The three steps of the ViennaLab PGX-Thrombo StripAssay®

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, Sugar Intolerance, and Thalassemia. See the full and most recent range of products at our website.

Order Information:

PGX-Thrombo StripAssay®: 4-730 (20 tests/kit)

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