ESTABLISHED INNOVATIONS IN DIAGNOSTICS

PGX-CYP2C19 StripAssay®

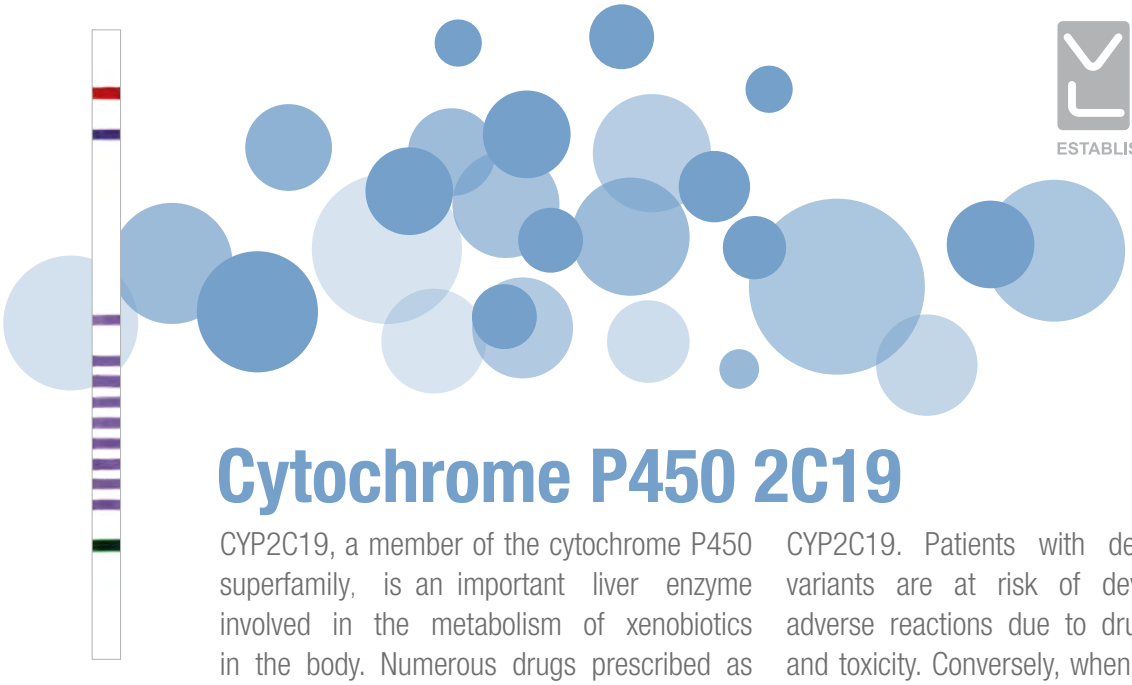
Identifies individuals with poor or ultrarapid metabolizer phenotype of CYP2C19

- The liver enzyme CYP2C19 is responsible for the metabolism of a huge number of currently prescribed drugs
- Differences in enzymatic activity due to polymorphisms in the CYP2C19 gene contribute to the inter-individual variability in drug response
- About 20% of Caucasians and 30% of Asians carry at least one defective allele
- Knowledge of the patient's metabolizer status allows for a more efficient and successful treatment with potentially less adverse side effects
- CYP2C19 genotyping helps to determine the optimum type and dosage of a drug for a specific therapy

Individualize drug therapy according to CYP2C19 genotype

ViennaLab PGX-CYP2C19 StripAssay® detects the most common variants with impaired enzyme activity and one variant with increased activity

- **Simple protocol for complex diagnostic questions**
- **Manual or automated**
- **No expensive lab equipment required**
- **Ready-to-use reagents**
- **CE-labelled complete kit - DNA extraction included**



Cytochrome P450 2C19

CYP2C19, a member of the cytochrome P450 superfamily, is an important liver enzyme involved in the metabolism of xenobiotics in the body. Numerous drugs prescribed as platelet inhibitors (clopidogrel), anticonvulsants (diazepam, mephenytoin), antidepressants (citalopram, sertraline), proton pump inhibitors (omeprazole, pantoprazole), or for the treatment of malaria (proguanil) are substrates for CYP2C19. Patients with defective enzyme variants are at risk of developing severe adverse reactions due to drug accumulation and toxicity. Conversely, when formation of an active metabolite is essential for the action of a drug, these patients can exhibit diminished response to therapy compared to extensive metabolizers.

PGX-CYP2C19 StripAssay® detects the following allelic variants: *2 (c.681G>A), *3 (c.636G>A); *4 (c.1A>G); *5 (c.1297C>T); *6 (c.395G>A); *7 (c.819+2T>A); *8 (c.358T>C); *17 (c.-806C>T)

Gene	Cellular function	Variant alleles *2 to *8 and *17	Phenotype
CYP2C19	Phase I drug metabolizing enzyme	Absent	Extensive metabolizer
		One allele out of *2 to *8 present	Intermediate metabolizer
		Two alleles out of *2 to *8 present	Poor metabolizer
		One or two alleles of *17 present	Ultrarapid metabolizer

The three steps of the ViennaLab PGX-CYP2C19 StripAssay®

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

Cat.no.: PGX-CYP2C19 StripAssay® 4-750 (20 tests/kit)

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

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July 2013 • ISO 9001 • ISO 13485