

HOTLINE: Effective February 22, 2022

3001501

CYP2C8, CYP2C9, and CYP2C cluster

2C8/2C9

Interpretive Data:

Background Information for *CYP2C8, CYP2C9, and CYP2C cluster*:

Characteristics: The cytochrome P450 (CYP) isozymes 2C8 and 2C9 are involved in the metabolism of many drugs. Variants in the genes that code for CYP2C8 and CYP2C9 may influence pharmacokinetics of substrates, and may predict or explain non-standard dose requirements, therapeutic failure or adverse reactions. **The *CYP2C cluster variant (rs12777823)* is associated with a decreased warfarin dose requirement in some people of African descent.**

Inheritance: Autosomal codominant.

Cause: *CYP2C8* and *CYP2C9* gene variants **and the *CYP2C cluster variant* affect enzyme function.**

Variants Tested: See the "Additional Technical Information" document.

Clinical Sensitivity: Drug-dependent.

Methodology: Polymerase chain reaction (PCR) and fluorescence monitoring.

Analytical Sensitivity and Specificity: Greater than 99 percent.

Limitations: Only the targeted *CYP2C8, CYP2C9, and CYP2C cluster* variants will be detected by this panel, and assumptions about phase and content are made to assign alleles. **Publicly** available sources such as the www.pharmvar.org or www.pharmgkb.org provide guidance on phenotype predictions and allele frequencies. Diagnostic errors can occur due to rare sequence variations. Risk of therapeutic failure or adverse reactions with CYP2C8 or CYP2C9 substrates may be affected by genetic and non-genetic factors that are not detected by this test. This result does not replace the need for therapeutic drug or clinical monitoring.

Please note the information contained in this report does not contain medication recommendations, and should not be interpreted as recommending any specific medications. Any dosage adjustments or other changes to medications should be evaluated in consultation with a medical provider.

This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

Counseling and informed consent are recommended for genetic testing. Consent forms are available online.

HOTLINE NOTE: There is a component change associated with this test.

Add component 3004497, CYP2C8 Phenotype

Add component 2008931, CYP2C9 Phenotype

Add component 3004499, CYP2C Cluster Genotype

Add component 3004500, CYP2C Cluster Phenotype