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Patient Report

Patient Age/Sex: Unknown

Specimen Collected: 20-Dec-21 17:18

CYP2C8, CYP2C9, and CYP2C cluster |Received: 21-Dec-21 07:19 Report/Verified: 21-Dec-21 12:01

Procedure	Result	Units	Reference Interval
2C8/2C9 Specimen	Whole Blood		
CYP2C8 Genotype	Negative		
CYP2C8 Pheno	Normal		
CYP2C9 Genotype	Negative		
CYP2C9 Phenotype	Normal		
CYP2C Cluster Geno	Negative		
CYP2C Cluster Pheno	Normal		
2C8/2C9 Interpretation	See Note [f1 i1]		

Result Footnote

f1: 2C8/2C9 Interpretation

The following CYP2C8 allele(s) were detected: Neg/Neg. This result predicts the normal metabolizer phenotype.

The following CYP2C9 allele(s) were detected: Neg/Neg. This result predicts the normal metabolizer phenotype, with an activity score of 2 of 2.

The following CYP2C9 allele(s) were detected: Neg/Neg. This result predicts the normal metabolizer phenotype, with an activity score 2 of 2.

Recommendation: Guidelines for genotype-based dosing are published by the Clinical Pharmacogenetics Implementation Consortium (CPIC) and other organizations. See: https://www.pharmgkb.org/

This result has been reviewed and approved by Sherin Shaaban, M.D., Ph.D.

Test Information

i1: 2C8/2C9 Interpretation

BACKGROUND INFORMATION: 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:
(Variants are numbered according to the following transcripts: CYP2C8 NM_000770, CYP2C9 NM_000771, and 2C cluster rs12777823).

Negative: No variants detected is predictive of the *1 functional alleles (CYP2C8 or CYP2C9).

Test Information

i1: 2C8/2C9 Interpretation

CYP2C8*2: rs11572103, c.805A>T
CYP2C8*3: rs10509681, c.1196A>G
CYP2C8*4: rs1058930, c.792C>G

CYP2C rs12777823, g.96405502 G>A

CYP2C9*2: rs1799853, c.430C>T
CYP2C9*3: rs1057910, c.1075A>C
CYP2C9*4: rs56165452, c.1076T>C
CYP2C9*5: rs28371686, c.1080C>G
CYP2C9*6: rs9332131, c.818del
CYP2C9*8: rs7900194, c.449G>A
CYP2C9*11: rs28371685, c.1003C>T
CYP2C9*12: rs9332239, c.1465C>T
CYP2C9*13: rs72558187, c.269T>C
CYP2C9*15: rs72558190, c.485C>A

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.