

Client: Example Client ABC123 123 Test Drive

Salt Lake City, UT 84108 UNITED STATES

Physician: Doctor, Example

**Patient: Patient, Example** 

DOB Unknown
Gender: Male

**Patient Identifiers:** 01234567890ABCD, 012345

**Visit Number (FIN):** 01234567890ABCD **Collection Date:** 00/00/0000 00:00

**CYP2C19** 

ARUP test code 3001508

2C19GENO Specimen

Whole Blood

CYP2C19 Genotype

\*1/\*1

CYP2C19 Phenotype

Normal

2C19GENO Interpretation

See Note

The following CYP2C19 allele(s) were detected: \*1/\*1. This result predicts the normal metabolizer phenotype.

Recommendation: Guidelines for genotype-based dosing are published by the Clinical Pharmacogenetics Implementation Consortium(CPIC) and can be found at: https://cpicpgx.org/ and https://www.pharmgkb.org/.

This result has been reviewed and approved by ■

 $\mathbb{H}$ =High, L=Low, \*=Abnormal, C=Critical

4848



## BACKGROUND INFORMATION: CYP2C19

Characteristics: The cytochrome P450 (CYP) isozyme 2C19 is involved in the metabolism of many drugs. Variants in the gene that code for CYP2C19 will influence pharmacokinetics of CYP2C19 substrates, and may predict or explain non-standard dose requirements, therapeutic failure or adverse reactions. Inheritance: Autosomal codominant.

Cause: CYP2C19 gene variants affect enzyme function. Variants Tested: (Variants are numbered according to NM\_000769 transcript).

\*1: Indicative of no detected targeted variants and an assumption of functional allele. No variants detected is predictive of the \*1 functional allele.

CYP2C19\*2: rs4244285, c.681G>A; rs12769205, c.332-23A>G CYP2C19\*3: rs4986893, c.636G>A CYP2C19\*4A: rs28399504, c.1A>G CYP2C19\*4B: rs28399504, c.1A>G; rs12248560, c.-806C>T CYP2C19\*5: rs56337013, c.1297C>T CYP2C19\*6: rs72552267, c.395G>A CYP2C19\*7: rs72558186, c.819+2T>A CYP2C19\*8: rs41291556, c.358T>C CYP2C19\*9: rs17884712, c.431G>A CYP2C19\*17: rs12248560, c.-806C>T CYP2C19\*35: rs12769205, c.332-23A>G

Clinical Sensitivity: Drug-dependent.
Methodology: Polymerase chain reaction (PCR) and fluorescence monitoring.

Analytical Sensitivity and Specificity: Greater than 99 percent. Limitations: Only the targeted CYP2C19 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 CYP2C19 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.

EER CYP2C19

See Note

H=High, L=Low, \*=Abnormal, C=Critical

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VERIFIED/REPORTED DATES				
Procedure	Accession	Collected	Received	Verified/Reported
2C19GENO Specimen	23-316-101126	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
CYP2C19 Genotype	23-316-101126	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
CYP2C19 Phenotype	23-316-101126	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
2C19GENO Interpretation	23-316-101126	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00
EER CYP2C19	23-316-101126	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00

END OF CHART

H=High, L=Low, \*=Abnormal, C=Critical